

**Gordon Institute
of Business Science**
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The impact of mass media entrepreneurship education on entrepreneurial mindset and intentions to start a business.

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ABSTRACT

Mass media platform radio has enjoyed minute attention within the entrepreneurial education discipline thus far. As an intervention, this study investigated the impact on entrepreneurial intention of mass media entrepreneurial education and entrepreneurial mindset. The mediating role of entrepreneurial mindset between mass media entrepreneurial education and entrepreneurial intentions was also examined. Drawing on the theory of planned behaviour this effect is tested among radio audience participants in South Africa through the dimensions of the theory, namely attitudes toward entrepreneurship, subjective norms, and perceived behavioural control.

This research examines the factors and dimensions of different categories of mass media entrepreneurial education, namely generalised, augmented, and motivational entrepreneurial education. Initially, the study outlines an examination of the literature defining, discussing, and contrasting the three mass media categories. This is followed by an examination of the relationships between the constructs of interest and their effect on entrepreneurship development.

A quantitative method was applied in this preplanned and structured study. Based on previous studies four hypotheses have been developed and tested through online questionnaires. Convenience sampling was used and 859 respondents' worth of data was collected and analysed. The data was statistically interpreted using descriptive statistics, factor, and regression analysis.

The result of the study shows a strong positive relationship between the sub-categories of mass media entrepreneurial education on entrepreneurial intentions. And a strong mediating role that entrepreneurial mindset has on mass media entrepreneurial education and entrepreneurial intentions. Furthermore, this study also outlines practical implications and future research suggestions.

KEYWORDS

Keywords: Mass Media, Entrepreneurship, Entrepreneurial Education, Entrepreneurial Mindset, Radio, Intentions

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.



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CHAPTER 1 - PROBLEM AND PURPOSE

1.1 Introduction

Chapter one outlines the background of the research project and discusses the business and theoretical relevance of the study. The research objectives, research scope, and the chapters that follow are also summarised in this section.

1.2 Background to the study

1.2.1 Increasing Entrepreneurial Intentions Rate

The recent Covid-19 global pandemic placed a spotlight on the vulnerability of emerging market economies (GEM, 2022) and the businesses therein (Schoemaker & Day, 2021). The pandemic has led to a rise in unemployment rates globally (Schotte & Zizzamia, 2021), and the closure of many businesses (Samanga, 2020; Schotte & Zizzamia, 2021). This has led to heightened levels of job losses and declines in standards of living (Income & Mobile, 2020). Though no country was left unscathed (Schotte & Zizzamia, 2021), countries that were the most affected are emerging markets. These were characterised by high income inequalities, slow economic growth rates, high crime rates, and social unrest like South Africa (Mastercard, 2020; Ojong, Simba & Dana, 2021). The hope for impactful change is in an accelerated rise in the creation of successful new businesses.

The South African economy reported 2.9 million net job losses in 2020 during the Covid-19 lockdown, and women accounted for two-thirds of this figure (Income & Mobile, 2020). It is not just jobs that were lost, but according to the Mastercard business index (MBI), the most vulnerable businesses in sectors such as hospitality, retail, tourism, and crafts were the most affected (Mastercard, 2020). The majority of these businesses are owned by women and youth (Mastercard, 2020; Nambiar, Sutherland & Scheepers, 2020; Schotte & Zizzamia, 2021). Ventures owned by women and young people that are known to usually focus on social benefits (Welter, 2011), have been the most negatively impacted (Mastercard, 2020). For new businesses to display resilience, and established businesses to sustain competitiveness, heightened levels of entrepreneurial spirit and intentions are required (Krisnaresanti, Julialevi, Naufalin & Dinanti, 2020; Hang & Weezel, 2005).

In the different economies of the world, new venture creation is a priority intervention for the creation of employment, particularly in emerging markets (Jena, 2020). The eradication of unemployed graduates has fuelled interest in entrepreneurial education with the aim of influencing positive attitudes of students for them to choose entrepreneurship as a career (Anjum, Sharifi, Nazar & Farrukh, 2018; Liñán, Ceresia, & Bernal, 2018). Increasing the rate of interest in entrepreneurship and new venture creation is the goal of many institutions that include governments, and business schools (Jena, 2020; Mckenzie, 2017).

1.2.2 Business Resilience

For businesses to survive under VUCA (volatility, uncertainty, complexity, and ambiguity) conditions, there is a need for the rise of entrepreneurship as it has been found to render businesses immune or robust while sustaining competitiveness (Schoemaker & Day, 2021). Furthermore, for an increased rate of new venture creation levels of entrepreneurial intentions must be raised (Lu & Wang, 2018; Turner & Gianiodis, 2018). It is these intentions and related behaviours that give rise to entrepreneurs when they pursue the desire to own their own businesses (Ahmed, Chandran, Klobas, Liñán, & Kokkalis, 2020; Bilic, Prka & Vidovi, 2011), or initiate a new business within an existing organisation there with creating new opportunities for growth (Krisnaresanti et al., 2020).

1.2.3 Entrepreneurial Labour Force

The competencies of human capital can be the basis for the competitive advantage of a business applicable to both new and established organisations (Kuratko & Morris, 2011; Lumpkin & Dess, 1996). The notion of entrepreneurial intentions and the entrepreneurial mindset of entrepreneurs, employees, and managers within organisations has given rise to the concept of “entrepreneurial managers” (Kuratko et al., 2011). A concept that explains employees that display entrepreneurial competencies to enhance organisational capabilities for improved performance (Bilan, Hussain, Haseeb, & Kot, 2020). Entrepreneurs, employees, and managers who display opportunity identification, creativity, leadership, novelty, calculated risk-propensity, analytical skills, critical thinking, and creative resource orchestration for value creation (Chen, Powers, Katragadda, Cohen, & Dweck, 2020; Naumann, 2017). These characteristics enable the organisation to respond effectively to market, competitor, legislative and regulatory, technological, and customers profile

changes while continuing to create value under turbulent conditions (Byers & Thomas, 2011; Kuratko, Morris & Covin, 2011). Ambidextrous competencies of organisation leadership enable new ventures and existing organisations to exploit current resources while exploratively engaging the innovation climate for competitiveness and corporate sustainability (Berraies, Zine & Abidine, 2019; Schoemaker et al., 2018).

1.2.4 Resilience through innovation

Technological, legislative, and regulatory changes, shifts in global supply chain structures, and immigration trends require the establishment of robust and innovative businesses (Hartmann & Lussier, 2020; Kuratko et al., 2011). Arshi and Burns (2018) clearly articulates the link between entrepreneurship and innovation, additionally GEM (2022) highlights “that in the face of disasters, such as COVID-19, it is ordinary people that step up to do extraordinary things through entrepreneurial action.” The need for increased entrepreneurial activity and development is not just for the establishment of new ventures (Hägg & Gabrielsson, 2020), but also for the existing organisations to gain problem-solving-orientated employees (Hwang & Shin, 2019; Thompson et al., 2020) and vigilance (Schoemaker & Day, 2021) required to maintain a competitive advantage (Thompson, Strickland, Peteraf, & Gamble, 2020). Entrepreneurship is required in organisations for them to maintain innovativeness and agility enabling the organisation (Schoemaker, Heaton, & Teece, 2018) to be sustainable while achieving the objectives of value creation for its stakeholders (Buchholtz, Brown & Carroll, 2018) during times of uncertainty and dynamic complexity.

1.2.5 Entrepreneurial Country Benefits

Entrepreneurial intentions are said to precede enterprise development and venture initiation (Anjum, Sharifi, Nazar & Farrukh, 2018; Nyadu-Addo & Mensah, 2018). The initiation of businesses, the development of new products and processes, the emergence of new business models, and the rise of technology-based industries are charging the growth of regions such as China in the manufacturing sector (Cui, Sun & Bell, 2021; Munir, Jianfeng & Ramzan, 2019). Regions like Silicon Valley and Israel with regard to technology entrepreneurship are also on the rise (Wonglimpiyarat, 2016). These tech businesses have also emerged to employ high numbers of people, which is the goal of world countries, increased employment rates and country wealth

(Byers & Thomas, 2011; Swartz, Scheepers & Toefy, 2022). The economic and social impact of global and domestic macro trends have led countries, and research institutions to invest in entrepreneurship and enterprise development through various channels (Ahmed et al., 2020; Nyadu-Addo & Mensah, 2018).

1.2.6 Entrepreneurial education tool and entrepreneurial intentions

Scholars have pointed to entrepreneurial education as a source of the development of entrepreneurial intentions and entrepreneurial mindset (Kier & McMullen, 2018). These two phenomena have been credited by some scholars with inspiring passion and creativity in the establishment of new ventures (Liao, Nguyen, Chi & Nguyen, 2022). The country's education system is the most explored channel through which entrepreneurial education is propagated in schools (Floris & Pillitu, 2019), universities, and other formal developmental entities (Farrukh, Lee, Sajid & Waheed, 2019). The limited reach of the education system and access to entrepreneurial education are responsible for the slow rise in new venture creation and increased entrepreneurial activity within South Africa (Bux & van Vuuren, 2019). Consequently, there is a slow rate of entrepreneurial intentions among graduating students and the population in general (Anjum et al., 2018; Bird, 1988). To stimulate the rate of entrepreneurial intention in society and among students, there is a need to increase the penetration of the entrepreneurial education (Baggen, Lans & Gulikers, 2021). And the use of mass media, such as radio, can aid in this aspiration (Laguía & Moriano, 2021; Madalena, Stachyra & Starkey, 2014).

Through studies of entrepreneurial intentions and the impact of entrepreneurial education on its development, the concept that entrepreneurs are not just born but trained is now widely accepted (Naumann, 2017). The challenge has been to groom adequate numbers to start mitigating some of the wider social challenges faced by countries, and organisations (Cacciolatti, Rosli, Ruiz-Alba & Chang, 2020). Entrepreneurial education has been positively associated with the development of competencies that include opportunity identification, analytical thinking, risk evaluation, agility, resilience, creativity, organisation management, and other requisites in students (Lackéus, 2020). According to scholars such as Saadat, Aliakbari, Majd and Bell (2021), Lackéus, (2020), and Vaghely and Julien (2010) these competencies are requisite for successfully initiating a new venture and sustaining it.

In summary, scholars have focused on understanding the drivers that inspire entrepreneurial intentions (Anjum et al., 2018; Sussman & Gifford, 2019; Tornikoski & Maalaoui, 2019). The relationship between entrepreneurial education and entrepreneurial intentions and mindset has as a result received much attention within the discipline of entrepreneurship (Bux & van Vuuren, 2019). However, few have conducted studies in third-world countries like South Africa, focusing on unconventional channels that can expedite these entrepreneurial intentions and mindset (Ghafar, 2020). This research focuses on a traditional mass media platform, radio, that continues to be an influential medium in the South African context and is yet understudied in the context of the entrepreneurship education discipline (Laguía & Moriano, 2021; Yunandar et al., 2019).

1.3 The business relevance of the study

The global economic landscape has changed drastically in recent times due to the impact of wars, natural disasters, and recent pandemics such as the Covid-19 (GEM, 2021; Mastercard, 2020). The robustness of private sector-driven businesses drives sustainable growth in an economy is a consensus held by scholars (Mbu, 2017). The momentum of new venture creation must be accelerated against the headwinds of the statistics that point to 69% of the 34,6% unemployed population being youth under the age of 35 years in South Africa (StatsSA, 2021). Juxtapose this with countries like the United States of America that have an unemployment rate of only 3.7% (R.A., 2018). A 70% failure rate within the first five years of SMME's inception is a call for mediation strategies (Bushe, 2019). Hustling to increase start-ups as opposed to planning and business plan formulation is not accepted as a mitigation strategy by scholars such as Brinckmann, Grichnik and Kapsa. (2010).

Some of the challenges that lead to high rates of new venture failure are the unavailability of skilled human resources, lack of access to funding, and markets, the phenomenon of increasing resource scarcity, dramatic changes in the customer environment, and legal and regulatory constraints (Beer, Voelpel, Leibod & Tekie, 2005; Kuratko et al., 2011; Neneh, 2012). Entrepreneurial orientation espouses the knowledge capabilities that can be a core source of sustainable advantage in companies (Soniewicki & Paliszkiwicz, 2019). New ventures that have a sustainable advantage can successfully defend themselves against the threats of failure within dynamic environments, furthermore, using the change to create new opportunities

for the business by operationalising offensive strategies (Daspit, Fox and Findley, 2021; Schoemaker & Day, 2021). By inspiring behaviours and mindsets that see change as an opportunity, entrepreneurs creatively seek out ways to be agents of change leading innovation, wealth, job, and value creation. These mindsets and behaviours are required by both existing and new ventures for survival in the business environment today (Subramaniam & Shankar, 2020).

Traditional business models, legacy management systems, and old thinking structures are constantly challenged by the contemporary environment. The need for compatible competency development is critical for building a resilient new venture and ensuring the survival of existing organisations (Neneh, 2012). Scholars have established that entrepreneurial education gives rise to these competencies as was evident when entrepreneurial education was offered to engineering and vocational students (Bae Qian, Miao & Fiet, 2014; Robinson & Gough, 2020). A positive relationship between entrepreneurial education and entrepreneurial intentions was demonstrated (Barba-Sánchez & Atienza-Sahuquillo, 2018; Rae & Melton, 2017). Supplementary research has also established that ventures initiated by those who had previous exposure to entrepreneurial education have higher rates of success in contrast to those without it (Farrukh, Alzubi, Shahzad, Waheed & Kanwal, 2018). Subsequently, it is critical to developing robust, practical, easily accessible strategies that can stimulate these competencies in the population (Suárez, White, Parker & Jiménez-Mavillard, 2018). Additionally, the higher the entrepreneurial intentions in the market and the higher the entrepreneurial competencies, the better the pool of human capital for organisational benefit and success (Hwang & Shin, 2019).

Resource constraints in the market are demanding that entrepreneurs learn the ability to organise limited resources in creative ways. The scarcity of natural resources and the call for responsible business activities are requiring mindsets that can creatively focus on sustainability-orientated organisations that focus on the triple bottom line, planet, people, and profit (Cacciolatti et al., 2020; Hwang & Shin, 2019). This and the requirement for entrepreneurial competencies that espouse responsible corporate governance and a wide view of stakeholder value creation which is not just focused on creating shareholder value, but also include the community, suppliers, and employees (Buchholtz, Brown & Carroll, 2018; Iglesias & Ind, 2020). Businesses then become members of the communities they serve.

Entrepreneurs must constantly evaluate themselves while dedicating resources to scan the environment for changes that can impact venture success (Lu & Wang, 2018). When launching a new business, the quality of the opportunity being pursued must be evaluated against the effort that is going to be required in creating the venture. The solution, or the product and/or services value propositions capitalise on the opportunity (Saadat, Aliakbari, Majd, & Bell, 2021; Subramaniam & Shankar, 2020).

Institutions of learning such as universities have invested in researching the impact of entrepreneurial education on the formation of an entrepreneurial mindset and intentions for new venture creation dispositions that create entrepreneurs (Lee, Chang, Lim, 2005; Bilić, Prka, Gaia Vidović, 2010). Key capabilities such as adaptability, flexibility, aggressiveness when facing competition and the innovativeness to consistently re-invent the organisation has been the pursuit of entrepreneurial leadership within businesses for sustained success (Berraies et al., 2019). Investment in entrepreneurial education, though traditionally initiated by business schools has begun to find expression approaches and institutions. For example, Ghafar (2020) insists that beyond new venture creation as a chief marker for economic activity, for a future-ready society, 21st century skills must be disseminated through various means.

The positive impact of entrepreneurship on country economies has heralded its importance therefore change in countries like Rwanda has become prototypical (Isenberg, 2011). Organisations, schools, and nations need to invest in the dispensing of entrepreneurial education focusing on cost-effective, high-impact mediums within communities, regions, and national contexts (Jain, 2021; Sari, Irawan, Mone & Aras, 2021). Traditional Mass media such as television (TV), radio, print, and recently, new media which include social media platforms and internet streaming services are examples of platforms that have this kind of reach (Sari et al., 2021). As a dispenser of public interest information and an influencer of audience attitudes (Lacroix, Snyder, Huedo-Medina & Johnson, 2014; Laguía & Moriano, 2021), the use of these platforms during the COVID-19 pandemic proved to be instrumental in communicating the safety protocols, medical interventions, and warnings against fake news reports (Garfin, 2020; Riha, Abreu Lopes, Ibrahim & Srinivasan, 2021). In surveys that were conducted, radio and television came out as

the most trusted news sources even in the presence of new media (Riha et al., 2021; Bosch, 2022).

The magnitude of the challenges demand approaches to entrepreneurial education that magnify the emerging view on entrepreneurial education which expands beyond venture creation but also includes wide-entrepreneurial education or value creation pedagogy (VeCP) (Lackéus, 2020). Entrepreneurship as a key strategy for economic and social advancement, the quality, relevance, accessibility, cost-effectiveness, local language compatibility of entrepreneurial education curriculum, and the frequency of exposure to it, will collectively impact the speed at which the desired outcome is achieved (Sari et al., 2021). To increase the number of ventures that succeed against existing constraints, the rate of new venture creation must be accelerated, and the quality of the competencies to higher order thinking processes of those who initiate them will have to also be improved (Ghafar, 2020). While the ease of doing business rankings, according to the World Economic Forum (WEF), places South Africa among the top 10 in the African continent (Mbu, 2017), the prevailing challenges require an acceleration of business development and large-scale job creation opportunities and initiatives (Bux & van Vuuren, 2019).

1.4 Theoretical relevance (gaps in the academic literature that the research is addressing)

While there are extensive studies conducted on the effectiveness of entrepreneurial education in educational institutions and across various academic disciplines, Laguía and Moriano (2021) agrees that literature is scant if not mute on mass media entrepreneurial education, particularly radio. Scholarly studies on the impact of television programmes that are entrepreneurial education oriented, for example, The Shark Tank (Peter & Pierk, 2020), and the study on the “Perceived representation of entrepreneurship in the mass media and entrepreneurial intention” by Laguía and Moriano (2021), demonstrate a positive relationship between the portrayal of entrepreneurship and entrepreneurial intentions among audiences yet, upon searching, not much research has focused on radio.

In the African context, radio is still the cheapest most listened to through which messages get conveyed (Bosch, 2022). The medium has been used extensively for news dissemination regarding varied subjects such as politics, disease outbreaks, and entertainment (Riha et al., 2021). As the largest public broadcaster in the African

continent, part of the core mandate of the SABC is to provide information, education, and entertainment to the population (SABC, 2021). Through partnerships with various stakeholders, such as the department of education, the broadcaster allocates a prescribed number of hours towards target audience-specific education programs both on television and radio (SABC, 2021). In a country where a gap in entrepreneurial skills and mindset to become an entrepreneur has been identified (Bux & van Vuuren, 2019), the setting begs the question of the effectiveness of the broadcast of such content against the intended results. Suárez et al., (2018, p. 2) postulate that “mass media is known to be a powerful vehicle for articulating and defining public perception with an impact that is measurable.” The pace of change is also begging that societies equipped skills for innovation to seize emerging opportunities and drive economic growth (Ghafar, 2020).

From a theoretical perspective, the study aims to contribute to the literature on mass media entrepreneurship education, entrepreneurship mindset, and entrepreneurial intention. Whereas it is widely known that entrepreneurship education has an impact on entrepreneurial intentions (Aparicio, Urbano & Stenholm, 2021; Bae et al., 2014), this study argues that mass media entrepreneurial education has a similar effect on the entrepreneurial mindset, eventually impacting entrepreneurial intentions on a wider scale than most conventional channels. Due to the very nature of the consumers of mass media being consistent and loyal as demonstrated in the study focused on the print media (Suárez et al., 2018) and (Nevill, 2020), radio loyalty is also demonstrated, particularly to African language stations, and radio in general is attested to by the longer time spent listening thus cementing the opportunity for frequent exposure to mass media entrepreneurial education (BRCSA, 2021). The examination of the impact of mass media entrepreneurial education on intentions, mediation of entrepreneurial mindset, and entrepreneurial intention has been suggested in previous research (Suárez et al., 2018; Laguía & Moriano, 2021).

Various approaches can be employed to deliver Entrepreneurship education, and these include business plan formulation, business simulations, small business start-ups and job shadowing an entrepreneur in a real setting, and brainstorming ideas (Hasan, Khan & Nabi, 2017a). The effectiveness of entrepreneurial education is tested by different stakeholders seeking insights most relevant to their role (Lackéus, 2020). Those who teach how to be effective, while policy-makers want to know if entrepreneurial education is effective (Lackéus, 2020).

Ultimately, according to Azjen (1991) entrepreneurial intentions predict action. Additionally, entrepreneurial education fuels entrepreneurial intentions in entrepreneurs that acquire a sense of cognitive ability, and resource access to achieve their business ambitions in the case of self-efficacy. They are propelled when having a handle on historic and environmental data that can assist one in forming a plan having calculated both the risk and anticipated returns, in the case of causation; and one where, according to Grégoire and Cherchem (2020, p. 622), the “means, resources and capabilities one can mobilise constitute more influential determinants of action than the ends one might elect to pursue.”

The increase of studies in mass media entrepreneurial education, as a growing field, will benefit various stakeholders that include media content producers, curriculum developers, education institutions, entrepreneurial education distribution channels/platforms, policymakers, and other interested parties (Bae et al., 2014; Hasan et al., 2017a). The findings aim to provide insights for various stakeholders for focused efforts towards effective, structured, mass media entrepreneurial education in order to expedite company, social, and government imperatives (Vila & Bharadwaj, 2017). Entrepreneurial education stimulates the orchestration of seemingly unrelated resources towards value creation, of products and services (Bae et al., 2014). Hasan, Khan and Nabi (2017b) and Baggen et al. (2021) postulated that anyone can be an entrepreneur since all have the capacity to learn, and entrepreneurs are trained not born. This presents a unique opportunity to awaken entrepreneurship competencies and intentions in many.

1.5 The business rationale of the study

1.5.1 Entrepreneurial ecosystem

The dynamic business environment, presenting a context of uncertainty and ambiguity demands that the entrepreneur must have a unique propensity for steep learning curves (Baggen et al., 2021), in order to constantly re-envision the business until advantage can be achieved (Brinckmann et al., 2010). Furthermore, existing businesses require entrepreneurially minded and skilled executives to steer them towards sustainability, and the creation and maintenance of a competitive advantage (Kuratko et al., 2021; Naumann, 2017). In order for the business ecosystem in any context to mature, the levels of entrepreneurial activity must increase. Also, the large-scale reach of entrepreneurial education in society will expedite the migration of

informal traders into high-value businesses that can employ a relatively larger workforce (GEM, 2021). Access to information regarding business cases, start-up funding, business management, regulatory requirements, skills, emerging opportunities, and technology may feed into the self-belief that entrepreneurship is possible, therefore also contributing to the concept of entrepreneurial self-efficacy (Bux & van Vuuren, 2019; Shahab et al., 2019).

1.5.2 Skills Gap and Career Options

Awareness building, skills development, and intentions origination, are some of the objectives that entrepreneurial education seeks to achieve at different stages of the development of an entrepreneur (Del Vecchio, Secundo, Mele & Passiante, 2021). Educational institutions seek to equip aspiring entrepreneurs with the required skills for success, and shape their mindset, while awareness is to present entrepreneurship as a career option (Nyadu-Addo & Mensah, 2018). When the effect of entrepreneurial education as a lever is understood, it can be manipulated for the benefit of the attainment of the goals of the one operationalising it (Rae & Melton, 2017). This thought empowers the formulation of effective curriculum and programmes, teaching approaches the effectiveness of business schools in crafting market-relevant and impact-oriented programmes that drive entrepreneurial education and stimulate entrepreneurial intentions toward new venture creation (Nyadu-Addo & Mensah, 2018). Governments can invest in the introduction of entrepreneurial education curricula in institutions of learning at an appropriate time and age to fulfil the public mandate of economic stimulation and large-scale job creation (Bux & van Vuuren, 2019). This can facilitate bridging the education quality and skills gaps.

1.5.3 Increased learning pool

Entrepreneurial education causing entrepreneurial intentions effectively increases the rate of new venture creation and increases the number of start-ups while lowering their existential and growth failure rate (Nyadu-Addo & Mensah, 2018). An increase in the number of start-ups and entrepreneurial ecosystems increases the potential for successful collaborations while creating an environment of learning from both successful and failed ventures (Spigel & Harrison, 2018). The insights gleaned from successful start-ups will assist in formulating duplicatable templates of success for aspiring entrepreneurs. In an environment with many informal traders,

entrepreneurial education may expedite the conversion rate to being a registered high-growth venture (Mckenzie, 2017).

1.6 Purpose Statement

The main purpose of the study is to investigate the effect of mass media entrepreneurial education on the entrepreneurial mindset and entrepreneurial intentions. The objectives of the study are as follows:

Objective 1

To investigate the impact of mass media entrepreneurial education broadcasted on radio and how it influences the development of an entrepreneurial mindset of the audience.

Objective 2

To investigate the impact of mass media entrepreneurship education that gets broadcasted on the radio on intentions for new venture creation.

Objective 3

To investigate the impact of the entrepreneurial mindset on entrepreneurial intentions.

Objective 4

To investigate the mediating effect of the entrepreneurial mindset between mass media entrepreneurial education and entrepreneurial intentions.

1.7 Significance of the study

1.7.1 Business development

Evidence shows that economic opportunities arise in proportion to the rise in entrepreneurship education and entrepreneurial activities. An entrepreneurially-minded society can give rise to a business ecosystem, like in Silicon Valley, that encourages experimentation, collaborations, innovation, entrepreneurial role modelling, and ease of new business origination (Wonglimpiyarat, 2016). Mass media entrepreneurial education's impact on attitudes towards entrepreneurship as

a career option, when proven to be positive when carried by radio in South Africa, will present this platform as an opportune channel for building thriving businesses. This will result in increases in job creation mechanisms for the population and an improved standard of living (GEM, 2022; Laguía González, Jaén, Topa & Moriano, 2019). The emergence of such an ecosystem also attracts the potential for growth in foreign direct investment (FDIs) flows into country economy, and the amount of venture capitalist (VC) and angel investment activity, further fueling socio-economic growth (Botelho, Harrison & Mason, 2021).

1.7.2 Impact on research and learning

Mass media entrepreneurship education is important to study for contribution toward growth of the field of entrepreneurial education. Additionally, the finding of the study will inspire further research beyond its outlined scope through the recommendations that emerge as a result of this study. Curiosity about a phenomenon, in this case, the impact of mass media education on radio, will incite scholars to endeavour to understand it thus giving rise to theories that extend existing ones or conceptualise new ones that can illuminate understanding. The benefit is the equipping of role players to improve, grow, and maximise its value for all stakeholders.

The emerging trend of providing education for higher-order entrepreneurial skills will also require extensive academic research and theory development increasing the pool of available literature (Gabrielsson, Hägg, Landström & Politis, 2020). The dynamic nature of entrepreneurship demands life-long learning in order to keep responding to the changes in the environment (Baggen et al., 2021). The continuous message distribution nature of mass media can facilitate this learning process (Madalena et al., 2014). Therefore, understanding the impact of mass media entrepreneurship education distributed through radio will assist in curriculum and content design, delivery approaches, and impact assessment metrics (Cui et al., 2021). Growth in mass media education curriculum and pedagogy will provide an opportunity for the rise of hybrid learning approaches suitable for the dynamics in the market (Ghafar, 2020). This increases the continual relevance of the medium within a rising digital landscape (Krotov, 2017).

1.7.3 Policy and decision-makers

The study will assist policymakers, public broadcasters, and mass media actors to gain insights into the influence that mass media has in transmitting the pedagogic construct of entrepreneurial education toward entrepreneurship mindset development among audiences (Laguía & Moriano, 2021). This understanding can inform policy decisions, budgets, and human capital allocations both in the public and private sectors. The low-cost nature of radio access and its far-reaching footprint even in the most remote areas of the country can serve as an advantage that can be used to influence public behaviour to combat social challenges (Peltzer, Parker, Mabaso, Makonko, Zuma & Ramlagan, 2012). Mass media consumption in the form of traditional media is still robust and its reach is extensive (BRCSA, 2021).

1.8 Conclusion

The rise in access to entrepreneurial education has had a far-reaching positive impact on developed economies, developing economies need to duplicate this phenomenon at an accelerated rate (Ghafar, 2020; Rae & Melton, 2017). Understanding the impact of mass media entrepreneurial education can assist with forming linkages between the different role players in academia, society, and business to achieve such an acceleration by harnessing its power (Qureshi & Mian, 2021).

The research intends to find out what the impact of mass media entrepreneurial education is on the entrepreneurial mindset of the listeners and how this impact intentions to start a business. The entrepreneurial intention is accepted as a forerunner to action, thereby serving as a measure of potential new venture creation. A brief background of the study is provided, and the theoretical basis and the study's relevance to the business context are articulated. The literature review and the hypothesis precede an outline of the proposed research methodology.

CHAPTER 2 - LITERATURE REVIEW

2.1 Introduction

A review of the literature is examined in this chapter by unpacking the theory that underpins the study, namely the theory of planned behaviour (TPB). The main constructs of the study follow starting with the definition of entrepreneurial intentions and exploring the descriptions of its dimensions. Additionally, entrepreneurial education, an intervention used for the development of entrepreneurial intentions, is defined, its dimensions are examined and the link between entrepreneurial education and mass media is then demonstrated. This section of the report also examines the definition of an entrepreneurial mindset, its dimensions, and a brief review of the development thereof. To conclude this chapter a discussion of the relationship between mass media entrepreneurial education (MMEE) and entrepreneurial mindset (EM), entrepreneurial mindset and entrepreneurial intentions (EI) and mass media entrepreneurial education (MMEE) and entrepreneurial intentions (EI) will follow.

2.2 Theory of planned behaviour

Human behaviour, mainly studied in the field of psychology, has been found to be difficult to understand and explain (Ajzen, 2012). Yet human behaviour informs critical activities in life and in the context of this study, the business environment, and its activities. Hardeman, Johnston, Johnston, Bonetti, Wareham and Kinmonth (2002, p. 124) argues that the theory is “relevant to both intentions and behavioural change.” Venture creation behaviour as a contributor to economic growth, an employment creation strategy, and societal socio-economic wellbeing, has aroused the interest of entrepreneurship scholars to study its antecedents (Neneh, 2019). Additionally, the field of entrepreneurship has also sought to understand multiple facets of those who engage in entrepreneurship and those who do not (Munir Jianfeng & Ramzan, 2019). Institutions that have a vested interest in the value created by entrepreneurial activities, and who seek to influence a favourable disposition towards venture creation, such as educational institutions (Laguía González et al., 2019), government-initiated business development agencies (Nguyen, Do, Vu, Dang & Nguyen., 2019), and existing companies have needed to assess the impact of their initiatives (Lee, Howe & Kreiser, 2019).

Among the many theories that have been cited, contrasted, and challenged, the most cited to date, with a focus on intentions and behaviour, is the theory of planned behaviour (TBP) by Icek Ajzen (Sussman & Gifford, 2019; Tornikoski & Maalaoui, 2019). His seminal paper was first published in 1991 (Ajzen, 2012; Tornikoski & Maalaoui, 2019) and later Ajzen (2019) colloquially stated that theory seeks to explain “the relation between what people say and what they actually do” (Tornikoski & Maalaoui, 2019, p. 538). With well over 60 000 citations by the year 2019 (Tornikoski & Maalaoui, 2019) the theory has provided a foundation to test and explain the formation of entrepreneurial intentions.

The theory of planned behaviour forms the basis that underpins the effort to predict human behaviour with relative accuracy (Bae et al., 2014). The theory assumes that human beings engage cognitively and plan before they act (Tornikoski & Maalaoui, 2019). Following gaps identified in the theory of reasoned action (TRA) (Hardeman et al., 2002), which Ajzen and Fishbein (1980) developed, Ajzen added improvements that led to the theory of planned behaviour (Ajzen, 2012; Tornikoski & Maalaoui, 2019). The former was premised on behaviours of interest to be under volitional control, not accounting for the contribution of subjective norms, and perceived and actual behavioural control (Tornikoski & Maalaoui, 2019).

Poor predictive validity of attitudes and traits has led to the emergence of the theory of planned behaviour as the theory with the most reliable outcomes (Farrukh et al., 2018), further proven in the conclusions by (Munir et al., 2019). Bux and Van Vuuren (2019) supported the use of the theory of planned behaviour for assessing entrepreneurship intentions. Neneh (2019) posits that intentions do not always turn into implementation. (Bazan et al., 2020) holds that intentions stand as the best predictor of behaviour. Anjum et al. (2018, p. 430) highlighted the limitations of the theory of planned behaviour concerning generalisation, and that it “explains only a small portion of the variance in the entrepreneurial intentions.” Nonetheless, increased intentions to consider entrepreneurial initiatives (Aparicio et al., 2021; Lekoko et al., 2012; Qureshi & Mian, 2021) attributable to exposure to entrepreneurial education, is enough to justify the use of the theory of planned behaviour in this study (Bux & van Vuuren, 2019), though calls for the model to be extended have been made (Anjum et al., 2018; Munir et al., 2019).

At the core of the theory of planned behaviour found to be more comprehensive, is a person's intentions to do a particular deed (Ajzen, 2012; Farrukh et al., 2018). A person's independent will becomes requisite for intentions to be an effective lever in predicting their course of action or behaviour (Tornikoski & Maalaoui, 2019). In the context of this theory, intentions are the motivation required for an individual to mobilise their energy and effort for the performance of a particular behaviour or action (Zaremohzzabieh, Ahrari, Krauss, Samah, Meng, & Ariffin, 2019). According to Ajzen (1991, p. 181), "the stronger the intention to engage in a behaviour, the more likely should be its performance." The planned behaviour model is graphically outlined below (Figure 1).

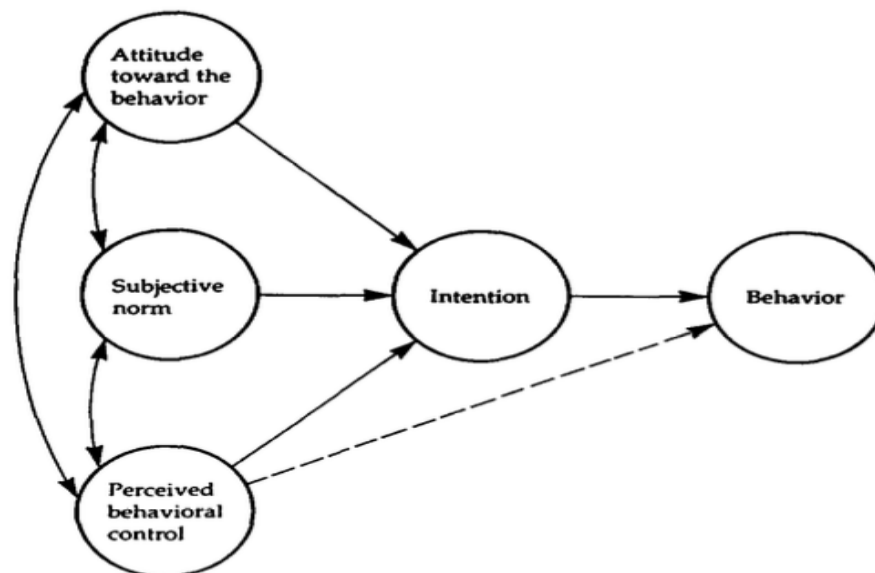


Figure 1. Theory of planned behaviour (Ajzen, 2012)

Attitudes towards a behaviour, subjective norms, and perceived behavioural control (PBC) are the three independent determinants of intentions in the theory of planned behaviour (Cui & Bell, 2022; Krueger & Carsrud, 1993). The positive or negative perception of behaviour by a person, social pressure to perform or not perform a behaviour, and the perceived ability or inability to perform the behaviour explain the determinants respectively (Ajzen, 1991). The weight of each factor in informing intentions is context dependent. Intentional activities to influence the attitudes positively toward entrepreneurship, and social norms, and increase the perceived self-efficacy of individuals are thus expected to increase entrepreneurial intentions,

therein increasing venture creation. Not negating the impact of a robust entrepreneurial ecosystem and contextual factors (Swartz, Amatucci & Marks, 2019).

2.2.1 Attitudes

The positive or negative perception of a behaviour by a person encapsulates the concept of whether the expected outcomes are favourable or not (Ahmed et al., 2020; Laguía González et al., 2019). The overall assessment a person makes regarding a behaviour and the performance thereof that particular result will be achieved (Botelho et al., 2021). At the core of attitudes is the leading behavioural belief that someone holds (Graziose et al., 2018). The theory of planned behaviour, a cognitively based model, assumes that people make decisions following careful thought regarding available information (Botelho et al., 2021; Tornikoski & Maalaoui, 2019). The theory posits that intentions are therefore motivation arising from a plan to act (Botelho et al., 2021). The principle of compatibility insists that intentions and behaviour closely reflect each other when the time-lapse between them is short enough to negate the influences that may sway intentions (Cui & Bell, 2022).

2.2.2 Subjective norms

Social pressure to perform or not perform a behaviour. The perceived or expressed opinions of people who have a significant attachment or whose opinions carry weight can influence intentions (Anjum et al., 2018; Laguía & Moriano, 2021). The more positive the anticipated response from this circle of relations is, the higher the intentions toward a predetermined goal will be (Ajzen, 2012; Shi, Yuan, Bell & Wang, 2020).

2.2.3 Behavioural control

The perceived ability or inability to perform the behaviour, i.e. how a person considers the extent of their ability to perform is the perceived behavioural control (Farrukh et al., 2019). Perceived behavioural control is also controlled by beliefs of access to tools that would enable the performance of the behaviour, opportunity, or absence of constraints (Cui & Bell, 2022; Shahab et al., 2019). The higher the perceptions that required resources are available the higher the levels of PBC (Ajzen, 2012).

Internal control beliefs, include dimensions such as knowledge, emotions, skills, and limitations (Munir et al., 2019). External control factors with dimensions such as

access barriers, opportunity barriers, and the need for others' involvement (Ahmed et al., 2020; Zaremohzzabieh et al., 2019).

Entrepreneurial intentions have become a major subject of interest over the years (Lu & Wang, 2018; Meoli, Fini, Sobrero & Wiklund, 2020). Just as (Munir et al., 2019) highlight the studies of researchers that have gone beyond the fundamental model of entrepreneurship intentions, and context, the call by Swartz et al., (2019) to include contextual factors when studying the influences of entrepreneurship in environments must not be ignored. The plea "for researchers to theorise context rather than to contextualise theory" (Swartz et al., 2019, p. 18) highlights the reality that there are indeed many factors that influence an entrepreneurial culture, mindset, and spirit in different social settings (Munir et al., 2019). And understanding them in concert, though they can be studied in isolation to arrive at focused conclusions can lead to initiatives that are more effective in increasing entrepreneurial intention and therefore new venture creation (Ahmed et al., 2020; Munir et al., 2019). Entrepreneurial activities have been found to be linked to improvements in the economic performance of countries and communities (Audretsch, Obschonka, Gosling & Potter, 2017).

2.2.4 The significance of the Theory of planned behaviour in context

This study tests the robustness of this theory in the context of entrepreneurial education-aligned content that is delivered on the radio medium. A medium closely associated with influencing the attitudes of its consumers (Laguía & Moriano, 2021), the social norms of the areas it broadcasts on (Sari et al., 2021), and the motivations that the listeners have (Hang & Weezel, 2005). As a medium that projects pictures in the minds of its listeners using words, sounds, and various cultural symbols and expressions such as music, dramas, interviews, and other content formats (Ferguson & Greer, 2018). The medium that has found a way to evolve through time, even as new versions of mass media emerged and reduces much of its market share (Madalena et al., 2014) is now finding renewal on digital platforms such as the internet radio (Sari et al., 2021). Much entrepreneurship education has been carried out in academic classrooms, yet many public broadcasting institutions have the mandate to inform, educate and entertain their listeners (Silva, Colussi, & Rocha, 2018). This study tests the effectiveness of the medium to see if similar conclusions are made regarding the relationship between entrepreneurship education and, entrepreneurship mindset arrived at in other research findings even when the

channel is radio (Bux & van Vuuren, 2019; Hasan et al., 2017). It further assesses whether mass media entrepreneurship education propagated through radio maintains a positive relationship with entrepreneurship intentions as has been found in academia (Suárez et al., 2018).

Entrepreneurial intentions are accepted as the starting point for understanding the entrepreneurial process (Nguyen et al., 2019; Nyadu-Addo & Mensah, 2018). To the effect that much study has been dedicated to entrepreneurial intentions and not much on the actual behaviour (Farrukh et al., 2018; Naumann, 2017). This is due to the established consensus that intention is itself the commitment to act according to a plan that one has decided on (Tornikoski & Maalaoui, 2019). The empirical findings of the study have seen it find expression in much research focused on entrepreneurship development (Qureshi & Mian, 2021) entrepreneurship education (Lackéus, 2020; Lekoko, Rankhumise & Ras, 2012), and venture intentions (Shahab Chengang, Arbizu & Haider, 2019). The results of research attempts to use general dispositions, personality traits, and perceived locus of control to predict behaviour have been meagre (Anjum et al., 2018). However, this has not deterred studies that link the theory of planned behaviour with personality traits, such as in the paper (Munir et al., 2019).

Considering that the theory of planned behaviour focuses on intentions, it is therefore relevant in the context of this study testing for the effectiveness of entrepreneurial development interventions. Particularly those presented through the mass media channel, radio (Graziose, Downs, O'Brien, & Fanzo, 2018). The reach of mass media platforms addresses the constraint of access to entrepreneurial development tools such as entrepreneurial education (Baggen et al., 2021; Bux & van Vuuren, 2019; Karyaningsih et al., 2020) by audiences and general country citizenry (Nguyen et al., 2019). The findings of the study will shed light on the impact of initiatives to equip the audiences with entrepreneurship-related information, skills, and other aspects of new venture creation. In the discipline of entrepreneurship education and research, policy-makers, advertisers, media businesses, institutions of higher learning, and entrepreneurship agencies stand to gain from the results of this study regarding the relevance of mass media as a channel for entrepreneurial intentions mobilisation (Lackéus, 2020). Insights can inform media strategies for enhancing entrepreneurial activities on a large scale.

2.3 Entrepreneurial intentions

Entrepreneurship is largely regarded as an intended and planned behaviour (Farrukh et al., 2018), while intentions are accepted as a precursor to action in favour of entrepreneurial activities such as venture origination (Krueger & Carsrud, 1993; Farrukh et al., 2018). Bird (1988) holds that intentions are independence of the mind, focusing attention, and will towards the pursuit of a specific goal, venture initiation. The entrepreneurial intention, in yet another study, was defined as “the state of consciousness of entrepreneur's direct attention, experience and action to a business concept” (Lu & Wang, 2018, p. 63) a desire “to either own their own business or start one” (Lu & Wang, 2018, p. 63). For this study intention, within the field of entrepreneurship, is therefore defined as a pre-determination by an individual to create a new venture. Intentions are influenced by attitudes which is what has led to an interest in studying the antecedents that influence them.

Bird (1988) postulates that for new products, services, and ventures to be realised, inspiration, sustained thinking, and intention are the key requirements. The theory of planned behaviour, which has its origins in the field of psychology (Hardeman et al., 2002), robustly provides a basis for the predictability of various planned behaviours including that of starting a business (Krueger & Carsrud, 1993). The theory, extensively used in entrepreneurship studies, has however been criticised by Sniehotta et al. (2014) as a tick-box theory that does not lend help to its users in crafting interventions when applied. They made a call for to retirement of the theory due to its loss of usefulness. Regarding the theory of planned behaviour's defence, Conner (2014) has argued that the effectiveness of this theory is what has elevated it to these heights of interest. The correlational characteristic of the model would have decreased this interest, but the causal model characteristic informs measures that can be employed to alter behaviours in question (Conner, 2015). It is this element that informs interest in models testing for intentions in entrepreneurship development, entrepreneurial mindset, and entrepreneurial intentions.

2.4 Entrepreneurial education

It was in the 1990s that entrepreneurship education began to emerge (Hägg & Gabrielsson, 2020), however, (Badri & Hachicha, 2019) notes that developed countries started offering entrepreneurship education programmes as early as 1987. This field has evolved into a highly respected academic field (Gabrielsson et al.,

2020). Young as the field is, entrepreneurship has become a focus area for developed and emerging nations (Handayati, Wulandari, Soetjipto & Wibowo, 2020), to enhance entrepreneurial activities toward wealth creation (Bilan, Hussain, Haseeb & Kot, 2020). Gabrielsson et al. (2020) outline four evolutionary periods in the discipline showing that the 1980s were a traditional top-down approach period where teachers were the source of knowledge, the learning process focus came in the 1990s when the emphasis was placed on students' experience, the 2000s focused on environment-relevance and real-world learning basis, and 2010s focused on the learner and their interaction with society.

2.4.1 Entrepreneurial education is defined

Entrepreneurial education is defined as “the entire educational activity with the ultimate goal of developing students' entrepreneurial intentions.” (Mukhtar, Wardana, Wibowo & Narmaditya, 2021, p. 3). In the research by (Ahmed et al., 2020), entrepreneurship education is defined as any course of learning with the purpose of developing entrepreneurial attitudes and competencies. Entrepreneurial competencies are described as “the capacity to identify opportunities, gather and manage all that is required to derive benefit from the opportunity” (Byers & Thomas, 2011, p. 10). Additionally, (Nyadu-Addo & Mensah, 2018) describe entrepreneurial education as an education pathway that empowers students with the ability to sense environmental cues of opportunities in pursuit of social and economic ambitions, and display the ability to engage entrepreneurial activities. Lekoko et al. (2012) expounds on the definition, describing it as the ability to use information gleaned from the environment, and skills to creatively form a new venture under difficult business terrains. However, Hägg and Gabrielsson (2020) postulates that research on entrepreneurial education may have gone ahead of the theoretical development of the discipline, thereby leaving its definition to context influence.

2.4.2 Entrepreneurial education approaches

Three entrepreneurial education approaches outlined by Hasan et al. (2017) are generalised, motivation, and augmented entrepreneurial education. Generalised entrepreneurial education awakens the potential in people, through practice structured learning. While, motivational entrepreneurial education bridges entrepreneurial intentions and actions by stimulating impetus toward entrepreneurial behaviour (Hasan et al., 2017), interacting with successful entrepreneurs can

influenced attitudes such that people can choose entrepreneurship as a career path (Aparicio et al., 2021). Augmented entrepreneurial education espouses practically applying the acquired knowledge using business simulations, business plan formulations competitions, and job shadowing in a real business setting (Hasan et al., 2017).

2.4.3 Generalised entrepreneurial education

In generalised entrepreneurial education, the entrepreneurial potential is aroused in an individual that is awareness-building in nature, presenting available entrepreneurial action options (Hasan et al., 2017a). Through in this type of entrepreneurial education, the possibility for entrepreneurial activity is planted and awareness of inborn abilities the individuals have (Ghafar, 2020). Providing well-crafted content allows the listeners or the audiences to conceive in their minds the possibility of success in the field of entrepreneurship (Hasan et al., 2017a).

2.4.4 Motivational entrepreneurial education

This type of entrepreneurial education is set to motivate listeners to choose entrepreneurship as a career option (Qureshi & Mian, 2021). With sustained exposure to entrepreneurial education, a person can develop a sense of entrepreneurial feasibility and the confidence to pursue entrepreneurial ambitions (Laguía & Moriano, 2021). Generally, by bringing successful entrepreneurs into the spotlight (Eikhof, Summers & Carter, 2013), role models about whom people can form an opinion and thus emulate (Aparicio et al., 2021) inspiring their own process of entrepreneurial pursuit (Di Pietro, 2018). This type of entrepreneurial education forms the bridge between entrepreneurial intentions and the action (Hasan et al., 2017a).

2.4.5 Augmented entrepreneurial education

Augmented entrepreneurial enhances the preceding two kinds of cognitive entrepreneurial education approaches (Hasan et al., 2017). This education provides mechanisms through which students can gain experiential dimensions of the entrepreneurial education (Lackéus, 2020). By creating opportunities for audiences and learners to practically engage with the theoretical and informative components of entrepreneurial education through the use of competitions, scenario presenting, quiz formats, and simulations entrepreneurial education effects are amplified (Hasan

et al., 2017; Lackéus, 2020). Entertaining television formats such as Dragon's Den, an entrepreneurs competition, demonstrated a positive relationship between the viewership of the show and the assimilation of the embedded entrepreneurship education (Laguía & Moriano, 2021). Augmented or experiential entrepreneurship education is a doing-orientated pedagogic approach (Lackéus, 2020).

2.4.6 Growth driver

Entrepreneurial education is seen as a critical strategy for economic growth, creation of employment, and wealth (Mahadea & Kaseeram, 2018). Lee, Chang and Lim (2005) argues, in their study on the impact of entrepreneurship education in the U.S and Korea, that children in America are exposed to entrepreneurship while at school, and those in Korea only in their adult years if at all. This, makes the United States of America display a more entrepreneurial social attitude than Korea, accounting for the high number of both start-ups and established businesses (Lee et al., 2005). Because of this impact, (Bilić et al., 2011) showed that Europe is making efforts to cultivate the same culture by focusing on entrepreneurship education. Interest in entrepreneurship education has emerged in various governments, institutions of learning and other organisations as the positive relationship between entrepreneurship education and intentions to start a business has been demonstrated by various research findings (Lekoko et al., 2012).

In this study, the focus is on entrepreneurial knowledge gained through the transmission of mass media entrepreneurial education on the radio, adding to the insights gleaned from the research by (Laguía & Moriano, 2021) that assessed the representation of entrepreneurs in mass media, television. This differs from research that is mostly based on entrepreneurial education offered in classrooms or institutions of higher education (Handayati et al., 2020). Additionally, though the study does not focus on entrepreneurial education's pedagogical evolution, like the study conducted by (Lackéus, 2020) it tests for the causal relationship between educational objectives and impact on audiences. Thus, contributing to the field by assessing mass entrepreneurial education's impact when propagated through radio. This study also provides an optional answer to the question of the sharing of emerging best practices within entrepreneurial education across different institutions (Qureshi & Mian, 2021).

2.5 Mass Media and entrepreneurship education

2.5.1 Mass media

Media is the plural form of medium, a channel through which communication is dispersed to a group of people (Madalena et al., 2014). Media has been going through various phases of evolution (Sari et al., 2021). Following print, electronic platforms such as radio and television emerged and, in most countries, commanded large audiences (Jain, 2021; Madalena et al., 2014). Many emerged as state-owned platforms that were used to disseminate information, news, and education to the population (Esch, Bianco & Esch, 2016). Much has since changed with the advent of the internet where a new type of media has emerged and platforms such as websites, apps, and social media have become new methods through which people communicate with each other and with large groupings of audiences (Ferguson & Greer, 2018; Silva et al., 2018).

2.5.2 Mass media influence

Mass media are those platforms through which communication is disbursed to large groups of people/audiences/readers reasonably at the same time (Sari et al., 2021). The influence of mass media on society's attitudes regarding a wide variety of subjects including that entrepreneurship has been established (Zampetakis et al., 2015). Mass media has been used to promote messages that destigmatise topics in health, teach about agriculture, and influence behavioural change in audiences (Peltzer et al., 2012). Radio influences cultural and social values and is one of the most cost-effective mass media platforms in Africa reaching millions of households at a time (Laguía & Moriano, 2021). In a country that is faced with a high and increasing unemployment rate, 34.9% as stated by StatsSA (2021), an entrepreneurial education, an entrepreneurial mindset and the intention to start new business ventures are critical as an intervention strategy (Laguía & Moriano, 2021). Mass media also provides an additional channel through which wide entrepreneurial education, primarily preoccupied with multistage access to entrepreneurial education, to gain accessibility to a wide audience (Baggen et al., 2021).

2.5.3 Radio resilience

Affectionately known as the "theatre of the mind", traditionally radio has predominantly been an unseen but heard medium (Madalena et al., 2014). Trends

have pointed to a rise in internet-based media options and consumption by audiences on platforms such as Facebook, YouTube, and Tweeter (Jain, 2021). However, this does not seem to have dented the stable growth of traditional mass media as reflected in the audience distribution study conducted by the Broadcasting Research Council of South Africa (BRCSA, 2021). Radio has moved from obscurity, by making its way onto the social media platforms such as Instagram adding a visible dimension to its offering (Jain, 2021). This traditional mass media platform presents a unique opportunity to potentially answer the “how” question that was asked by Baggen et al. (2021) to advance wide entrepreneurial education, explained as entrepreneurial education reaching all people. As a medium, it can be used as a tool that enlarges the reach of entrepreneurial education (Laguía & Moriano, 2021).

2.5.4 Entrepreneurial education and radio

Entrepreneurial education is known to foster innovation and the development of new businesses that create jobs, new products, and business models (Bilan et al., 2020; Kier & McMullen, 2018). In the context of the economic challenges faced by South Africa and other countries like Croatia, such as the high youth unemployment rate, building a society that is entrepreneurial is critical (Robinson & Gough, 2020) for enhanced interest in venture creation activities (Handayati et al., 2020). The influence of mass media on society, the phenomenon of an entrepreneurial mindset, and the intentions to establish start-up businesses are pertinent subjects that require investigation in today’s context (Hang & Weezel, 2005). Particularly since the impact of radio on influencing attitudes positively with regards to social matters has been proven even at a community radio level (Khan et al., 2017).

2.5.5 Mass media entrepreneurial education

For purposes of this study mass media entrepreneurial education is defined as the formal and informal propagation of entrepreneurial education curriculum/content using broadcast or mass-reaching media channels and formats such as radio (Madalena et al., 2014; Ndou, Secundo, Schiuma & Passiante, 2018). The reciprocal relationship between media and entrepreneurship was clearly described by Hang and Weezle (2005), in how media influences the entrepreneurship phenomenon in society. Mass media entrepreneurial education equips listeners to succeed at business origination and administration by providing information and training that develops and enhances opportunity identification, critical thinking, decision-making,

and innovativeness (Aparicio et al., 2021; Lackéus, 2020). With radio described as the “theatre of the mind” (Ferguson & Greer, 2018), the listener is taken into a mental classroom as entrepreneurial education content-orientated programming is presented through various formats such as information sharing, dramas, interviews, music, public announcements, and advertisements (Laguía & Moriano, 2021; Sari et al., 2021).

Mass media entrepreneurial education is used as an attitude development and adjustment this is encouraged to begin at the earliest stage in a person's life (Laguía & Moriano, 2021). The common characteristic between entrepreneurial education and mass media platforms of influencing attitudes seamlessly joins the two concepts (Laguía & Moriano, 2021). Mass media influences in general, and similarly so does entrepreneurial education, except its objectives are the enhancement of entrepreneurial activities that include business management (Hägg & Gabrielsson, 2020) and venture creation (Suárez et al., 2018).

The presentation of an entrepreneurial education curriculum using unconventional approaches as opposed to the typical classroom teacher-student approach (Lackéus, 2020), is consistent with entrepreneurial education's classification of uniqueness by (Hägg & Gabrielsson, 2020) by also finding creative expression in mass media. Mass media entrepreneurial education can be embedded in TV shows like the Apprentice or The Shark Tank (Peter & Pierk, 2020), in radio drama storylines, documentaries, competitions, inspirational interviews with entrepreneurs, and the common presenter information-sharing methods (Khan et al., 2017; Madalena et al., 2014). This proposed study will focus on three types of entrepreneurship education, namely generalised, motivational, and augmented mass media entrepreneurial education.

2.5.6 Generalised mass media entrepreneurial education

Through this type of mass media entrepreneurial education, entrepreneurship possibility is planted and awareness of inborn abilities the individuals have. Providing well-crafted content allows the listeners or the audiences to conceive in their minds the possibility of success in the field of entrepreneurship (Hasan et al., 2017).

2.5.7 Motivational mass media entrepreneurial education

This entrepreneurial education is set to motivate listeners to choose entrepreneurship as a career option (Qureshi & Mian, 2021). Frequent exposure to this type of mass media entrepreneurial education helps the listeners to develop a sense of confidence to pursue entrepreneurial ambitions (Suárez et al., 2018). Generally, by bringing successful entrepreneurs onto the platform (Eikhof et al., 2013), presents audiences and listeners with role models about whom they can form an opinion and thus model their own process of entrepreneurial pursuit against (Di Pietro, 2018). This type of entrepreneurial education forms the bridge between entrepreneurial intentions and the action (Hasan et al., 2017a).

2.5.8 Augmented entrepreneurial education

Augmented mass media entrepreneurial education provides support for the preceding two kinds of mass media entrepreneurial education (Hasan et al., 2017a; Shi et al., 2020). By creating opportunities for audiences to engage with the theoretical and informative components of mass media entrepreneurial education, augmented mass media entrepreneur education through the use of competitions (Mckenzie, 2017), scenario presenting, quiz formats, and simulations, intending to give audiences and students a sense of the experience of the conceptual and theoretic elements provided by the preceding two (Hasan et al., 2017; Madalena et al., 2014). Entertaining television formats such as Dragon's Den, an entrepreneurs competition, demonstrated a positive relationship between the viewership of the show and the assimilation of the embedded entrepreneurship education (Laguía & Moriano, 2021).

Mass media entrepreneurial education, therefore, forms the primary basis of the first three proposed hypotheses of the study (Hasan et al., 2017). While the last proposed hypothesis seeks to investigate the moderating impact of an entrepreneurial mindset on entrepreneurial intentions. The three sub-types of mass media entrepreneurial education thus form the basis of the sub-hypothesis. Available evidence posits that much ground has been covered with regard to the relationship between entrepreneurship education and the entrepreneurial mindset (Bux & van Vuuren, 2019; Qureshi & Mian, 2021; Wardana, Narmaditya, Wibowo, Mahendra, Wibowo, Harwida & Rohman, 2020), and the relationship between the entrepreneurship

mindset and intention to start a business (Kuratko, Fisher & Audretsch, 2021), yet little research focus has been placed on the use of mass mediums.

2.6 Entrepreneurial mindset

The entrepreneurial mindset is defined by (Naumann, 2017) as a way of thinking that focuses on creating value without regard for resource constraints in a business environment characterised by uncertainty and ambiguity. Various definitions exist in the academic literature that concurs that an entrepreneurial mindset distinguishes entrepreneurs from non-entrepreneurs (Kouakou, Li, Akolgo & Tchamekwen, 2019). The ability to take note of variables that appear unrelated, organise them in thought with the view to create a product or a service which can lead to new venture creation or the growth of existing business (Baron, 2006). This type of mental disposition, though a singular definition still illudes researchers, is agreed upon as what distinguishes those who can identify opportunities and exploit them, having conceived intentions to start a business in their minds.

An entrepreneurial mindset is said to have seven attributes. The attributes of an entrepreneurial mindset include cognitive tuning and goal orientation, heuristic-based decision logic, alertness, prior knowledge, and social interaction (Kuratko, Fisher & Audretsch, 2021). The last two attributes are not so easily identifiable, and these include cognitive adaptability and metacognition. These traits have proven to be important elements required in strategic management (Daspit et al., 2021).

Kouakou et al. (2019), in their review paper on entrepreneurial mindset proposed a peculiarity in an action-orientated mindset and an analysis pre-occupied mindset. The implementing mindset which engages the decision to do is presented as superior as compared to elaborating mindset which is disposed to analytical thinking that aborts the action element of the intention for new venture creation (Kouakou et al., 2019).

2.7 Main relationships

2.7.1 Mass media entrepreneurial education and entrepreneurial mindset

In the education context, an entrepreneurial mindset can be developed through acquiring training provided by mass media intrapreneurial education (Hägg & Gabrielsson, 2020). The spirit of entrepreneurship, or mindset, encourages agile

thinking, creativity, and continued innovation (Aldila Krisnaresanti et al., 2020). It is also seen as a critical spirit to have for the survival of start-ups, 60-70% of which never make it past five years after inception (Waddock, 2020). The pursuit of this mindset has led the United States to introduce at least one entrepreneurship course in 60% of their colleges and universities (Lee et al., 2005). In business, the entrepreneurial mindset is the habitual way of thinking that leads to the discovery of opportunities and the building of response mechanisms that fosters the exploitation of the same (Handayati et al., 2020).

The curiosity to explore why some people have the capacity to organise information and available or limited resources to create value has led to the rise of research in the area of entrepreneurial mindset (Naumann, 2017), intentions to start a business (Ahmed et al., 2020), and the effects of entrepreneurial education (Bilić et al., 2011). The three subdimensions of entrepreneurial education named generalised entrepreneurial education, augmented entrepreneurial education, and motivational intrapreneurial education important in the formation of an entrepreneurial mindset (Hasan et al., 2017). It is therefore critical to understand how each sub-dimension contributes to the relationship between mass media entrepreneurial education and entrepreneurial mindset.

A generalised entrepreneurial education sub-dimension deals with the creation of awareness, and the dispensing of information regarding entrepreneurial activities and venture creation, thereby presenting an entrepreneurial career as an option one can choose (Lekoko et al., 2012). It is during awareness of entrepreneurship that an opinion or attitude is formed regarding the discipline and how one can engage with it (Liñán et al., 2018). While augmented entrepreneurial education, or simply, experiential pedagogics approaches are meant to equip the students for real-life ease of integration (Baggen et al., 2021; Ghafar, 2020). Understanding how each sub-dimension contributes toward the relationship between mass media entrepreneurial education and entrepreneurial minds will assist in the development of relevant entrepreneurial curriculum and content, and also highlight which subdimensions to focus on in order to achieve the set behavioural changes targeted (Laguía & Moriano, 2021).

2.7.2 Mass Media Entrepreneurial education and Entrepreneurial Intentions

It has emerged in various studies that students exposed to organised entrepreneurial pedagogic processes display a propensity toward entrepreneurial intentions more than those without (Bux & van Vuuren, 2019; Laguía González et al., 2019; Shi et al., 2020). Entrepreneurial education is a construct that is a precursor to the development of an entrepreneurial mindset that facilitates intentions for new venture creation or any entrepreneurial career pursuit (Ahmed et al., 2020). This new and growing field is aimed at presenting high-growth options for career and employment creation for its students, shaping intentions that lead to the start-up initiation (Hägg & Gabrielsson, 2020; Lekoko et al., 2012). Bae, Qian, Miao and Fiet (2014) state that entrepreneurial education is a pedagogical approach used to inspire a desire for one to own a business. It is the robustness of entrepreneurship under contexts of great uncertainty (Grégoire & Cherchem, 2020) and constraints that have inspired the pursuit of the field's development and promotion (Farrukh et al., 2019).

Baggen et al. (2021) introduced the concept of “wide entrepreneurial education” in their study. These scholars argue that wide entrepreneurial education is a tool aimed at equipping all exposed to it with life-long learning competencies, at different stages of life, to successfully navigate the prevailing and future contexts, regardless of whether there are ambitions for new venture creation or not (Ahmed et al., 2020; Baggen et al., 2021; Rae & Melton, 2017). This concept addresses the pedagogic nature of entrepreneurial education and the reach of the channels through which it is made available, including the scope of the student constituency (Baggen et al., 2021). Beyond new venture origination, competencies that entrepreneurial education provides are furthermore required in making existing businesses sustainable, and competitive (Bae et al., 2014).

The demand for entrepreneurial education emanates from various sections of society, government (Mahadea & Kaseeram, 2018), business, and students. (Baggen et al., 2021; Lekoko et al., 2012) contends for the expanded concept of entrepreneurial education as a competency that all members of society must have (Hasan et al., 2017a), in that the classic definition is too limited to combat the multi-faceted challenges faced (Cacciolatti et al., 2020; Mahadea & Kaseeram, 2018). The effectiveness of entrepreneurial education can be assessed by testing for its impact on attitudes toward entrepreneurship, mindset change, and intentions to start a new

venture (Bux & van Vuuren, 2019). This then opens the scope of channels through which one receives entrepreneurial education from the formal schooling system, learning from entrepreneurial parents (Monteith & Camfield, 2019), and other channels such as the media (Yunandar et al., 2019).

2.7.3 Entrepreneurial mindset and Entrepreneurial Intentions

The positive relationship between entrepreneurial mindset and entrepreneurial intentions has been confirmed by multiple studies (Campos et al., 2017; Kouakou et al., 2019; Ndou et al., 2018; Robinson & Gough, 2020). Though the entrepreneurial mindset has been found to have a mediating effect on the development of entrepreneurial intentions through training and education (Bux & van Vuuren, 2019; Wardana et al., 2020), there has been surprisingly low output on research focused primarily on the entrepreneurial mindset (Cui & Bell, 2022). Entrepreneurial mindset even within the context of other disciplines that include the engineering (Rae & Melton, 2017), technology training and venture creation (Ndou et al., 2018; Swartz Scheepers & Amatucci, 2022), and vocational studies (Di Pietro, 2018), has been found to equip students with competencies required for them to think entrepreneurially for new business origination within existing organisations, or to start their own ventures (Ndou et al., 2018). This phenomenon displays a high degree of entrepreneurial intentions, which has been found to also lead to actual entrepreneurial behaviour as confirmed by (Cui & Bell, 2022).

2.7.4 Mass media entrepreneurial education, mindset, and intentions

The phenomena that are mass media entrepreneurial education, entrepreneurial mindset, and entrepreneurial intentions have been found in common research studies (Anjum et al., 2018; Gabrielsson et al., 2020; Laguía González et al., 2019; Qureshi & Mian, 2021). Entrepreneurial education has been found to facilitate the development of an entrepreneurial mindset (Ahmed et al., 2020). Entrepreneurial education has also been found to facilitate the development of entrepreneurial intentions (Anjum et al., 2018; St Quinton, Morris & Trafimow, 2021). Entrepreneurial mindset, though predominantly studied from a cognitive perspective, and studies have begun to emerge that focus on behavioural entrepreneurial mindset (Cui & Bell, 2022), is one of the most understudied constructs of the other two. Entrepreneurial mindset or an entrepreneurial cognitive posture has been found to not only be beneficial to those seeking new venture creation, but it has also been found to be

instrumental in facilitating creativity, problem-solving skills, and heightened creativity even among those operating in sectors such as technology businesses, engineering disciplines, vocational sectors, and other industries (Rae & Melton, 2017).

2.7.5 Mediating effect of entrepreneurial mindset between MMEE and EI

Entrepreneurial mindset described by Kouakou et al. (2019, p.118) as “an innovative practice which leads to discover and evolve opportunities and then set up the right behaviour to effectively exploit those opportunities”. The mediating effect of entrepreneurial mindset between mass media entrepreneurial education and entrepreneurial intentions, though not frequently studied, receives recurrent mention in most studies linking the two constructs (Cui & Bell, 2022; Kouakou et al., 2019; Kuratko et al., 2021; Qureshi & Mian, 2021). In the study by Cui and Bell (2022) the fact that the entrepreneurial mindset frequently receives attention from scholars from a cognitive perspective as opposed to adding the behavioural dimension was also seen as a gap that needed to be filled. This is also attributable to the fact that the entrepreneurial mindset is mostly mentioned in studies focused on entrepreneurial education and intentions (Baggen et al., 2021; Turner & Gianiodis, 2018).

Since an entrepreneurial mindset is critical in facilitating the positive relationship between entrepreneurial education and entrepreneurial intentions (Daspit et al., 2021), it does warrant therefore that channels or platforms such as mass media be considered as potential channels that can stimulate the development of entrepreneurial intentions in audiences (Qureshi & Mian, 2021). Through multiple formats entrepreneurial education can be propagated on mass media platforms (Suárez et al., 2018; Yunandar et al., 2019), this affords the opportunity to influence the development of an entrepreneurial mindset from as early as primary school audience listeners and youth, who are most affected by high unemployment rates within various countries. The radio platform presents the advantages of low cost, wide reach, context relevance, and message transmission using various local languages (Esch et al., 2016; SABC, 2021).

Entrepreneurial mindset within the entrepreneurship discipline is opportunity identification and exploitation orientated and can be developed through the mass media entrepreneurial education (Saadat et al., 2021). For new ventures to be formed based on opportunities in the environment, and for existing organisations to exploit the opportunities arising from environmental trends entrepreneurial and

organisational alertness is a requisite (Chavoushi et al., 2021). According to Saadat et al. (2021) entrepreneurial mindset positively mediates the effect of entrepreneurial education as recipients think and act entrepreneurially through venture creation or new business origination for existing companies.

2.8 Conclusion

The interplay between two of these three, entrepreneurial intentions, mass media entrepreneurial education, and entrepreneurial mindset has been linked by various concluded studies (Laguía & Moriano, 2021). This study brings all three constructs under one study, to understand how mass media entrepreneurial education and entrepreneurial mindset ultimately impact entrepreneurial intentions. This interplay has led to the formulation of the main question of the study. It is from this main question that the sub-hypothesis will be outlined and studied.

CHAPTER 3 - CONCEPTUAL MODEL AND HYPOTHESIS

3.1 Introduction

Building on the outlined literature in Chapter two, this research primarily seeks to first understand the impact of mass media entrepreneurial education on the development of entrepreneurial intentions for venture creation, secondly on the entrepreneurial mindset, and lastly the effect of entrepreneurial mindset on entrepreneurial venture creation intentions. Furthermore, under examination in this study is the moderating effect of an entrepreneurial mindset between mass media entrepreneurial education and entrepreneurial intentions to start a business. Additionally, Chapter three outlines the conceptual model and outlines the hypotheses.

3.2 Theoretical Model Development

An effort has been invested in studying human behaviour using the theory of planned behaviour for effect testing and predictive purposes within the context of entrepreneurial education (Sussman & Gifford, 2019). This behavioural model developed in the 1980s by Ajzen (2012) has been used in various research in pursuit of presenting and improving entrepreneurial education in institutions of higher learning (Badri & Hachicha, 2019; Brüne & Lutz, 2020), understanding effective approaches for the delivery of entrepreneurial education to students (Lackéus, 2020), and increasing the propensity towards choosing entrepreneurship as a career path and new venture creation (Liao et al., 2022).

A high rate of successful venture creation and entrepreneurial activity has a positive relationship with a country's socio-economic growth (Ghafar, 2020). Additionally, entrepreneurial education also displays a have a positive relationship with the development of entrepreneurial intentions and an entrepreneurial mindset (Cui & Bell, 2022). Furthermore, an entrepreneurial mindset has been found to have a positive effect on entrepreneurial intentions (Mukhtar et al., 2021). As these relationships stand, they have mostly never been tested within the context of entrepreneurship education forming part of the content transmitted through mass media channels in the South African context.

In the context of the growth of the field of entrepreneurial education and the increasing interest in entrepreneurship, its development, and those of the

entrepreneurial mindset, and entrepreneurial intentions (Nyadu-Addo & Mensah, 2018), and the proposed view to expand it beyond input-output venture creation focus to a more process-focus with a wider view that includes social, cultural, environmental, and business pursuits (Ghafar, 2020), it then begs the questions that follow.

3.3 Main Research Question

What is the impact of mass media entrepreneurship education on entrepreneurial mindset creation and the intention to start a business?

The sub-questions are:

1. What is the impact of mass media entrepreneurship education broadcasted on the mass media platform radio, on intentions for venture creation?
2. What is the impact of mass media entrepreneurship education broadcasted on the mass media platform radio on the entrepreneurial mindset?
3. What is the impact of the entrepreneurial mindset on entrepreneurial intentions?
4. What is the mediating impact of the entrepreneurial mindset between mass media entrepreneurial education and entrepreneurial intentions?

The proposed conceptual model is represented below:

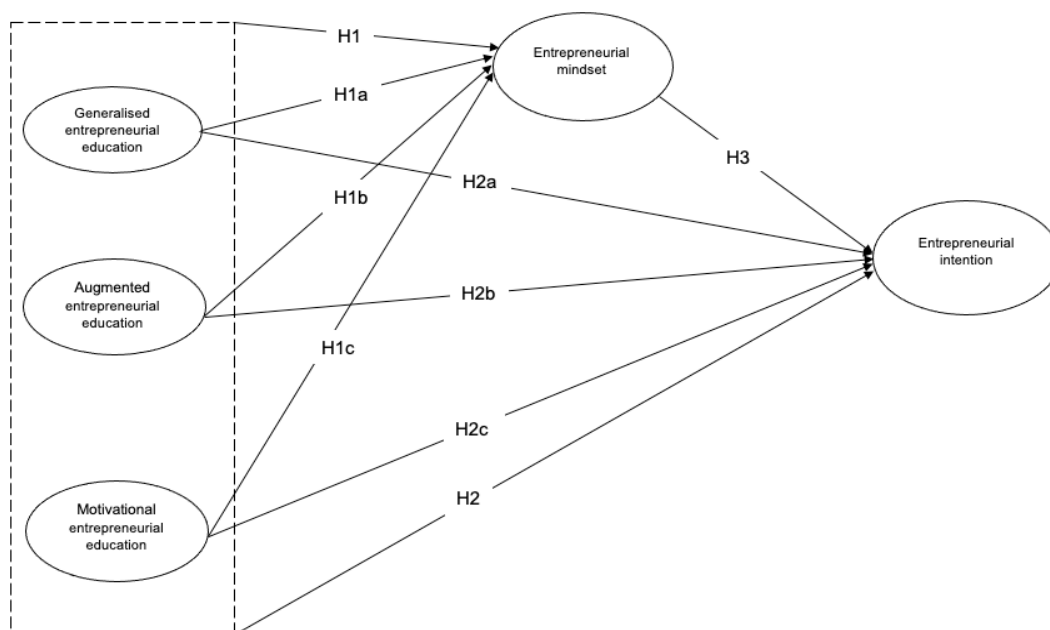


Figure 2. The proposed conceptual model

Mass media entrepreneurial education as an antecedent of entrepreneurial mindset and intentions, and the mediating effects of entrepreneurial mindset between mass media entrepreneurial education and entrepreneurial intentions.

3.4 Hypothesis and Sub-hypothesis

3.4.1 Hypothesis 1

Mass media entrepreneurial education is found to produce positive attitudes toward entrepreneurship enhancing an adaptive mental disposition that (Hägg & Gabrielsson, 2020; Nguyen et al., 2019). Multiple studies conducted on various continents and countries have found that entrepreneurial education creates a pattern of thinking toward enterprise and small business initiation among students that improve venture success potential while simultaneously improving employability prospects (Bilic et al., 2011; Lee et al., 2005; Nyadu-Addo & Mensah, 2018). It has been found that scarcity of employment opportunities and job dissatisfaction have fuelled an interest in the field of entrepreneurship, with many seeking alternative income-generation options (Anjum et al., 2018; R.A., 2018). This study, therefore, hypothesises that mass media entrepreneurial education has a positive effect on the entrepreneurial mindset (Naa, Arthur, Appiah-Nimo & Ofori, 2018).

The hypothesis considers the three subdivisions of entrepreneurial mass media education (MMEE), which are generalised mass media entrepreneurial education (GEE), motivational mass media entrepreneurial education (MTEE), and augmented mass media entrepreneurial education (AGEE).

Therefore, the first hypothesis was:

H1 – Mass media entrepreneurial education has a positive effect on the entrepreneurial mindset.

Hypothesis 1a (*H1a*) - Generalised mass media entrepreneurial education (GMEE) has a positive impact on the entrepreneurial mindset.

Hypothesis 1b (*H1b*) - Augmented mass media entrepreneurial education (AMEE) has a positive impact on the entrepreneurial mindset.

Hypothesis 1c (*H1c*) - Motivational mass media entrepreneurial (MMEE) education has a positive impact on the entrepreneurial mindset.

3.4.2 Hypothesis 2

The proposed hypothesis modelled also posits that mass media entrepreneurial education has a positive impact on intentions to start a business (Nguyen et al., 2019). Mass media entrepreneur education influences attitudes that stimulate new venture creation ideas (Laguía & Moriano, 2021). Unlike business education, the focus of this field is not just about equipping the recipient with the necessary skills for organisational administrative roles, but also for starting a business (Aparicio et al., 2021; Robinson & Gough, 2020). The mass media entrepreneurial education subtopics will be tested to investigate their individual and collective effect on entrepreneurial intentions.

Therefore, the second hypothesis states that:

H2 – Mass media entrepreneurial education has a positive impact on entrepreneurial intentions.

Hypothesis 2a (*H2a*) - Generalised mass media entrepreneurial education (GEE) has a positive impact on entrepreneurial intentions.

Hypothesis 2b (*H2b*) - Augmented mass media entrepreneurial education (AGEE) has a positive impact on entrepreneurial intentions.

Hypothesis 2c (*H2c*) - Motivational mass media entrepreneurial (MTEE) education has a positive impact on entrepreneurial intentions.

Mass media entrepreneurial education is found to trigger positive attitudes toward entrepreneurship (Hägg & Gabrielsson, 2020; Nguyen et al., 2019). Multiple studies conducted on various continents and countries have found that entrepreneurial education creates a favourable attitude toward enterprise and small business initiation among students (Bilic et al., 2011; Lee et al., 2005; Nyadu-Addo & Mensah, 2018). It has been found that scarcity of employment opportunities and job dissatisfaction have fuelled an interest in the field of entrepreneurship, with many seeking alternative income-generation options (Anjum et al., 2018; R.A., 2018).

Venture creation is the solution that many countries are seeking to encourage and facilitate (Nguyen et al., 2019; Yunandar, Hariadi & Raya, 2019).

The effect of entrepreneurial education on entrepreneurial intentions has received sturdy attention (Aldila Krisnaresanti et al., 2020), yet it is scanty with respect to the relationship between mass media entrepreneurial education's individual subdimensions on entrepreneurial intentions. Understanding the contributory weight of each subdimension will deepen the development of entrepreneurship education theory (Hasan et al., 2017a).

3.4.3 Hypothesis 3

There may be a lack of consensus about the exact definition of an entrepreneurial mindset among researchers and scholars, but there is clear agreement that cognition and emotions are all very important elements of an entrepreneurial mindset (Kuratko et al., 2021). It is also clear in the research findings that an entrepreneurial mindset is a mode of thinking that allows the entrepreneur to adjust their thinking in response to environmental dynamics and uncertainty (Naumann, 2017). It is a robust manner of thinking that assist the entrepreneur to persist even in unfavourable situations (Cui & Bell, 2022; Wardana et al., 2020). It is against this backdrop that this study's hypothesis is that an entrepreneurial mindset has a positive effect on entrepreneurial intentions.

Therefore, the third hypothesis states that:

H3 – Entrepreneurial mindset has a positive impact on entrepreneurial intentions.

3.4.4 Hypothesis 4

A manner of thinking that can generate advantages in an environment displaying great uncertainty is one of the ways that an entrepreneurial mindset is explained (Cui & Bell, 2022; Shi et al., 2020). This mental disposition leverages social networks and creatively organises existing resources to create an advantage (Shi et al., 2020). It is a unique way of thinking that distinguishes between those who have it and those who do not (Kuratko et al., 2021).

Lastly, the fourth hypothesis states that:

H4 – Entrepreneurial mindset plays a mediating role between mass media entrepreneurial education and entrepreneurial intentions.

An entrepreneurial mindset is developed through a process of learning through formal channels and informal channels (de Villiers Scheepers, Barnes, Clements & Stubbs, 2018; Ndou et al., 2018). Tools such as design thinking frameworks are used to develop this mindset to guide accurate problem understanding, systematic problem identification, and meaningful value creation (Daspit et al., 2021; Saptono et al., 2020). In this study, the moderating role of the entrepreneurial mindset was investigated (Liao et al., 2022). The entrepreneurial mindset which has to do with a way of thinking is sought-after by new ventures and established businesses as employees a point of differentiation for the company, therefore its competitive advantage against competitors (Ghafar, 2020; Johnson & Stage, 2018).

The entrepreneurial mindset is credited with building adaptive capabilities in the students thereby making them agile and able to respond positively in times of uncertainty and contexts of dynamic complexity (Ghafar, 2020; Schoemaker & Day, 2021). It is a mindset that companies and new ventures require to continuously reinvent themselves for sustained competitiveness in a rapidly evolving market (Del Vecchio et al., 2021; Ghafar, 2020).

Individuals with entrepreneurial mindsets are credited with innovative problem-solving skills, the creation of new services, products, business models, and innovative processes (Bird, 1988; Kretschmer & Khashabi, 2020). Therefore, this hypothesis seeks to understand whether heightened levels of an entrepreneurial mindset affect the interaction between entrepreneurial education and entrepreneurial intentions (Saptono, Wibowo, Narmaditya, Karyaningsih & Yanto, 2020). Furthermore, the testing of the mediation role of the entrepreneurial mindset seeks to understand if an increased entrepreneurial mindset facilitated an increased positive relationship between entrepreneurship education and entrepreneurial intentions and whether low levels of entrepreneurial mindset had the opposite effect. It also tests whether the entrepreneurial mindset had no moderating effect between mass media entrepreneurial education and intrapreneurial intentions.

3.5 Conclusion

This chapter presented the theoretical research model and outlined the hypotheses. Chapter four follows where a detailed description of the chosen research methodology and design. In chapter five the results are outlined following data processing and analysis. Furthermore, in chapter six the results are discussed and Chapter seven concludes this report where among others, the implication of these findings are presented and future research recommendations are made.

CHAPTER 4 - RESEARCH METHODOLOGY AND DESIGN

4.1 Introduction

This chapter introduces the research methodology that was used for this study. A positivist philosophy has been selected using a cross-sectional descriptive quantitative design. In the study a statistical analysis and the quantitative method is discussed along with the strategy utilised for data collection. The other elements covered in this chapter are the population focus, unit of analysis, sampling method and size, measurement instrument, data gathering process, quality controls, and methodological limitations.

4.2 Research Methodology

4.2.1 Research Philosophy

A post-positivist philosophy is used in this study (Scotland, 2012). The incorporation of the principle of sense-confirmed knowledge will allow for the study to be truly warranted (Saunders & Lewis, 2018). Additionally, because science must be conducted objectively and positivism adopts scientific procedures, it can be considered an objective approach (Bryman & Bell, 2011).

This study proposes to utilise quantifiable data by distributing and collating questionnaires for analysis and conclusion formation. The respondents, from whom entrepreneurial mindset and intentions will be tested, are deemed to be objective and independent of the researcher and the researcher's values. This is extreme positivism, founded on concrete observable facts that exist independently of the personal beliefs and views of the researcher. Additionally, it is based on the belief that knowledge should be accessible to all (Bryman & Bell, 2011). Positivism is predicated on the exclusion of one's own values; however, Saunders and Lewis (2018) contend that this is implausible and that even the acceptance of a value-neutral worldview reveals the existence of some subjectivity.

4.2.2 Research Approach

This study used a deduction approach. A deduction approach is a method of arriving at a conclusion based on prior knowledge. The proposed study is anchored on the theory of planned behaviour which has enjoyed extensive use in examining the

impact of entrepreneurial education on various dependent constructs such as entrepreneurial self-efficacy, entrepreneurial mindset, and intentions for new venture creation (Laguía & Moriano, 2021; Shahab et al., 2019; Sommer, 2011). Bryman and Bell (2011) argue that theory and research are intertwined. This is based on the premise that a logical generalisation of previously observed data leads to a sound conclusion (Bryman & Bell, 2011).

To generalise existing facts, it is necessary to know the specific area and its theoretical concerns (Melnikovas, 2018). As a result of this, existing knowledge and the data collected, and the hypotheses were empirically tested and reported since the constructs can be measured (Bryman & Bell, 2011). The results, acceptance or rejection, of the four tested hypotheses, and sub hypotheses of the first two, are reported in Chapter five (Schindler, 2019). Hypotheses can also be tested using controls, as well as using an extremely well-structured technique that makes replicability easier (Saunders & Lewis, 2018). For researchers using a deductive approach, the key goal is not simply to generate hypotheses from existing knowledge, but additionally to illustrate how the information utilised in the hypotheses may be acquired (Hasan et al., 2017a; Nyadu-Addo & Mensah, 2018; Saunders & Lewis, 2018).

4.2.3 Research Design Purpose

The research utilised a post-positivist philosophy design. As a result of the design, the researcher analysed the relationship between all three constructs, namely mass media entrepreneurial education, entrepreneurial mindset, and entrepreneurial intentions, without manipulating them (Saunders & Lewis, 2018).

By aligning with previous research conducted in the entrepreneurship field describing and explaining the relationship between mass media entrepreneurial education, entrepreneurial mindset, and entrepreneurial intentions this research contributes to the body of literature that has investigated relationships between these constructs in various contexts. Additionally, the mediating effect of the entrepreneurial mindset between mass media entrepreneurial education and entrepreneurial intentions was also tested in the South African radio broadcast environment. The key element is understanding the current scenario, and also being able to give an explanation of how the dependent variables behave thus justifying the use of a post-positivist philosophy (Bryman & Bell, 2011).

4.2.4 Methodological Choice

The primary question of the study required a quantitative methodological choice. It is common for quantitative studies to be firmly grounded in past research and academic literature before the collection of data begins (Saunders & Lewis, 2018) as was the case with this study. In this research, past research and academic literature citing the importance of undertaking increasing available research literature to provide insights for policy-making, strategy formulation, and enlarging the pool of knowledge, have been provided (Liao et al., 2022; Schoemaker & Day, 2021). Gabrielsson et al. (2020) insists that entrepreneurial education is a high-growth area and that the entrepreneurship curriculum seems to be growing at a relatively slower rate.

Scholars in the field of mass media entrepreneurial education, entrepreneurial mindset, and entrepreneurial intentions have demonstrated that many relationships between relevant constructs must still be tested and new insights mined from ensuing findings for the benefit of the growth of the field (Bilic, et al., 2011; Bazan, Gaultois, Shaikh, Gillespie, Frederick, Amjad, Yap, Finn, Rayner & Belal, 2020). Laguía and Moriano, (2021) highlights the importance of investigating preferred channels of various age groups for the effective delivery of entrepreneurial education. This study focuses on the radio broadcasting sector. Understanding the different programmes on the platforms, such as radio through, which entrepreneurial education is offered may also highlight effective approaches as mass media consumers and sector evolves (Peter & Pierk, 2020; Jain, 2021). This study did not require a multi-method because the constructs are well researched and a mono-method quantitative approach was used because it is adequate for testing the hypotheses and fulfilling the research objectives (Vizcarguenaga-Aguirre & López-Robles, 2020). The mono-methodological choice, and making use of the quantitative method is deemed appropriate as the aim is to reach generalisable conclusions (Melnikovas, 2018).

The data was acquired using a questionnaire constituted of questions as informed by the four hypotheses of this research (Morgan, 2018). Sub-hypotheses were considered under the applicable main constructs, for example mass media entrepreneurial education. In addition, quantitative research is a strategy that emphasises quantification in the data collection and analysis (Melnikovas, 2018; Schindler, 2019).

4.2.5 Research Strategy

The survey strategy for data collection of primary data, encompasses beliefs, opinions, attitudes, intentions, and general demographic information such as gender, age, education level, geographical location, and radio station language preference (Schindler, 2019). However, there are some disadvantages to using a survey strategy, such as the fact that it is extremely time-consuming, both in terms of receiving data and later analysing it. It is important to also note that there is a risk of bias if this method is not well structured and executed (Saunders & Lewis, 2018). Failing which, these are the risks. Finally, because it allows the researcher to collect quantitative data, this research strategy is associated with the quantitative approach (Saunders & Lewis, 2018).

Additionally, the strategy is used when the researcher needs to know “who”, “what”, “where”, “how much”, and “how many” people are involved, proving relevant to this proposed study for testing impact. Entrepreneurial education is the “what” whose effect on radio audiences “who”, was tested in this study. The South African radio landscape is the “where”, and the intensity of the relationships is the “how much”, while the sample size, “how many”, and various tests on the data collected validated the extent to which generalisation or findings transferability was possible.

4.2.6 Research Time Horizon

A cross-sectional time horizon was used and was fitting for this study since past experiences were being studied therefore the study was concluded within the planned time (Melnikovas, 2018). The research provides a "snapshot" of mass media entrepreneurial education and how it affects entrepreneurial mindset and entrepreneurial intentions for business origination at a specified point in time (Spigel, & Harrison, 2018). The data collection required for this type of study was relatively quicker than that required for longitudinal studies (Zaremohzzabieh et al., 2019).

In this research, the effect of entrepreneurial education on entrepreneurial mindset, and intentions to start a business was investigated. This Cross-sectional research, also known as correlational research, collected and analysed data on both the independent and dependent constructs at the same time (Schindler, 2019).

4.3 Research Design

4.3.1 Population

The population, meaning the total number of weekly radio listeners in South Africa is +-36 million according to BRCSA (2021) and Nevill (2020). This is too vast to study and collect data from. However, a sample of this population was selected. The sample or sub-group was chosen to manage constraints pertaining to available financial, technological, and human capital resources (Subramaniam & Shankar, 2020).

Similar studies testing the effect of entrepreneurial education that focused on the student population, such as the one conducted by (Hasan et al., 2017) testing entrepreneurial education at the university level and entrepreneurship development using a sample size of 200, similarly Yunandar et al. (2019) used a sample size of 210 students in their studies. A target sample size of 750 was deemed adequate for the purposes of this study as the previous scholars used personally administered interviews, and this study would use online administered survey forms. The targeted 750 respondents seemed to be adequate purposes of this study in light of the vastness of the population size. Having employed quality data collection and analysis methods insightful findings were acquired that were descriptive of the population and explanatory regarding the observed phenomenon of the interaction of the constructs (Qureshi & Mian, 2021).

4.3.2 Unit of analysis

The unit of analysis for this study was at an individual level, therefore response data was collected from among radio listeners. Similar studies, such as the one by Laguía and Moriano (2021) and the one by Peter and Pierk, (2020) focused on television audiences as a unit of analysis testing for the effect of entrepreneurial television content on entrepreneurship development. Therefore, an appropriate unit of analysis for this study was radio listeners within the South African context who listen to this traditional mass media platform occasionally or mostly. This is based on the main research question. In contrast, another mass media-related study conducted by Laguía and Moriano (2021) focused on a mass media platform and entrepreneurship representation, with a unit of analysis being television viewers in that study's context scope.

Considering the wide variety of radio stations in the country, more than 300 stations (Nevill, 2020), and the plurality of the languages used in broadcast which include all eleven official South African languages (SABC, 2021), the study focused on content encompassing entrepreneurial education. The interest of this study was at an individual level.

4.3.3 Sampling Method and Size

A non-probability sampling technique was used since a full list of the sample populations could not be accessed, and was appropriate for this investigation of the effect of mass media entrepreneurial education on the entrepreneurial mindset and business start-up intentions, renders since (Saunders & Lewis, 2018). It is important to note though, that the audiences of a radio station or a specific radio programme can be quantified, and statistically reported, the full list and details of the respective listeners cannot be compiled let alone accessed as a whole. Mass media implies that the reach of the platform is geographically vast in nature (Laguía & Moriano, 2021).

A convenience sample was applied in this research to gather the targeted sample of between 450 and 1000 listeners through online platforms as previous studies in entrepreneurship have done (Mukhtar et al., 2021), also considering the sizeable population size (Nevill, 2020; SABC, 2021). The targeted respondents were listeners between the ages of 18 and older, who were within the reach of the radio broadcast in South Africa. The listeners had to also be active users of social media platforms such as Facebook, Twitter, and LinkedIn, age 18 years and older regardless of gender. The targeted number of respondents was based on the average sample size used in the research by (Hasan et al., 2017a) and (Yunandar et al., 2019). The ultimate number of respondents that participated in this study was 859.

4.3.4 Inclusion Criteria

All respondents were included according to the described criteria. However, the research survey was such that only those who listened to the radio could participate in the research. Those who did not listen to the radio were excluded from the final data analysis as they did not have the basic experience required to respond in this study.

4.3.5 Measurement Instrument

The measuring instrument in this study was an online questionnaire. A standardised questionnaire to gather data from a sample of the population as proposed was suitable (Bryman and Bell, 2011). A similar method was used by (Mukhtar et al., 2021), however, they used WhatsApp and email for distribution, while this study used social media platforms and emails.

Nominal data were used to describe the participating listener's profiles to best understand who they are, where they were, and what preferred language they receive entrepreneurial education in (Kier & McMullen, 2018).

The scale developed by Hasan et al. (2017) was used to measure the relationship between the constructs of mass media entrepreneurial education and its sub-categories, generalised entrepreneurial education, augmented entrepreneurial education, and motivational entrepreneurial education and entrepreneurial intentions. In order for the questionnaire to comprehensively cater to all the constructs, the scale by Cui and Bell (2022) was included to test the relationship between mass media entrepreneurial education and entrepreneurial mindset, and entrepreneurial intentions. The study was developed to investigate the role of mass media entrepreneurial education offered to radio station listeners in South Africa and to understand the perceived influence this construct has on the development of entrepreneurial intention. Previously outlined research objectives informed the questions in the questionnaire thus the information needed was clearly defined. Preplanning and structure were characteristic of the study

The questions were organised into sections according to each construct and a five-point Likert scale was used (Baggen et al., 2021; Hasan et al., 2017a). The scale by Cui and Bell (2022) was adapted from a 7-point Likert scale to a 5-point Likert scale for consistency with the first scale which was by Hasan et al., (2017). Overall measurement consistency was maintained in this study.

4.4 Pilot study

The questionnaire was distributed during the pilot phase, which was 5 days, 20 respondents were collected for this study. The purpose was to test for any programming or technical inconsistencies that could compromise the quality of the data, the time needed to conclude the data-gathering process and any other issues

that could have arisen (Melnikovas, 2018). Additionally, it was to test for language comprehension of what is being asked of the respondents, and ease of use by the population sample when answering.

Feedback was received and a few shortcomings were highlighted concerning the survey form design and settings. Firstly, the restrictive elements of the questionnaire did not function well in the first two days of the pilot phase. The questionnaire was meant to restrict respondents according to age, closing immediately when a respondent was below the cut-off age of 18 years. Secondly, the Google Form allowed multiple responses in the section collecting the demographic data where only one response was required. Both these issues were Google Form settings related and were thus accordingly resolved within the 5-day period of the pilot. The finalised questionnaire was then distributed according to the plan and data was collected.

4.5 Data collection

Primary data was collected using an electronic survey, where a structured interview was conducted using a questionnaire developed on Google Forms. The questionnaire link was distributed on social media platforms repeatedly for a period of 14 days. Facebook, Twitter, WhatsApp, and LinkedIn were used (Mochon et al., 2017). Bias was towards the platforms with the highest proven penetration and engagement in South Africa such as Facebook and LinkedIn (Mochon, Johnson, Schwartz, & Ariely, 2017). Repetitive posting was used to increase the data collected by directing the audience to a survey link for filling out the questionnaire. The questionnaire completion duration was 10 - 15 minutes.

4.6 Data analysis

The collected empirical data was extracted from Google Forms to Microsoft Excel after which it was imported to IBM statistical package for social sciences which is SPSS version 28 and SmartPLS version.4. The research sorted and tabulated the collected data, then explanations and discussions of what has been learned outlined in chapter 5 and 6. Data samples were analysed using Inferential statistical techniques, and the resulting population-level conclusions were drawn and presented (Schindler, 2019).

4.6.1 Data screening and cleaning

Initially, the data were screened and cleaned starting with extreme outliers. These are the values that can create bias in the results. values had to stay within the z-scores threshold of ± 3.29 according to Tabachnick and Fidel (2013) with values outside this threshold removed in the empirical data.

This was followed by analysing the missing value where to check if there were no substantial numbers of missing values. A cut-off acceptable level of 5% was used as a limit as per the guidelines of Schafer (1999). Furthermore, a common method bias (CMB) was assessed with Harman's single-factor test using principle axis factoring. Only the results of the single factor that was less than 50% were considered acceptable, and that there was no problem with CMB.

4.6.2 Descriptive statistics

Descriptive statistics were used to understand the distribution profile of the respondents using frequency and percentage frequency. This helps to understand and gain insight into the type and profile of the respondents that took part in the study. Further descriptive statistics were used to understand the profile of the variables from all constructs both independent and dependent as well the mediation variable. This was done by understanding the central tendency as well as the spread. The central tendency analysed with the mean (M) and median (Mdn) while the spread with standard deviation (SD). Flowing from this was to understand whether the data was normally distributed, and this was done using skewness and kurtosis using the guidelines ± 2 by Hair et al. (2010).

4.6.3 Inferential statistics and hypothesis testing

After conducting the multi-variate analysis for validity and reliability which is detailed in the section, quality controls, the relationship was analysed using structural equation modelling partial least squares (PLS-SEM). The predictive quality assessment was conducted to determine if the endogenous variable had a good predictive quality was used to understand if variables have a good predictive index. A predictive value where Q-squared is greater than zero ($Q^2 > 0$).

This was then followed by analysing the relationship on the structural equation modelling using bootstrapping method. For the explanation of the variability of the

dependent variable due to one or more explanatory variable to measure the statistical significance of the relationship between dependent variables, entrepreneurial mindset, with explanatory variable mass media entrepreneurial education and the mediation effect of the entrepreneurial intentions. The results were analysed and reported for the coefficient (β) as well as the statistical significance based on 95% confidence level in ($p < 0.05$).

4.6.4 Correlation matrix

A correlation matrix was conducted using Pearson product-moment correlation to determine the strength of the relationships between the constructs. Therefore, to determine the significance at $P < 0,05$, the direction whether positive or negative and the strength of the relationship. The strength of the relationship was determined using the guidelines of Cohen (1988). Cohen (1988) posits that if the $r = 0.10$ to 0.29 then the correlation had a weak strength, while $r = 0.30$ to 0.49 indicate a medium strength and $r \geq 0.50$ imply that constructs are strongly correlated.

4.6.5 Multiple regression analysis

Multiple regression analysis was used to test the hypotheses and draw conclusions from the study. For the explanation of the variability of the dependent variables due to one or more control variables. In the context of this study, multiple regression analysis was used to assess how entrepreneurial mindset and a dependent variable were affected by the presentation of mass media entrepreneurial education, an independent variable, as opposed to its absence, which is hypothesis 1 (*H1*).

Similarly, the test also assessed the variability of the dependent variable, entrepreneurial intentions (ENTI) when mass media entrepreneurial education, an independent construct, is presented testing hypothesis 2 (*H2*). The subdimensions of mass media entrepreneurial education (generalised, augmented, and motivational entrepreneurial education) were also individually tested to assess the variability of both dependent variables entrepreneurial mindset and intentions when they interact.

Entrepreneurial mindset's effect on entrepreneurial intentions development was also tested, hypothesis 3 (*H3*), concluding with this construct's mediating role between mass media entrepreneurial education and entrepreneurial intentions, which is hypothesis 4 (*H4*). To measure the strength of the relationship between dependent variables, entrepreneurial mindset, and entrepreneurial intentions, and the

independent variable, which in this study is mass media entrepreneurial education multiple regression analysis was used.

4.6.6 Statistical software

The collected data were analysed and interpreted using various statistically statistical softwares which include Statistical Package for Social Science (SPSS). Factor analysis was used to summarise the data so that the relationship and data were interpreted, and insights mined from the conclusions (Hasan et al., 2017). These numbers come from the responses to the survey's questions, which were provided by the participants. The researcher sorted and tabulated the collected data, then explanations and discussions of what has been learned are outlined in Chapters 5 and 6. Data samples were analysed using inferential statistical techniques, and the resulting population-level conclusions were drawn and presented (Schindler, 2019).

4.7 Quality controls

4.7.1 Reliability

In quantitative research, reliability refers to two standards the research outcomes must satisfy, the consistent replicability of the study's results, and the stability measure at all times (Chan & Idris, 2017). When it comes to the reliability of data collection or analysis, these authors agree that it's all about how consistent the results are. Additionally, the term refers to the consistency of concept measurement methods (Bryman & Bell, 2015). Subject error, participant bias, observer error, and observer bias all pose problems for the validity of the results.

This questionnaire used Cronbach's alpha (a reliability coefficient) to verify the accuracy and validity of all its variables. Cronbach's alpha measures a survey instrument's reliability by determining the average correlation of its variables, Chan and Idris (2017) posit that Cronbach's α index above 0.7 is good when the instrument has 10 or more items. The instruments were found to be good. The values of the findings are presented in detail in chapter five.

4.7.2 Validity

The issue of instruments testing for what they are intended is key in research. A combination of methods of assessment was used by the researcher to maintain acceptable standards. The degree to which the research instruments measure their

intended purpose in solving the research objectives is referred to as the validity (Bryman & Bell, 2011). Validity has to do with the truthfulness of the conclusions drawn from a specific body of research (Saunders and Lewis, 2018). Connell, Carlton, Grundy, Taylor, Keetharuth, Ricketts, Barkham, Robotham, Rose and Brazier (2018, p. 1823) explains it as “the extent to which the set of items comprehensively covers the different components” being measured. It is one of the tools that address concerns about whether findings are really about what they appear to be (Saunders & Lewis, 2018).

Factor analysis

Initially, the face validity was conducted to test the suitability of the contents to what the objectives are. It checks for relevance, and suitability (Connell et al., 2018). This was followed by exploratory factor analysis used to summarise the data so that the relationship in the data was interpreted, and insights mined from the conclusions (Hasan et al., 2017a). This is an analysis that tests the validity of the research instrument. Additionally it organises questionnaire items into specific variables (Chan and Idris, 2017). The acceptable outcomes of this analysis highly depend on how well the measuring instrument is designed (Goretzko et al., 2021).

To confirm that the factor analysis will produce accurate results the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) test and Bartlett's Test of Sphericity were conducted. The reliability of the items was dependent on complying with the threshold of the Cronbach alpha of being higher than the acceptable threshold of 0,7 as proposed by George and Mallery (2003). Cronbach's α was used to measure the internal consistency and to gauge how closely related items are as a group. A reliability test using Cronbach's α was also conducted in the study to measure internal consistency. The rule is that an acceptable Cronbach's α index is 0.6 – 0.7, any value greater or equal to 0.8 is deemed very good. Factor analysis was used to determine if the construct was unidimensional or multi-dimensional in nature.

This was followed by the confirmatory factor analysis to determine the convergence validity with Average Variance Extracted (AVE), composite reliability with composite_rho a and rho_c and Cronbach alpha. This was followed by discriminant validity using cross loadings and Heterotrait-monotrait ratio (HTMT) (Kline, 2011).

4.7.3 Face validity

This test the suitability of the contents to what the objectives are. It checks for relevance, and suitability (Connell et al., 2018).

4.7.4 Ethics Considerations

4.7.4.1 Data storage

The collected data was stored safely on a password-protected cloud facility for the recommended minimum 10-year period.

4.7.4.2 Participants of the study

The convenience sample applied in this research provided 859 respondents for data analysis. To ensure privacy and ethical conduct the respondents of the survey were informed of their anonymity and option to withdraw from participation at any point in accordance with the GIBS-UP ethical clearance rules and guidelines. Contact details of the institutions for any correspondence they may require was also provided on of the questionnaire cover page.

4.8 Limitations

The use of English questionnaires may have presented a limitation as the dominant radio listeners in South Africa are African language station audiences (Bosch, 2022; BRCSA, 2021).

Additionally, the use of the Internet to collect data may also have been a limitation as there is still a disproportionate distribution of bandwidth and access to technology in South Africa. The high cost of access to the Internet may be another.

The collected respondent data has a bias where most are in the Free State or Gauteng provinces, with minimum representation in the other seven provinces. For generalisability a higher representation in the other provinces would have strengthened the data.

Although mass media entrepreneurial education, entrepreneurial mindset, and entrepreneurial intentions are the three variables that the study has focused on, there are other factors that contribute to the intention to start a business

CHAPTER 5 - RESULTS OF THE STUDY

5.1 Introduction

The study investigated the impact of mass media entrepreneurship education on entrepreneurial mindset and intentions to start a business. Based on the objectives and research approach which was deductive reasoning this study was investigated using cross-sectional quantitative methodology where 859 responses were collected in different areas of South Africa. In this chapter, the results from the empirical data analysis are presented and the hypotheses as tabulated in chapter 3 were tested.

5.2 Data screening and cleaning

The data was screened and cleaned by assessing the extreme outliers, missing values, common method bias, and normality distribution of the data. In the 39 variables of the study that were assessed the entrepreneurial education, entrepreneurial mindset, and entrepreneurial intentions, three variables had extreme outliers, EM5 which had 10 extreme values, EM6 with seven, and EM7 with six. All these values had z-scores that were higher than the threshold: ± 3.29 . These outliers were trimmed, and the remaining data was within the threshold (Tabachnick & Fidell, 2013). Missing data is a common problem in research, even when the project is well-planned and controlled. A study's statistical power can be weakened by missing data, leading to inaccurate estimations and potentially misleading findings (Kang, 2013). As such, the missing values must be within the accepted level and Schafer (1999) proposed a cut-off of 5%.

Post removal of the outliers the data had missing values which were less than 5% with the highest being 2%. This means that the missing values were within the acceptable range of 5% as recommended by Schafer (1999). There is evidence that the common method variance can induce systematic bias in research by overinflating or deflating correlations, putting at risk the validity of findings drawn regarding the relationships among constructs (Reio, 2010). To ensure that this problem is not introduced to the results, a common method bias (CMB) is assessed with Harman's single-factor test. If the results of the single factor are less than 50% then there is no problem with CMB, and this was confirmed in the study with the results being 34.56%.

5.3 Profile of the respondents

The profile of the respondents is presented in **Table 1**. There were three females in five people (59.57%), and two males (40.43%) in every five people. The most dominant age groups found to be represented was 25-34 years and 35-44 years, each with 38.79%. The lowest representation was of respondents who were older than 55 years as they constituted only 1.826%. The highest education level of the respondents ranged from Post Graduate Diploma/ Honours degree (27.45%), then Post Matric/High school certificate and Undergraduate Degree, with 24.21% and 24.11%, respectively. Almost all the respondents were Africans (96.93%) with 51.58% residing in Gauteng and 32.02% in the Free state, while the rest were from other provinces.

Of the total respondents, 71.76% indicated that the radio station they listen to offers business or entrepreneurship content, while 24.2% indicated that it happened occasionally or sometimes, furthermore 4.02% said the radio stations they listen to do not offer business or entrepreneurship content. More than half indicated that they follow business education content on the radio (52.92%), while 31.04% highlighted they only follow it occasionally or sometimes, lastly, 16.04% did not follow business education content on the radio. The preferred radio language stations were African – African language stations (57.05%) followed by English / Afrikaans stations (31.36%) then a combination of African Language Stations, English/Afrikaans Station (11.59%).

Table 1. Profile of the respondents

		Frequency	Percent Frequency
Does the radio station offer business/entrepreneurship content?	No	35	4.02%
	Sometimes/Occasionally	211	24.23%
	Yes	625	71.76%
Do you follow business education content on the radio?	No	140	16.04%
	Sometimes/Occasionally	271	31.04%
	Yes	462	52.92%
Preferred radio language?	African Language Station	502	57.05%
	African Language Station, English/Afrikaans Station	102	11.59%
	English/Afrikaans Station	276	31.36%
Gender	Female	523	59.57%
	Male	355	40.43%
Age	18 - 24	52	5.94%
	25 - 34	339	38.70%
	35 - 44	341	38.93%
	45 - 54	128	14.61%
	55+	16	1.826%
Education	Doctorate and Post-Doctoral	15	1.730%
	Grade 12 Matric and less	91	10.46%
	Master's degree	104	11.99%
	Post Graduate Diploma/ Honours degree	238	27.45%
	Post Matric/High school certificate	210	24.21%
	Undergraduate Degree	209	24.11%
Ethnicity	African (Black)	853	96.93%
	Coloured	8	0.909%
	Indian	6	0.682%
	Other	1	0.114%
	White	12	1.364%
Province	Eastern Cape	20	2.312%
	Free State	277	32.023%
	Gauteng	446	51.561%
	KZN	21	2.428%
	Limpopo	24	2.775%
	Mpumalanga	15	1.734%
	North West	32	3.699%
	Northern Cape	9	1.040%
	Western Cape	21	2.428%

5.4 Entrepreneurial education

The mass media entrepreneurial education was an independent variable that investigated generalised entrepreneurial education, motivational entrepreneurial education, and augmented entrepreneurial education.

5.4.1 Generalised entrepreneurial education

The first independent variable of the study was generalised entrepreneurial education. It has 13 items, which were assessed with a 5-point Likert scale, with 1.00 indicating strongly disagree and 5.00 strongly agree. The descriptive statistics are presented in **Table 2**. The results show that the respondents highly agreed with GEE13 which stated “Entrepreneurial Education is appropriate for the listeners of this particular specialised program” with Mean (M = 3.71, SD = 1.05 and median, Mdn = 4.00. It was followed by GEE9 “The listeners of the Radio station I listen to talk about having/starting their own business” (M = 3.69, SD = 1.053) and Mdn = 4.00 and then GEE6 “Many listeners of the Entrepreneurial Education programs look for business opportunities passionately” (M = 3.67, SD = 1.106) and Mdn = 4.00. The statement the respondents least agreed with was GEE1, “Entrepreneurial Education is mostly organised by mass media platforms, like Radio” (M = 3.30, SD = 1.087) and Mdn = 3.00. This is the only item that had a mean lower than 3.40. The data was normally distributed with skewness and kurtosis within ± 2 (Hair et al., 2010).

Table 2. Descriptive statistics of general entrepreneurial education

Generalised entrepreneurial education		Mean (M)	Median (Mdn)	Std. Deviation (SD)	Skewness	Kurtosis
Entrepreneurial Education is mostly organised by mass media platforms, like Radio	GEE1	3.30	3.00	1.087	-0.185	-0.52
Mass media (Radio) has a high involvement in entrepreneurial education	GEE2	3.44	3.00	1.098	-0.333	-0.521
Radio stations arrange specialised entrepreneurial education programme content	GEE3	3.5	4.00	1.126	-0.439	-0.509
The radio station I listen to has adequate programmes that focus on entrepreneurial education	GEE4	3.45	4.00	1.183	-0.361	-0.77
The station has a monitoring system of its entrepreneur listeners	GEE5	3.02	3.00	1.162	0.058	-0.69

Many listeners of the Entrepreneurial Education programmes look for business opportunities passionately	GEE6	3.67	4.00	1.106	-0.577	-0.354
Many listeners of the station I listen to are able to identify Entrepreneurial opportunities	GEE7	3.54	4.00	1.055	-0.37	-0.471
Many listeners of Entrepreneurial Education radio programmes are disciplined in pursuing business opportunities	GEE8	3.39	3.00	1.044	-0.113	-0.549
The listeners of the Radio station I listen to talk about having/starting their own business	GEE9	3.69	4.00	1.053	-0.534	-0.29
Many listeners of the Radio station improved their learning by listening to Entrepreneurial Education programs	GEE10	3.55	4.00	1.054	-0.423	-0.351
A lot of Radio station callers of radio I listen to ask many questions about starting a business	GEE11	3.47	4.00	1.172	-0.431	-0.666
Many listeners of the radio station have an intention to start their own business	GEE12	3.62	4.00	1.068	-0.457	-0.427
Entrepreneurial Education is appropriate for the listeners of this particular specialised programme	GEE13	3.71	4.00	1.05	-0.545	-0.275

An exploratory factors analysis was conducted on the 13 items of generalised entrepreneurial education. Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO = 0.948) and Bartlett's Test of Sphericity ($\chi^2 = 7769$, $df = 78$, $p < .001$) confirmed that the factor analysis will produce accurate results. The factor analysis yielded two constructs named: Generalised Entrepreneurial education-received content (GEE-RC) with eight items and Generalised Entrepreneurial education-perceived impact (GEE-PI) with five items all with good loading factors higher than 0.4 (Shrestha, 2021).

From the conceptualisation of the study, this sub-construct of mass media entrepreneurial education was intended to be unidimensional. It nonetheless ended up being a multi-dimensional sub-construct. Sub-construct one, labelled received content (RC) as their questions common theme focused on assessing the generalised entrepreneurial education content that was broadcasted on the radio. Contrasted with sub-construct two, labelled perceived impact (PI) as the questions' common these that yielded it focused on the perceived impact of the generalised entrepreneurial education on the respondents. Received content (RC) had a

percentage of variance of 59.3% with an Eigen value of 7.711 which is higher than 1.0. These items were reliable with Cronbach alpha higher than the acceptable threshold of 0.7 proposed by George and Mallery (2003) ($\alpha = 0.924$).

Table 3. Exploratory factor analysis of general entrepreneurial education

Variable	Received content	Perceived impact	% Of Variance	Eigen value	Cronbach alpha (α)
GEE12	.820	.170			
GEE9	.787	.343			
GEE11	.782	.275			
GEE13	.732	.270	59.318	7.711	0.924
GEE8	.694	.369			
GEE7	.678	.442			
GEE10	.664	.513			
GEE6	.660	.421			
GEE2	.327	.820			
GEE1	.221	.814			
GEE3	.341	.787	9.266	1.205	0.901
GEE4	.381	.770			
GEE5	.320	.726			

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy, KMO = 0.948

Bartlett's Test of Sphericity, $\chi^2 = 7769$, $df = 78$, $p < .001$

5.4.2 Motivational entrepreneurial education

The second independent variable of the study was the motivational entrepreneurial education (MTEE) with descriptive statistics presented in **Table 4**. It comprised of six items, with all mean values higher than 3.4, with the statement the mostly agreed with being MEE4 “The Entrepreneurial Education programmes on Radio remind listeners about the benefits of entrepreneurship” (M = 3.80, SD = 1.026) and the median (Mdn = 4.00). This is followed by MEE6 “The Entrepreneurial Education programmes build high self-confidence in the listeners” (M = 3.79, SD = 1.024) and the median (Mdn = 4.00). The range for skewness was -0.664 to -0.403, while the kurtosis was -0.562 to -0.095, all within ± 2 indicating it was normally distributed (Hair et al., 2010).

Table 4. Descriptive statistics of motivational entrepreneurial education

Motivational entrepreneurial education		Mean	Median	Std. Deviation	Skewness	Kurtosis
The station arranges the Entrepreneurial Education programme in such a way that helps most listeners to access it	MEE1	3.57	4	1.091	-0.403	-0.562
The Radio station's Entrepreneurial Education programme helps most listeners feel positive about Entrepreneurship	MEE2	3.75	4	1.026	-0.604	-0.108
The Entrepreneurial Education programme on Radio builds self-confidence to succeed under difficulties	MEE3	3.7	4	1.04	-0.517	-0.294
The Entrepreneurial Education programmes on Radio reminds listeners about the benefits of entrepreneurship	MEE4	3.8	4	1.026	-0.664	-0.095
The station helps many Radio listeners to become more career advanced	MEE5	3.77	4	1.049	-0.624	-0.180
The Entrepreneurial Education programmes builds high self-confidence in the listeners	MEE6	3.79	4	1.024	-0.597	-0.169

Factor Analysis had a KMO = 0.922 and Bartlett's Test of Sphericity ($\chi^2 = 4469$, $df = 15$, $p < .001$) confirming the suitability of the factor analysis. This analysis yielded only one factor confirming that motivational entrepreneurial education was a unidimensional construct with % of Variance = 77.66%. These six items were reliable with $\alpha = 0.942$.

5.4.3 Augmented entrepreneurial education

The third independent variable of the study was the augmented entrepreneurial education (AGEE) with descriptive statistics presented in Table 4. The descriptive statistics show that the respondents generally agreed with all the statement will all of them around the mean = 4.00 which is 'Agree' zone in the 5-point Likert scale. The statement the respondents mostly agreed with was AEE3 "Collaborating with various Entrepreneurship Development Support Agencies" with a mean ($M = 4.03$, $SD = 0.980$) and the median ($Mdn = 4.00$). The data was normally distributed with skewness and kurtosis within ± 2 (Hair et al., 2010).

Table 5. Descriptive statistics of augmented entrepreneurial education

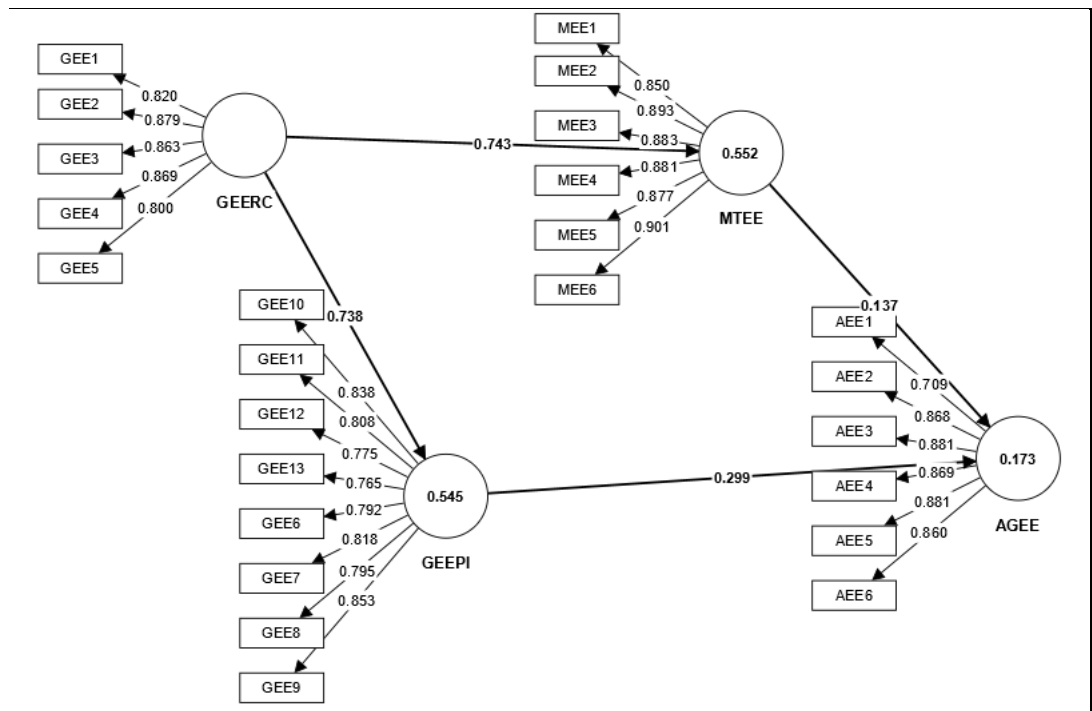
Augmented entrepreneurial education		Mean	Median	Std. Deviation	Skewness	Kurtosis
Present Entrepreneurial Education Radio content requires substantial changes to develop entrepreneurial qualities	AEE1	3.88	4	0.977	-0.585	-0.227
Arranging more interaction with Entrepreneurs	AEE2	3.98	4	0.975	-0.791	0.211
Collaborating with various Entrepreneurship Support Agencies	AEE3	4.03	4	0.98	-0.918	0.477
Give more assignment/project related competitions/engagements on Entrepreneurial Development	AEE4	3.96	4	1.056	-0.828	-0.002
Give socialisation in Entrepreneurship Development	AEE5	3.99	4	0.988	-0.74	-0.09
Include more syllabus/content on Entrepreneurship Development (Adding newer angle(s)/show(s) on ED	AEE6	3.97	4	1.046	-0.78	-0.107

Factor analysis also confirmed that this was a unidimensional construct with % of variance = 71.752. This construct is reliable with $\alpha = 0.920$.

5.4.4 Confirmatory factor analysis for entrepreneurial education

The confirmatory factor analysis (CFA) method is utilised in the process of validating the factor loading and measurement that is incorporated. The measurement model for the mass media entrepreneurial education was conducted for its four constructs, generalised entrepreneurial education-received content (GEERC), generalised entrepreneurial education-perceived impact (GEEPI), augmented entrepreneurial education (AGEE), and motivational entrepreneurial education (MTEE). The CFA technique relies on factor loadings and fitness indices, both of which play an important part (Figure 3). All loading factors were higher than 0.7, which is higher than the acceptable minimum of 0.6 (Awang, 2014). The loading factors for GEE1

ranged from 0.800 – 0.879, and for MEE (0.850 – 0.901), GEE2 (0.738 – 0.853) and AEE (0.807 – 0.881). In addition, the fitness index confirms if the model is acceptable. In this model the fit was assessed with the absolute fit Standardised Root Mean Square Residual (RMSEA ≤ 0.08) and the Normed Fit Index (NFI) or Bentler and Bonett Index, NFI values above 0.9 usually represent acceptable fit (Hair et al., 2017). The results show a model fit with RMSEA = 0.042 and the NFI = 0.919.



SRMR = 0.042 NFI = 0.919

Figure 3. CFA Model for the entrepreneurial education

Next, is the construct reliability and validity that needs to be achieved by the measurement model of latent constructs. Cronbach's alpha, Composite reliability (rho_a), and Composite reliability (rho_c) confirm the construct reliability for all the four constructs GEE1, GEE2, AEE and MEE as their values were higher than 0.70 (Kamis et al., 2020). The range of these construct reliability measures for these constructs range from 0.901 – 0.954 (Table 6). The convergence validity was measured with the Average variance extracted (AVE), with this validity achieved if the AVE > 0.50. There was convergence validity in these constructs with AEE (AVE =0.717), GEE1 (AVE = 0.717), GEE2 (AVE =0.650) and MEE (AVE = 0.776).

Table 6. Construct reliability and validity

Constructs	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Augmented _Entrepreneurial Education	0.920	0.927	0.938	0.717
GEE - received content	0.901	0.904	0.927	0.717
GEE - perceived impact	0.923	0.926	0.937	0.650
Motivational _Entrepreneurial Education	0.942	0.943	0.954	0.776

The discriminant reliability was assessed with cross-loadings. For discriminant validity, the loading value of the construct must be higher than the loading values of all the other constructs, because if the value of loadings for other constructs is greater than the loading value for the construct under investigation, then this points to an issue with the discriminant validity of the study (Hair et al., 2016). The results show that there were no issues with discriminant validity (Table 7).

Table 7. Cross-loading for discriminant validity

Variables	AGEE	GEERC	GEEPI	MTEE
AEE1	0.709	0.176	0.291	0.266
AEE2	0.868	0.276	0.377	0.345
AEE3	0.881	0.270	0.371	0.356
AEE4	0.869	0.239	0.311	0.300
AEE5	0.881	0.276	0.371	0.331
AEE6	0.860	0.224	0.333	0.281
GEE1	0.225	0.820	0.563	0.576
GEE2	0.268	0.879	0.647	0.641
GEE3	0.269	0.863	0.640	0.651
GEE4	0.255	0.869	0.668	0.662
GEE5	0.208	0.800	0.600	0.608
GEE10	0.345	0.700	0.838	0.723
GEE11	0.322	0.563	0.808	0.621
GEE12	0.319	0.490	0.775	0.577
GEE13	0.383	0.539	0.765	0.616
GEE6	0.326	0.609	0.792	0.597
GEE7	0.282	0.632	0.818	0.658
GEE8	0.291	0.581	0.795	0.611
GEE9	0.357	0.614	0.853	0.656
MEE1	0.311	0.712	0.688	0.850
MEE2	0.335	0.675	0.703	0.893

MEE3	0.332	0.631	0.683	0.883
MEE4	0.311	0.634	0.697	0.881
MEE5	0.333	0.632	0.691	0.877
MEE6	0.349	0.633	0.699	0.901

The discriminant validity was confirmed with the Heterotrait-monotrait ratio (HTMT) – Matrix (Table 8). Henseler, Ringle, and Sarstedt (2015) presented this as the method for evaluating the validity of discriminant analysis. Heterotrait-monotrait ratio of correlations (HTMT) measure of the degree to which two latent variables are same is provided by the HTMT. The HTMT for all the values was less than the threshold of 0.85, indicating that there was discriminant validity (Kline, 2011).

Table 8. Discriminant validity assessment with Heterotrait-monotrait ratio (HTMT) – Matrix

	AGEE	GEERC	GEEPI	MTEE
AGEE				
GEERC	0.315			
GEEPI	0.440	0.803		
MTEE	0.398	0.803	0.842	

5.5 Entrepreneurial mindset and entrepreneurial intentions

The entrepreneurial mindset (EMST) and entrepreneurial intentions (ENIT) were the mediation variable and dependent variable, respectively (Table 9).

Table 9. Descriptive statistics of entrepreneurial mindset and entrepreneurial intentions

Entrepreneurial mindset and entrepreneurial intentions		Mean	Median	Std. Deviation	Skewness	Kurtosis
I often come up with new business ideas.	EM1	3.66	4	1.099	-0.512	-0.477
It's easy for me to solve problems creatively.	EM2	3.8	4	0.933	-0.484	-0.104
I feel that I am good at generating novel ideas	EM3	3.53	4	1.081	-0.431	-0.323
In general, I have a tendency to first try new approaches or methods in my work.	EM4	3.84	4	0.958	-0.731	0.327

I am curious to find out more information about business and entrepreneurship	EM5	4.31	5	0.821	-1.001	0.256
I often think about how I think, what I think about, and how I make decisions	EM6	4.21	4	0.805	-0.723	-0.213
I often think about ways of solving problems during difficult times	EM7	4.32	4	0.733	-0.797	0.004
When I see an opportunity to do business, I use it	EM8	3.74	4	1.134	-0.549	-0.566
I'm ready to do anything to be an entrepreneur.	EI1	4.06	4	1.085	-0.997	0.178
My professional goal is to become an entrepreneur.	EI2	4.14	5	1.106	-1.196	0.593
I will make every effort to start and run my own firm.	EI3	4.19	5	1.051	-1.249	0.853
I am determined to create a firm in the future.	EI4	4.25	5	1.019	-1.403	1.442
I have very seriously thought of starting a firm.	EI5	4.22	5	1.073	-1.354	1.09
I have the firm intention to start a firm someday	EI6	4.25	5	1.058	-1.477	1.538

There were eight items for EMST and six for ENIT. EM7 and EM5 were the most agreed with statements, EM7 is 'I am curious to find out more information about business and entrepreneurship' with $M = 4.32$ ($SD=0.733$) and its median, $Mdn = 4.00$, followed by EM5 'I am curious to find out more information about business and entrepreneurship' with $M = 4.31$ ($SD = 0.821$) and $Mdn = 5.00$. For entrepreneurial intentions, the statement with the highest mean, $M = 4.25$, were "I am determined to create a firm in the future" (EI4) and "I have the firm intention to start a firm someday" (EI6).

The entrepreneurial mindset was a unidimensional construct with % variance of 52.66% from the factor analysis ($KMO = 0.891$; $\chi^2 = 2730$, $df = 28$, $p < .001$). This construct was reliable with the Cronbach alpha, $\alpha = 0.864$. The entrepreneurial intention was also unidimensional with % variance of 81.04% from the factor analysis ($KMO = 0.908$; $\chi^2 = 5724$, $df = 15$, $p < .001$).

5.6 Correlation matrix

The correlation analysis was conducted using Pearson product moment correlation and the results are presented in Table 10. The analysis assessed the statistical significance between the constructs, the direction, and the strength of the correlation.

The results show that EMST has a statistically significant positive and strong correlation with ENIT ($r = 0.602, p < .01$) based on the guidelines of Cohen (1988). These guidelines posit that if the $r = 0.10$ to 0.29 then the correlation has a weak strength, while $r = 0.30$ to 0.49 indicate a medium strength and $r \geq 0.50$ imply that constructs are strongly correlated. Generalised entrepreneurial education-received content (GEE-RC), and generalised entrepreneurial education-perceived impact (GEE-PI), both had a statistically significant correlation with entrepreneurial intentions (ENIT), though generalised entrepreneurial education-received content (GEE-PI) has medium strength while generalised entrepreneurial education-perceived impact (GEE-RC) had a weak strength. Motivational entrepreneurial education (MTEE) has a statistically significant correlation with EIC ($r = 0.285, p < .01$) and augmented entrepreneurial education (AGEE) also has a statistically significant correlation with entrepreneurial intentions (ENIT) ($r = 0.324, p < .01$). There is also statistically significant positive correlation between generalised entrepreneurial education-received content (GEE-RC), generalised entrepreneurial education-received content (GEE-PI), Motivational entrepreneurial education (MTEE), and augmented entrepreneurial education (AGEE) individually with entrepreneurial mindset (EMST) with weak or medium strength.

Table 10. Correlation matrix of the constructs

	1	2	3	4	5	6
1. ENIT	1					
2. EMST	.602**					
3. GEERC	.218**	.223**				
4. GEEPI	.336**	.375**	.732**			
5. MTEE	.285**	.306**	.741**	.784**		
6. AGEE	.324**	.391**	.281**	.402**	.356**	

** . Correlation is significant at the 0.01 level (2-tailed).

5.5 Hypothesis testing with structural equation models

5.5.1 Impact of Mass media entrepreneurial education on entrepreneurial intentions

The first hypothesis from Chapter three states that mass media entrepreneurial education has a positive impact on the entrepreneurial mindset. The relationship was

tested in the four constructs of entrepreneurial education, generalised entrepreneurial education-perceived impact (GEE-PI) hypothesis 1a (*H1a*), Generalised entrepreneurial education-received content (GEE-RC) hypothesis 1b (*H1b*), AGEE (*H1c*), and motivational entrepreneurial education (MTEE) hypothesis 1d (*H1d*). A predictive analysis was performed to ascertain the model's predictive quality before hypotheses testing (Table 11). The quality of the model's prediction was good since all Q^2 values were greater than 0. This is supported by the fact that both the error (PLS-SEM RMSE) and fit (PLS-SEM MAE) values were larger than the RMSE values obtained from the linear model (LM RMSE) for 80% or more of the endogenous variables.

Table 11. Predictive quality of the endogenous variable

	Q ² predict	PLS-SEM	PLS-SEM	LM_RMSE	LM_MAE
		RMSE	MAE		
EI1	0.115	1.019	0.823	1.029	0.819
EI2	0.093	1.055	0.841	1.069	0.848
EI3	0.108	0.993	0.790	1.006	0.796
EI4	0.122	0.953	0.743	0.966	0.747
EI5	0.113	1.010	0.788	1.026	0.799
EI6	0.115	0.993	0.759	1.009	0.766

The structural model (Figure 4) and Path coefficient table (Table12) presents Hypothesis 2, which tested the relationship between impact of mass media entrepreneurial education on entrepreneurial intentions. The results show that the path, (GEEPI -> ENIT), generalised entrepreneurial education-perceived impact (GEE-PI) to entrepreneurial intentions (ENIT) had a statistically significant positive relationship ($\beta = 0.238$, $p < .001$). There was also a statistically significant positive relationship between augmented entrepreneurial education and entrepreneurial intention, AGEE -> ENIT ($\beta = 0.209$, $p < .001$).

Table 12. Path coefficients of the relationship between entrepreneurial education constructs and entrepreneurial intentions

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
AGEE -> ENIT	0.209	0.211	0.040	5.194	0.000
GEEPI -> ENIT	0.238	0.239	0.063	3.805	0.000

GEERC -> ENIT	-0.068	-0.066	0.051	1.352	0.176
MTEE -> ENIT	0.072	0.071	0.059	1.215	0.224

The paths, GEERC -> ENIT and MTEE -> ENIT were not statistically significant implying that the general entrepreneurial education received content does not have a statistically significant relationship with entrepreneurial intentions (Figure 4). Also, motivational entrepreneurial education has no statistically significant relationship with entrepreneurial intentions. The R^2 was 0.150, meaning a quantitative representation of the degree to which a regression model's independent variables (GEEPI and AGEE) account for the variance in the dependent variable (entrepreneurial intention) is 15% with small effect size GEEPI ($f^2 = 0.042$) and AGEE ($f^2 = 0.022$).

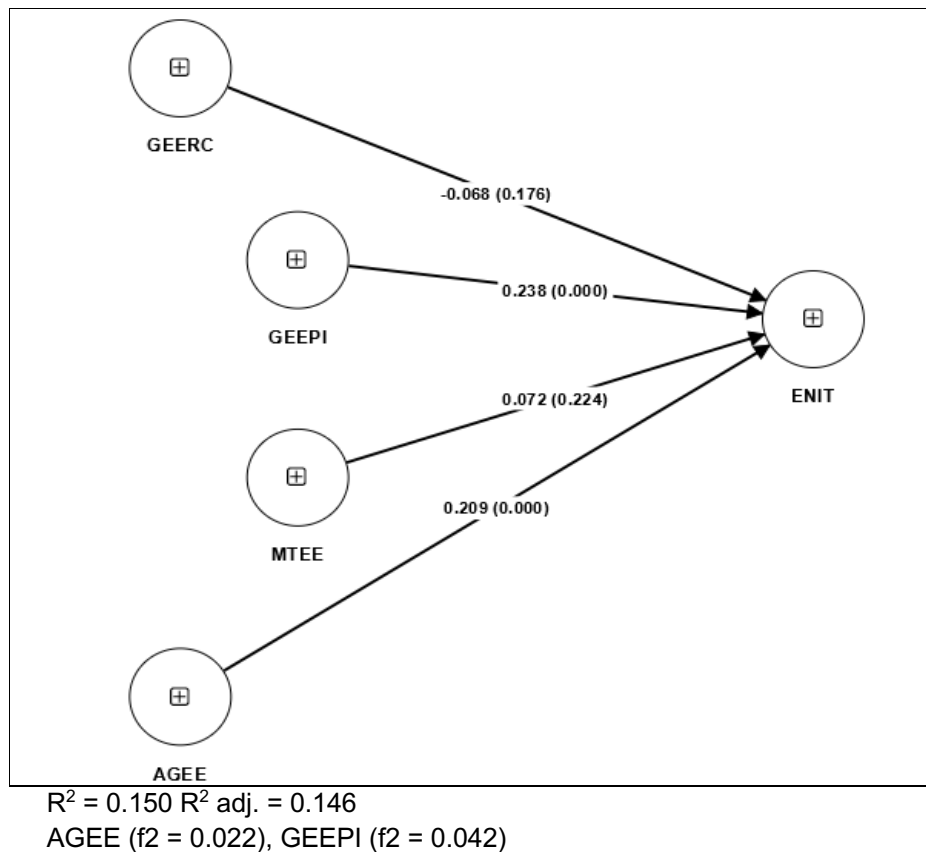


Figure 4. Structural model of entrepreneurial education on entrepreneurial intention

It can be concluded that hypothesis 2a and 2c are supported, while hypothesis 2b and 2d are not supported by the results of the study.

Hypotheses four focuses on the mediation effect of the entrepreneurial mindset on the relationship between entrepreneurial education and entrepreneurial intention. The mediation effect is investigated in each of the multidimensions of the

entrepreneurial education with GEEPI (H2a), GEERC (H2b), AGEE (H2c) and MTEE (H2d). The mediation effect occurs, when there is an interaction between two other related constructs that include a third mediator variable. To be more specific, in the PLS path model, a change in the exogenous construct produces a change in the mediator variable, which then leads in a change in the endogenous construct. The overall model for the mediation effect of the entrepreneurial mindset on the relationship between mass media entrepreneurial education and entrepreneurial intentions (Figure 5).

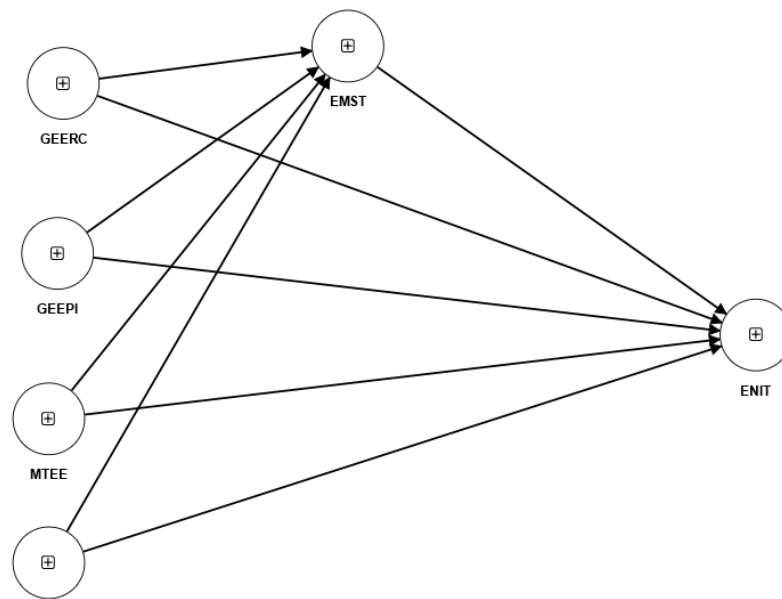


Figure 5. Mediation model of entrepreneurial mindset on the relationship between mass media entrepreneurial education and entrepreneurial intentions

The specific indirect effect results are presented in Table 13. The results show that there is a statistically significant relationship in the path generalised entrepreneurial education-perceived impact (GEE-PI) -> entrepreneurial mindset (EMST) -> entrepreneurial intentions (ENIT), GEEPI -> EMST -> ENIT ($\beta = 0.161$, $p < .001$). There is also a statistically significant positive relationship in the path augmented entrepreneurial education (AGEE) -> entrepreneurial mindset (EMST) -> entrepreneurial intentions (ENIT), AGEE -> EMST -> ENIT ($\beta = 0.178$, $p < .001$), and there is a statistically significant negative relationship in the path generalised entrepreneurial education-received content (GEE-RC) -> entrepreneurial mindset (EMST) -> entrepreneurial intentions (ENIT), GEERC -> EMST -> ENIT ($\beta = -0.07$, $p < .01$). The path MTEE -> EMST -> ENIT, motivational entrepreneurial education

(MTEE) -> entrepreneurial mindset (EMST) -> entrepreneurial intentions (ENIT) were not statistically significant at 5%.

Table 13. Specific indirect effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
MTEE -> EMST -> ENIT	0.054	0.054	0.03	1.797	0.072
AGEE -> EMST -> ENIT	0.178	0.179	0.022	8.104	0.000
GEERC -> EMST -> ENIT	-0.07	-0.07	0.027	2.61	0.009
GEEPI -> EMST -> ENIT	0.161	0.161	0.031	5.19	0.000

The total effect shows that the paths augmented entrepreneurial education (AGEE) -> entrepreneurial mindset (EMST) {AGEE -> EMST}; augmented entrepreneurial education (AGEE) -> entrepreneurial intentions (ENIT) {AGEE -> ENIT}; entrepreneurial mindset (EMST) -> entrepreneurial intentions (ENIT) {EMST -> ENIT}; generalised entrepreneurial education-perceived impact (GEE-PI) -> entrepreneurial mindset (EMST) {GEEPI -> EMST}; generalised entrepreneurial education-perceived impact (GEE-PI) -> entrepreneurial intentions (ENIT) {GEEPI -> ENIT}; generalised entrepreneurial education–received content (GEE-RC) -> entrepreneurial mindset (EMST) {GEERC -> EMST} are all statistically significant (Table 14).

Table 14. Total effect of the model

Total effect	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
AGEE -> EMST	0.312	0.313	0.035	9.007	0.000
AGEE -> ENIT	0.208	0.209	0.04	5.145	0.000
EMST -> ENIT	0.573	0.573	0.029	19.61	0.000
GEEPI -> EMST	0.281	0.281	0.052	5.383	0.000
GEEPI -> ENIT	0.24	0.24	0.063	3.825	0.000
GEERC -> EMST	-0.123	-0.122	0.047	2.633	0.008
GEERC -> ENIT	-0.074	-0.072	0.051	1.442	0.149
MTEE -> EMST	0.094	0.095	0.052	1.804	0.071
MTEE -> ENIT	0.075	0.074	0.06	1.258	0.208

The direct effect is presented in Table 15. The results show that augmented entrepreneurial education (AGEE) has a statistically significant relationship with entrepreneurial mindset (EMST), AGEE -> EMST ($\beta = 0.312$, $p < .001$), however, augmented entrepreneurial education (AGEE) has a statistically insignificant relationship with entrepreneurial intentions (ENIT), path AGEE -> ENIT is not statistically significant. The paths, entrepreneurial mindset to entrepreneurial intentions {EMST -> ENIT}, generalised entrepreneurial education-perceived intention to entrepreneurial mindset (EMST) {GEEPI -> EMST}, generalised entrepreneurial education-received content to entrepreneurial mindset (EMST) {GEERC -> EMST} are all statistically significant.

Table 15. Direct effect of the model

Direct effect	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
AGEE -> EMST	0.312	0.313	0.035	9.007	0.000
AGEE -> ENIT	0.030	0.03	0.035	0.844	0.399
EMST -> ENIT	0.573	0.573	0.029	19.61	0.000
GEEPI -> EMST	0.281	0.281	0.052	5.383	0.000
GEEPI -> ENIT	0.079	0.079	0.055	1.449	0.147
GEERC -> EMST	-0.123	-0.122	0.047	2.633	0.008
GEERC -> ENIT	-0.003	-0.002	0.046	0.072	0.943
MTEE -> EMST	0.094	0.095	0.052	1.804	0.071
MTEE -> ENIT	0.021	0.02	0.051	0.411	0.681

Based on the results of the direct effect, the total effect, and the specific indirect effects it can be concluded that the entrepreneurial mindset (EMST) has a partial mediation effect on the relationship between augmented entrepreneurial education and entrepreneurial intentions. The results also show that entrepreneurial mindset (EMST) has a full mediation effect on the relationship between general entrepreneurial education–received content (GEERC) and entrepreneurial intentions. Also, entrepreneurial mindset (EMST) has a full mediation effect on the relationship between general entrepreneurial education – perceived impact and entrepreneurial intentions. As such, hypotheses GEEPI (*H2a*), GEERC (*H2b*), AGEE (*H2c*) are supported while MTEE (*H2d*) is not supported.

5.6 Summary and conclusion

The empirical data from the quantitative study investigated the relationship between entrepreneurial education constructs and entrepreneurial intention as well as the mediation effect of the entrepreneurial mindset on this relationship. The results show that a relationship exists between augmented entrepreneurial education and entrepreneurial intention, there was also a relationship between general entrepreneurial education perceived impact and entrepreneurial intention. Entrepreneurial mindsets have a mediation effect on entrepreneurial education (general entrepreneurial education perceived impact, general entrepreneurial education received content, and augmented entrepreneurial education), and entrepreneurial intention. These results are discussed in chapter 6, and limitations which help with their contextualisation are discussed in chapter 7.

CHAPTER 6 - DISCUSSION OF RESULTS

6.1 Introduction

In this chapter, the summary of the findings following the discussion of the results outlined in chapter five from the data analysis process is presented. Furthermore, a discussion of the results of the statistical analysis and descriptive statistics are also included. In conclusion, the results of the study are discussed by comparing the result in chapter five regarding the tested hypotheses and the relevant literature review from chapter two.

6.2 Summary of results

6.2.1 Data collection

In the context of similar studies, that have examined the effect of entrepreneurial education on the intentions of starting a business. The population from where the samples were drawn have been students enrolled in institutions of higher learning within specific country contexts, as was the case in the study conducted by Ahmed et al. (2020) in Pakistan, where eight universities participated. Their research investigated the effect that entrepreneurship education programmes, learning, inspiration, and resources have on intentions to start a business in an emerging economy. The sample sizes have ranged from 200 (Hasan et al., 2017a) to 480 (Saptono et al., 2020). In this study, however, a higher sample size was targeted because the radio population in South Africa exceeded 30 million in the years 2020/21 according to BRCSA (2021). The study exceeded the sample target of 750 and gathered 859 responses for processing and statistical analysis. Even with a large data gathered, the generalisability of this study may however be compromised as the sample had a concentration in only two of the nine South African provinces as outlined in the limitation presented in chapter 4. Nonetheless, it was adequate for this study.

6.2.2 Conceptual model

The research developed a conceptual model that includes the constructs (entrepreneurial education, entrepreneurial mindset, and entrepreneurial intention) for the problem identified which was under investigation. Since the majority of empirical studies are included in this paradigm, the instrument used to measure the

survey possessed specific properties in order to yield positive results (Sürücü. & Maslakçı, 2020).

6.2.3 The pilot phase

Before the discussion, the credibility, consistency, and accuracy of the results were evaluated. This was done by confirmation of the validity and reliability of the data and reviewing the credibility of the sample. It was confirmed in chapter 4, that the validity was obtained through internal validity with pilot studies that ensured a typical step in the process of developing and translating research was carried out. Within the translational pathway from concept development to large-scale research, pilot studies are done to offer information of significant usefulness for determining the acceptability of research (Beets et al., 2020).

To ensure the usefulness of this study's questionnaire during the pilot phase, the feedback highlighted a few shortcomings regarding the survey form. These issues were Google Form settings related and were thus accordingly mitigated before the final survey form was distributed for data collection.

6.2.4 Validity

Validity measured the instrument to anticipate behaviour or quality and is a measure of how well the measuring instrument is performing. In this study, the construct validity was determined and confirmed with convergence and discriminant validity. The scale also had reliability to measure the consistency of the measured values acquired from repeated measurements conducted under the same conditions with the same measuring instrument. Reliability did not only measure the characteristic of the measuring device, but also of the measuring instrument's results. In this study, it was confirmed with composite reliability (ρ_a and ρ_c) and Cronbach alpha.

6.2.5 Descriptive statistics

The sample was relevant as it was made up of the listeners of the radio who could share experiences about mass media entrepreneurial education. The sample was relevant with three in five participants being female and two in five males across the different age groups from different provinces, though biased towards Gauteng and Free State as shown in graph. These respondents confirmed that the radio stations they listen to offer business or entrepreneurship content. This underpins the

influence of mass media on the efficient reach of big groups of people/audiences/listeners simultaneously (Sari et al., 2021).

In summary, the impact of the media on societal views toward a variety of topics, including entrepreneurship, has been demonstrated (Zampetakis et al., 2015). Mass media has been used to promote messages that de-stigmatize health-related themes, educate about agriculture, and encourage audience behavioral change (Peltzer, Parker, Mabaso, Makonko, Zuma, & Ramlagan, 2012). Radio is one of the most cost-effective mass media channels in Africa, reaching millions of households (Lagua & Moriano, 202). In addition to the relevance of the sample, there was also the extensiveness of the sample (Guetterman, 2015). The research had empirical data from 859 responses. This was a large sample size which is useful in quantitative research to improve the accuracy and relevance of the results (Andrade, 2020).

6.3 Hypothesis testing

6.3.1 Relationship between mass media entrepreneurial education and the entrepreneurial mindset

Multiple studies conducted in various continents and nations have indicated that entrepreneurial education instills a pattern of thinking in a mindset toward entrepreneurship and small business creation and increases the likelihood of venture success while simultaneously boosting employability (Nyadu-Addo & Mensah, 2018). It has been discovered that a lack of employment prospects and job frustration has driven an attraction to the field of entrepreneurship, with many individuals pursuing alternative income-generating opportunities (Anjum et al., 2018). The study investigated whether there was a significant relationship between mass media entrepreneurial education and entrepreneurial mindset.

Entrepreneurial education is a multidimensional construct, and the results in this study yielded four dimensions, generalised entrepreneurial education-received content (GEERC), generalised entrepreneurial education-received impact (GEEPI), motivational entrepreneurial education (MTEE), and augmented entrepreneurial education (AGEE). The model fit results confirmed the multidimensionality of the four constructs as valid and reliable constructs to measure mass media entrepreneurial education. The literature distinguishes mass media entrepreneurial education in that it can be characterised as the formal and informal dissemination of entrepreneurial

education curricula and material through the use of broadcast or mass-reaching media channels and formats such as radio (Madalena et al., 2014; Ndou et al., 2018).

This culminated in to general entrepreneurial education-received content (GEERC), generalised entrepreneurial education-received impact (GEEPI). Hang and Weezle (2005) were able to clearly illustrate the reciprocal relationship that exists between the media and entrepreneurship by focusing on how the media influences the entrepreneurship phenomena that occurs in society. Listeners benefit from mass media entrepreneurial education because it provides them with information and training that develops and enhances their ability to identify opportunities, critical thinking, decision-making, and innovativeness (Aparicio et al., 2021; Lackéus, 2020). This enables listeners to be successful in the initiation and administration of businesses. The listener is transported into a mental classroom as entrepreneurial education content-oriented programming is presented through various formats such as information sharing, dramas, interviews, music, public announcements, and advertisements (Lagua & Moriano, 2021; Sari et al., 2021). Radio has been referred to as the "theatre of the mind" (Ferguson & Greer, 2018).

According to Lagua and Moriano (2021), mass media entrepreneurship education serves as a tool for the creation and modification of attitudes, and it is recommended that this process start as early as possible in a person's life. Both entrepreneurial education and mass media platforms share the quality of having the ability to influence attitudes, which allows for a seamless connection between the two concepts (Lagua & Moriano, 2021). The goals of entrepreneurial education are similar to those of mass media in that they seek to improve entrepreneurial activities such as business management (Hagg & Gabrielsson, 2020) and venture creation (Suárez et al., 2018). However, unlike the goals of entrepreneurial education, the goals of mass media are more general.

The descriptive statistics in the research revealed that the entrepreneurial education was generally high, though the augmented entrepreneurial education (AGEE) and motivational entrepreneurial education (MTEE) were higher according to the respondents compared to the general entrepreneurial education. The results also revealed that the four dimensions of the entrepreneurial education had a statistically significant positive correlation with entrepreneurial mindset (EMST). When considered collectively within the model, generalised entrepreneurial education –

perceived impact (GEEPI), generalised entrepreneurial education – received content (GEERC), and augmented entrepreneurial education (AGEE) were statistically significant while motivational entrepreneurial education (MTEE) were not statistically significant. The results were congruent with the literature which found that mass media entrepreneurial education is found to produce positive attitudes toward entrepreneurship enhancing an adaptive mental disposition that (Hägg & Gabrielsson, 2020; Naa et al., 2018; Nguyen et al., 2019). Ahmed et al. 2020) argued that entrepreneurial education is a prelude to the formation of an entrepreneurial mindset that fosters goals for new venture creation or any entrepreneurial career path.

This new and expanding field aims to provide its students with alternatives for career and employment creation, the formation of an entrepreneurship orientation, and start-up initiating intentions (Lekoko et al., 2012). According to Bae et al (2014), entrepreneurial education is a pedagogical strategy used to instil a desire to start a firm. It is the resilience of entrepreneurship in situations of high uncertainty (Grégoire & Cherchem, 2020) and restrictions that have motivated the creation and promotion of the discipline (Farrukh et al., 2019). Entrepreneurial education is believed to encourage creativity and the formation of new ventures that generate new employment (Kier & McMullen, 2018).

Noticeably, the lack of a statistically significant relationship between motivation entrepreneurial education (MTEE) might be alluding to the weakness of this form of entrepreneurial education currently on the mass media or its inability to influence the mindset. This, even though this education is meant to inspire people to choose entrepreneurship as a career path (Qureshi and Mian, 2021). Suárez et al. (2018) say that when people listen to this kind of entrepreneurial education in the media often, they gain the confidence to follow their own business dreams. In general, bringing successful entrepreneurs on stage (Eikhof et al., 2013) gives audiences and listeners role models that they can judge and use as a model for their own attempts to start their own businesses (Di Pietro, 2018). This kind of education for entrepreneurs is the link between their ideas and their actions (Hasan et al., 2017).

In the study, augmented mass media entrepreneurial education has a substantial influence and seems critical to influence the mindset and the intentions. Shi et al. (2020) argued that this type of entrepreneurial education helps mass media

entrepreneurial education. This, by giving audiences opportunities to interact with the theoretical and informative parts of mass media entrepreneur education, augmented mass media entrepreneurial education uses. Interactive mechanisms such as competitions (Mckenzie, 2017), scenario presentations, quiz formats, and simulations. The goal is to give audiences and students a sense of what the theoretical and conceptual parts of the first two sections are like in practise (Hasan et al., 2017; Madalena et al., 2014). (Lagua and Moriano, 2021) found a link between people watching entertaining TV shows like Dragon's Den, which is a competition for entrepreneurs, and their ability to learn about entrepreneurship from the show.

6.3.2 Mass media entrepreneurial education has a positive effect on entrepreneurial intentions

The second hypothesis examined whether mass media entrepreneurial education had a favourable influence on entrepreneurial inclinations. (Lagua & Moriano, 2021) Mass media entrepreneur education promotes attitudes that stimulate new venture formation concepts. This discipline, unlike business education, focuses on educating the recipient with the abilities essential not just for organisational administration tasks, but also for beginning a firm (Aparicio et al., 2021; Robinson & Gough, 2020). The subtopics of mass media entrepreneurial education were evaluated to determine their individual and aggregate impact on entrepreneurial goals. Positive views regarding entrepreneurship are triggered by mass media entrepreneurial education (Hagg & Gabrielsson, 2020; Nguyen et al., 2019). Various research undertaken in numerous continents and nations have determined that entrepreneurial education fosters in pupils a positive attitude toward enterprise and small business creation (Bilic et al., 2011; Lee et al., 2005; Nyadu-Addo & Mensah, 2018).

It has been discovered that a lack of employment prospects and job unhappiness have driven the heightened interest in the field of entrepreneurship, with many individuals pursuing alternative income-generating opportunities (Anjum et al., 2018). Entrepreneurship is the solution that many nations aim to promote and facilitate. The effect of entrepreneurial education on entrepreneurial intentions has received much attention, but little is known about the relationship between the subdimensions of mass media entrepreneurial education and entrepreneurial aspirations. Understanding the relative importance of each subdimension will contribute to the expansion of entrepreneurship education theory.

Both the correlation analysis and structural statistically show a significant relationship between the dimensions of entrepreneurial education and entrepreneurial intentions. The results of the correlation revealed that all four dimensions of the entrepreneurial education had a statistically significant positive correlation with entrepreneurial intention. Although that is the situation, the structural model which considers all the dimension of entrepreneurial education at the same time, shows that generalised entrepreneurial education – perceived impact (GEEPI), and augmented entrepreneurial education (AGEE) were statistically significant, meanwhile generalised entrepreneurial education – received content (GEERC) and motivational entrepreneurial education (MTEE) were not statistically significant. There was a lack of statistical significance of the motivation entrepreneurial education MTEE even with entrepreneurial intention (ENIT). Nonetheless, the construct of mass media entrepreneurial education did influence both the mindset and intention.

6.3.3 Entrepreneurial mindset has a positive impact on entrepreneurial intentions

The third hypothesis investigated whether the Entrepreneurial mindset has a positive impact on entrepreneurial intentions. There is unanimity that cognition and emotions are crucial components of an entrepreneurial mindset (Kuratko et al., 2021). Also evident from the research findings is that an entrepreneurial mindset is a mode of thought that enables the entrepreneur to adapt his or her thoughts to environmental dynamics and uncertainty (Naumann, 2017). It is a sturdy way of thinking that enables the entrepreneur to persevere despite adverse conditions (Cui & Bell, 2022; Wardana et al., 2020). In this context, the hypothesis of this study is that an entrepreneurial attitude has a beneficial influence on entrepreneurial inclinations.

The results of the study showed a strong statistically significant correlation between entrepreneurial mindset and entrepreneurial intentions, and this was confirmed with the structural model. This underpins the importance of the mindset on the entrepreneurial intention . The influence of the media on society, the phenomena of an entrepreneurial mindset, and the intention to launch new ventures are contemporary issues that merit examination. Particularly considering that even at the level of community radio, it has been demonstrated that radio has a favourable influence on social views (Khan et al., 2017).

The influence of the entrepreneurial mindset on intention cannot be underestimated as it can allow for flexibility and progressive focus as Naumann (2017) posits that, an entrepreneurial mindset is a way of thinking that focuses on creating value without worrying about limited resources in a business environment that is full of uncertainty and ambiguity. Different academic definitions agree that entrepreneurs are different from people who don't run their own businesses because they have an entrepreneurial mindset (Kouakou et al., 2019). The ability to take note of things that don't seem to go together and organise them in mind so that it can make a product or service that can lead to a new business or the growth of an existing one (Baron, 2006). Kuratko et al., (2021) highlight that there are seven things that make up an entrepreneurial mindset. An entrepreneurial mindset includes cognitive tuning and goal-setting, decision-making based on heuristics, alertness, knowledge of the past, and social interaction. The last two characteristics, cognitive adaptability, and metacognition are not as easy to spot.

The influence of the mindset on intention is congruent to other studies in the literature. Multiple studies have shown that having an entrepreneurial mindset and wanting to start a business go hand in hand (Campos et al., 2017; Kouakou et al., 2019; Ndou et al., 2018; Robinson & Gough, 2020). Even in other fields, like engineering (Rae & Melton, 2017), technology training and venture creation (Ndou et al., 2018; Swartz et al., 2022), and vocational studies (Di Pietro, 2018), having an entrepreneurial mindset has been found to give students the skills they need to think like entrepreneurs and start new businesses within existing companies or on their own (Ndou et al., 2018). This phenomenon shows a lot of entrepreneurial intent, which has been shown to lead to actual entrepreneurial behaviour (Cui & Bell, 2022).

6.3.4 Entrepreneurial mindset mediates the relationship between entrepreneurial education and entrepreneurial intentions

The last hypothesis tested whether the entrepreneurial mindset had a mediation effect on the relationship between mass media entrepreneurial education and entrepreneurial intentions. A mindset conducive to entrepreneurship is fostered through official and informal routes of education (Aparicio et al., 2021; Bell & Bell, 2020). This attitude is developed with the aid of design thinking frameworks in order to facilitate precise problem comprehension, systematic problem identification, and significant value creation. The entrepreneurial attitude is attributed to fostering

adaptable qualities in pupils, making them agile and able to respond positively in unpredictable and dynamically complex environments (Baggen et al., 2021; Bux & van Vuuren, 2019). In order to maintain competitiveness in a market that is quickly evolving, organisations and new initiatives must adopt a particular mentality. Entrepreneurial individuals are credited with creative problem-solving abilities. The introduction of innovative new services, products, business models, and procedures (Saptono et al., 2020).

Therefore, the purpose of this hypothesis is to determine whether entrepreneurial mindset levels influence the interplay between entrepreneurial education and entrepreneurial intents. In addition, the testing of the mediator role of the entrepreneurial mindset aims to determine if an increased entrepreneur mindset facilitated an increased positive relationship between entrepreneurship education and entrepreneurial intentions, or if low levels of entrepreneurial mindset had the opposite effect. Or, if the entrepreneurial attitude did not moderate the relationship between mass media entrepreneurial education and entrepreneurial goals. The success of entrepreneurial education can be measured by examining its effect on entrepreneurial attitudes, mindset shifts, and plans to launch a new business (Bux & van Vuuren, 2019). This, therefore, expands the routes via which one acquires entrepreneurial education, including formal schooling, learning from entrepreneurial parents, and additional channels such as the media (Yunandar et al., 2019).

The results of the research show that there is a statistically significant relationship in the path generalised entrepreneurial education – perceive impact -> entrepreneurial mindset -> entrepreneurial intentions {GEEPI -> EMST -> ENIT}. Also, there was a statistically significant positive relationship in the path augmented entrepreneurial education ->entrepreneurial mindset ->entrepreneurial intentions {AGEE -> EMST -> ENIT} and there is a statistically significant negative relationship in the path, generalised entrepreneurial education – received content -> entrepreneurial mindset ->entrepreneurial intentions {GEERC -> EMST -> ENIT}. This confirmed the mediation effect of the entrepreneurial mindset, except for the MTEE path motivational entrepreneurial education ->entrepreneurial mindset -> entrepreneurial intentions {MTEE -> EMST -> ENIT}. In the context of education, a student can learn to think like an entrepreneur by getting training through mass media entrepreneurial education (Hagg & Gabrielsson, 2020). Entrepreneurship is a way of thinking that

encourages quick thinking, creativity, and new ideas (Aldila Krisnaresanti et al., 2020). It is also seen as a very important trait for start-ups to have (Waddock, 2020).

Because of this way of thinking, at least one entrepreneurship course has been added to colleges and universities. A possibility that might not be possible in South Africa, where high poverty and unemployment make entrepreneurship a necessity and where entrepreneurs might not be able to go to college. This gives the mass media a better chance to be the source of information that helps people think more like entrepreneurs. In business, an entrepreneurial mindset is a way of thinking that leads to finding opportunities and making plans for how to take advantage of those opportunities (Handayati et al., 2020). This has to do with figuring out how to make the most of limited resources to create value (Ahmed et al., 2020) and with people's plans to start a business (Bili et al., 2011).

The phenomena that are mass media entrepreneurial education, entrepreneurial mindset, and entrepreneurial intentions have been found in common research studies (Anjum et al., 2018; Gabrielsson et al., 2020; Laguna González et al., 2019; Qureshi & Mian, 2021). These phenomena have been found in common research studies (Anjum et al., 2018; Gabrielsson et al., 2020; Laguna González).

Education in entrepreneurship has been demonstrated to be an effective means of encouraging the growth of an entrepreneurial mindset (Ahmed et al., 2020). Education in entrepreneurship has also been found to assist in the formation of entrepreneurial goals (Anjum et al., 2018; St Quinton et al., 2021). Even though studies have begun to emerge that focus on behavioural entrepreneurial mindset (Cui & Bell, 2022), one of the most understudied constructs of the other two is the entrepreneurial mindset. This is despite the fact that the entrepreneurial mindset has been studied predominantly from a cognitive perspective. An entrepreneurial mindset or an entrepreneurial cognitive posture has been found to be beneficial not only to those who are interested in the creation of new businesses, but it has also been found to be instrumental in the facilitation of creativity, problem-solving skills, and heightened creativity even among those who are operating in sectors such as technology businesses, engineering disciplines, vocational sectors, and other industries (Ghafar, 2020). This finding was made possible by the fact that an entrepreneurial mindset or an entrepreneurial cognitive posture is a cognitive posture that is characterised by an entrepreneurial mindset (Rae & Melton, 2017).

According to Naumann (2017, p. 159), an entrepreneurial mentality is "seen as a way of adaptable thinking and decision-making in complex, uncertain and dynamic environments." Even though it is not widely examined, the mediating influence of entrepreneurial mindset between mass media entrepreneurial education and entrepreneurial intents is mentioned in the majority of studies that relate the two variables (Cui & Bell, 2022; Kouakou et al., 2019; Kuratko et al., 2021; Qureshi & Mian, 2021). According to the research conducted by Cui and Bell (2022), one of the gaps that needed to be filled was the fact that the entrepreneurial mindset is typically studied by academics from a cognitive point of view, as opposed to adding the behavioural dimension. This was seen as a gap that needed to be filled. This is also partially linked to the fact that the entrepreneurial mindset is most frequently discussed in research that focuses on entrepreneurial education and intentions (Baggen et al., 2021; Turner & Gianiodis, 2018).

Given that an entrepreneurial mindset is essential in facilitating the positive relationship between entrepreneurial education and entrepreneurial intentions (Daspit et al., 2021), it does warrant that channels or platforms such as mass media be considered as potential channels that can stimulate the development of entrepreneurial intentions in audiences. This is because an entrepreneurial mindset is critical in facilitating the positive relationship between entrepreneurial education and entrepreneurial intentions (Qureshi & Mian, 2021). This affords the opportunity to influence the development of an entrepreneurial mindset from as early as primary school audience listeners and youth, who are most affected by high unemployment rates within various countries (Suárez et al., 2018; Yunandar et al., 2019). This can be done through multiple formats of entrepreneurial education that can be propagated on mass media platforms. (Suárez et al., 2018; Yunandar et al., 2019). The radio platform offers the benefits of having a low cost, having a vast reach, having context relevance, and being able to transmit messages in a number of different local languages (Esch et al., 2016).

6.3.5 The final model of the study

The research confirms that the quest to forecast human behaviour with some degree of precision is supported by the theory of planned behaviour, which serves as the framework for this endeavour (Bae et al., 2014). The hypothesis is predicated on the idea that human beings engage in cognitive activity and make plans before they take

any action (Tornikoski & Maalaoui, 2019). Ajzen provided changes that led to the development of the theory of planned behaviour in response to deficiencies that were observed in the theory of reasoned action (TRA) (Hardeman et al., 2002), which was established by Ajzen and Fishbein (1980). (Ajzen, 2012; Tornikoski & Maalaoui, 2019). The earlier theory was predicated on the idea that behaviours of interest were under the volitional control of the individual, but it failed to take into consideration the influence of subjective norms, as well as perceived and actual behavioural control (Tornikoski & Maalaoui, 2019). The theory of planned behaviour has emerged as the theory with the most dependable outcomes (Farrukh et al., 2018). This was further demonstrated in the conclusions by Munir et al. (2019). Bux and Van Vuuren (2019) provided support for the utilisation of the theory of planned behaviour for the purpose of evaluating entrepreneurial intentions.

Figure 7 shows the final model of the study. The model has four constructs of entrepreneurial education, general entrepreneurial education-received content (GEERC), general entrepreneurial education-received impact (GEEPI), motivational entrepreneurial education (MTEE), and augmented entrepreneurial education (AGEE).

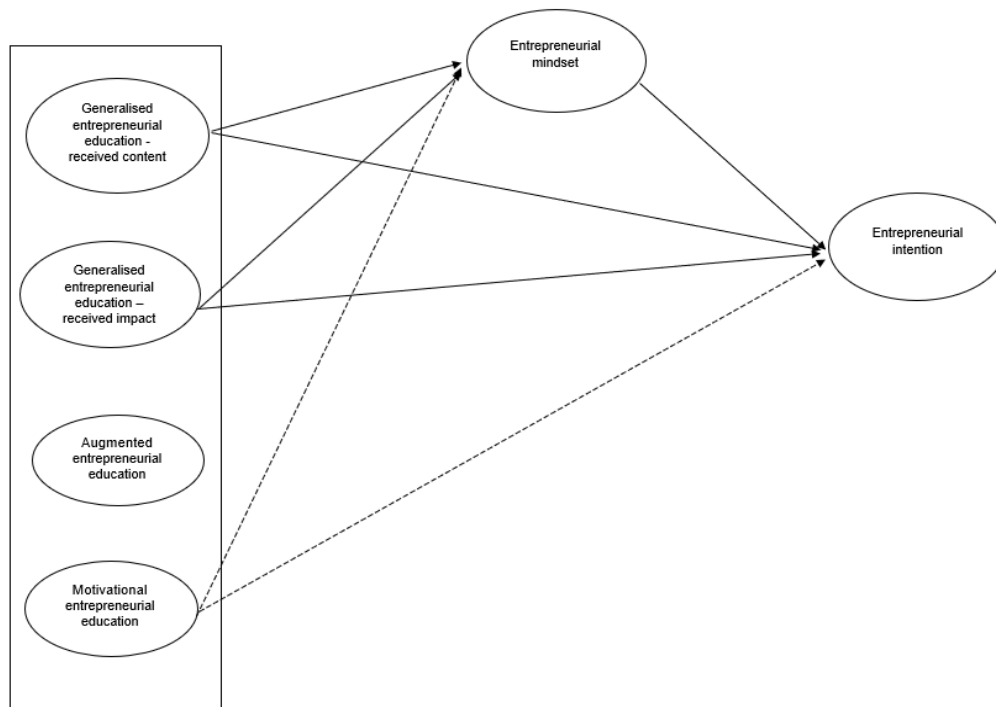


Figure 8. Final model of the study

The model fit results confirmed the multidimensionality of the four constructs as valid and reliable constructs to measure the mass media entrepreneurial education. According to Neneh (2019), there is no guarantee that intentions will be translated into action. Nevertheless, increased intentions to consider entrepreneurial initiatives attributable to exposure to entrepreneurial education (Aparicio et al., 2021; Lekoko et al., 2012; Qureshi & Mian, 2021) is enough to justify the use of the theory of planned behaviour in this study (Bux & van Vuuren, 2019), though calls for the model to be extended have been made (Anjum et al., 2018; Munir et al., 2019).

The mass medium is a route through which communication can be distributed to a group of individuals. The plural version of the word medium is media (Madalena et al., 2014). The media industry has gone through several different stages of development (Sari et al., 2021). Following the development of print media, electronic platforms such as radio and television came into existence and quickly gained enormous audiences in the majority of countries (Jain, 2021; Madalena et al., 2014). A great number of them came into existence as platforms that were owned by the state and were put to use to educate, inform, and otherwise reach the populace (Esch et al., 2016). Because of the advent of the internet, much has changed since then. The internet has given rise to a new form of media, and platforms such as websites, Apps, and social media have become new ways for people to communicate with each other and with large groupings of audiences. In the past, people communicated primarily face-to-face (Ferguson & Greer, 2018; Silva et al., 2018).

Intentions of a person to carry out a specific action are at the centre of the expanded scope of the theory of planned behaviour, which was shown to be more complete (Ajzen, 2012; Farrukh et al., 2018). It is necessary for a person to have their own free will in order for their intentions to be a useful lever in accurately anticipating their subsequent actions or behaviour (Tornikoski & Maalaoui, 2019). In the context of this theory, intentions are the motivation required for an individual to mobilise their energy and effort for the performance of a specific behaviour or action. In other words, intentions are the driving force behind behaviour (Zaremohzzabieh et al., 2019).

6.4 Conclusion

Entrepreneurial education is viewed as a crucial tool for economic growth, job creation, and wealth generation. This study focuses on entrepreneurial knowledge received through the transmission of mass media entrepreneurial education on the

radio, adding to the insights gathered from which Laguía and Moriano (2021) evaluated the depiction of entrepreneurs in mass media, television to be specific. In a country with a high and rising unemployment rate, entrepreneurial education, an entrepreneurial attitude, and the desire to create new businesses are essential intervention strategies. Wide entrepreneurial education, which is primarily concerned with multi-stage access to entrepreneurial education, has additional access to a broad audience through mass media (Baggen et al., 2021).

The discussion of the study confirmed that mass media can be a useful platform for entrepreneurial education, and that this education is critical as it had a significant relationship with the entrepreneurial intention with the entrepreneurial mindset mediating this relationship. This underpins the importance of the entrepreneurial mindset in ensuring the entrepreneurial intent, which is critical to be an entrepreneur. The next chapter provides the conclusions and recommendations of the study, focusing on the principal findings, implications for the stakeholders, and suggestions for future research.

In this chapter a summary of the results was discussed from the collected, processed, and analysed data. A discussion of the results following the hypotheses testing were also presented. Chapter 7 follows wherein conclusions and a discussion of the recommendation for future research are articulated.

CHAPTER 7 - CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

In chapter seven principal conclusions are provided and a discussion of the implication of the study for various stakeholders such as government, business, and management are discussed. Furthermore, a discussion of the implications for academia is outlined, including a discussion of the limitations of the research. In conclusion, recommendations for future research with respect to the fields of entrepreneurship, entrepreneurial mass media education, and the use of both traditional and new media platforms for accelerated impact are presented.

7.2 Principal conclusions

Building on the work by Hasan et al. (2017) their instrument was used to empirically investigate the relationships between the constructs, mass media entrepreneurial education and its sub-categories, generalised entrepreneurial education, augmented entrepreneurial education, and motivational entrepreneurial education with an entrepreneurial mindset and entrepreneurial intentions. The work by Cui and Bell (2022), and their instrument were also included due to the inclusion of the development of and mediation role of the entrepreneurial mindset construct that their study also focused on. Though the context of both these studies focused on university settings (de Villiers Scheepers et al., 2018), this study's context was mass media, namely radio, as a channel through which entrepreneurial education is disseminated to listeners.

Study Findings:

- The results show that generalised entrepreneurial education, the perceived impact (GEE-PI) sub-dimension, accelerates the development of entrepreneurial intentions (ENIT). Similarly, so does augmented entrepreneurial education. Generalised entrepreneurial education's perceived impact sub-dimension is a significant listeners' response that highlights that they are favourably predisposed to this type of radio content. Which ensures the engagement and retention of radio audiences benefit when presented. Thus contributing favourably to the radio broadcast construct "edutainment", a word formed by combining education with entertainment, in defiance of the linear classroom presentation style of educational content (SABC, 2021).

- Intentional and dedicated improvement efforts in the literature that forms the basis of radio content can accelerate the intentions to start businesses in society (Laguía & Moriano, 2021). Additionally, this would add the benefit of accelerating the venture creation rate of marginalised members of society, such as women. Since women have been found to start social enterprises (Welter, 2011), the pursuit of financial ambitions through innovatively solving social dilemmas adds to the benefits society stands to gain from (Bazan et al., 2020). And that the youth need to be steered towards venture creation to increase the pool of businesses that can create new employment opportunities (Bux & van Vuuren, 2019; Nguyen et al., 2019). A rise in technology businesses is seen as an opportunity to achieve the goal of high-growth businesses that offer high employment opportunities (E. M. Swartz et al., 2022).
- Scholarly knowledge gaps informing general entrepreneurial education-received content (GEE-RC) render it ineffective at igniting entrepreneurial intentions (ENTI) (Hägg & Gabrielsson, 2020). When this is not known, the possibility of presenting any kind of entrepreneurial education content on the radio as a tick-box exercise is very high, as opposed to the preferred evidence-informed educational (Baggen et al., 2021). This knowledge is critical to content producers, radio station management, and policy-makers since it addresses the issue of accountability regarding the effectiveness of entrepreneurship development programmes against the return on investment (ROI) of the budget spent with the aim of fulfilling public education mandates objectives (Badri & Hachicha, 2019; Bux & van Vuuren, 2019).
- Interestingly though, when general entrepreneurial education-received content (GEE-RC) is broadcasted to an audience that has an entrepreneurial mindset the development of entrepreneurial intentions (ENTI) is achieved. This implies mass media entrepreneurial education must be tailored to respective audience profiles aligning each sub-dimension with appropriate programme formats and approaches. Music format radio stations, and talk format radio stations, cannot adopt the same subdimensions when creating entrepreneurial education since they attract different audiences. Each must creatively only apply the most effective sub-dimension.
- Like general entrepreneurial education-received content (GEE-RC), motivational entrepreneurial is also ineffective regarding the development of intentions to start a business. Radio stations usually offer a variety of content catering to the diverse needs of audiences. Due to time allocation constraints whereby radio programmes

only run for a limited amount of time per week, or per month, without compromising audiences' attention, some stations might have to avoid using motivational entrepreneurial education if the objective is to encourage new venture creation. Motivational entrepreneurial education (MTEE) can be revisited once literature deficiencies that render it ineffective for entrepreneurial intentions development have been closed.

- This finding is key as they aid radio stations such as public broadcasters and community radio stations to effectively refine their content offering for meeting public education mandates. Beyond simply ticking a box, this knowledge will translate into content effects manifesting in society for improved quality of life.
- The results show that augmented entrepreneurial education (AGEE) ignites the development of an entrepreneurial mindset (EMST) in radio listeners, however, augmented entrepreneurial education (AGEE) is impotent toward inspiring new venture creation in the listeners. In this instance it would be prudent to investigate the literature gaps that render AGEE ineffective. Alternatively, to engage it in combination with generalised entrepreneurial education-perceived impact (AGEE-PI) for desired effect of inspiring venture creation intent. But for programmes aimed at entrepreneurial mindset development it is a good tool to use.
- Additionally, results confirm de Villiers Scheepers et al. (2018) that entrepreneurial mindset facilitates the development of entrepreneurial intentions, while generalised entrepreneurial education-perceived impact and generalised entrepreneurial education-received content each and collectively facilitates entrepreneurial mindset (EMST) development (Hasan et al., 2017a). This does not just benefit the creation of venture creation objective, but also facilitates the development of a mindset ready to display the competencies required for competitiveness in the era of forth industrial revolutions (4IR) (Daspit et al., 2021). The rapid changes in the market are accelerated a demand for a work force that is capable of operating in an innovation-driven competitive economy (Qureshi & Mian, 2021).
- As per the results presented in chapter six, entrepreneurial mindset (EMST) has a partial mediation effect on the relationship between augmented entrepreneurial education and entrepreneurial intentions. The full mediation effect of entrepreneurial mindset (EMST) on the relationship between general entrepreneurial education-received content (GEERC) and entrepreneurial intentions. Similarly, the relationship

between general entrepreneurial education-perceived impact sub-dimension, and entrepreneurial intentions highlights the importance of entrepreneurial mindset development (Daspit et al., 2021; de Villiers Scheepers et al., 2018). Hence, just as has been the case in academia, mass media platforms with a mandate to contribute towards providing public education like South Africa's national broadcaster, and community radio stations must make an effort to focus radio content for entrepreneurial mindset development (Esch et al., 2016; Khan et al., 2017).

In summary, this study has empirically proven the existence of a positive relationship between augmented entrepreneurial education and entrepreneurial intention (Hasan et al., 2017a; Lackéus, 2020), there was also a relationship between general entrepreneurial education perceived impact and entrepreneurial intention (cite). Entrepreneurial mindsets have a mediation effect on entrepreneurial education (general entrepreneurial education perceived impact, general entrepreneurial education received content, and augmented entrepreneurial education), and entrepreneurial intention (Hasan et al., 2017a).

7.3 Theoretical contribution

This study addresses calls in the literature, made by Naa et al. (2018) to increase access to entrepreneurial education with the objective of increasing the rates of new venture creation. Further calls were made by Qureshi and Mian (2021) to improve the transfer of best practices between business schools, even though the scope of this research focuses on the wider society of South Africa in order to facilitate the ambitious goal of the rise of an entrepreneurial population (Wonglimpiyarat, 2016). By focusing on an institution mostly associated with entertainment, therefore deemed informal such as radio, the findings of this study argue their case as credible accelerators of entrepreneurship (Aparicio et al., 2021). Furthermore, emphasising the need for multi-stakeholder collaborative efforts to be made for academic advancements in the entrepreneurship field and for social benefit.

The contrast between the high intentions to start a business articulated in the findings of this study, and the actual rate of venture creation in South Africa echoes the call by Cui & Bell (2022) to increase research that focuses on the behavioural dimension of the theory of planned behaviour since most research is cognition focused. Similar sentiments are expressed by Aparicio et al. (2021) who postulate that context plays a role in whether or not people act on their intentions.

The intended unidimensional mass media entrepreneurial education sub-construct, further breaking out into a multi-dimensional construct adds the call to better structure the theory that informs the entrepreneurial education (Hägg & Gabrielsson, 2020). Consolidating the meaning of concepts and curricular approaches will assist with better alignment of this discipline with contextual challenges being mitigated. This research highlights the space for objectivist approaches using cognitive and behaviourism to provide the underpinning knowledge for an enhanced experiential learning process that is constructive (Bell & Bell, 2020).

7.4 Implications for management and other stakeholders

7.4.1 Government

Government and other related stakeholders will have to place an emphatic focus on the inclusion of entrepreneurial education in institutions that government controls from schools all the way to higher education institutions. Exposing the larger society to entrepreneurial education from an early age as part of lifelong learning (Bux & van Vuuren, 2019; Floris & Pillitu, 2019) is proven in this study and it echoes the findings of other studies that entrepreneurial intentions are consequence from entrepreneurial education (Karyaningsih et al., 2020; Shi et al., 2020).

Secondly, the government can focus and allocate a budget towards the development of mass media entrepreneurial education content for radio, television, and new in collaboration with stakeholders such as industry stakeholders, academic scholars, research institutions such as the CSIR (Chebbi et al., 2020), and sectors with the highest demand for skills development. The development of a mass media format compatible entrepreneurial education curriculum framework will expedite the government's mandate to enhance entrepreneurial activity in the country (Bell & Bell, 2020).

Ensuring that access to entrepreneurial education is made available at different touchpoints that society can access will mitigate the cost of higher education learning constraints for the majority in South Africa (Jain, 2021). Due to the socio-economic conditions of the country, many of the people that need access to entrepreneurial education cannot afford it. This is evidenced by campaigns such as “fees must fall” where students highlighted financial constraints prohibiting their access to higher education learning (Mbandlwa, 2021).

By and large, the government will also be following the trend set by technology companies of offering massive open online courses (MOOCs) by Google, Meta, and LinkedIn which have made various key courses available for ease of access and lifelong learning (OECD, 2020). It would therefore be to the benefit of the country for the government to collaborate with radio primarily because in South Africa it is the only medium through which information is predominantly disseminated in local languages (Bosch, 2022; BRCSA, 2021; SABC, 2021) and then secondly the collaboration with online platforms (Sari et al., 2021) will serve to amplify the content that is already carried out on the radio.

7.4.2 Labour policy makers

One of the South African government's biggest challenges particularly among the youth is unemployment (Bux & van Vuuren, 2019; StatsSA, 2021). The channeling of resources towards the use of mass media especially radio which is easily accessible can act as a way to influence youth in the right direction by equipping them with knowledge through entrepreneurship education that could be offered in an African language (Bux & van Vuuren, 2019; SABC, 2021). Aparicio et al. (2021, p. 1) agree that "media coverage on entrepreneurship or education can enhance the entrepreneurial potential in its lower end." The relationship established clearly proves that entrepreneurial education influences intentions (Farrukh et al., 2018). Consequently, the effect of providing well-curated content using mass media would lead youth to increase their chances of arising as entrepreneurs who originate new businesses that employ others thus reducing unemployment.

7.4.3 Radio and Institutions of Higher learning

The emergence of Internet-based media has birthed a new phenomenon where traditional mass media platforms such as radio also find expression online by streaming radio content on various social media and streaming platforms through the Internet (Ferguson & Greer, 2018). This media convergence has added a new dimension to the media landscape. Multiple traditional mass media channels have had to innovate and pivot in response to the changing landscape (Ferguson & Greer, 2018; Sari et al., 2021) to avoid the demise of print publications that have since closed (Samanga, 2020).

For radio to sustain its resilience it will have to work in concert with various other stakeholders and emergent media channels currently preferred by the audiences it serves (Madalena et al., 2014). Just as radio has had to adapt to providing content online, by forming partnerships with institutions of higher learning, various research-based institutions, the business sector, and other stakeholders it can ensure that it becomes the platform where all who have an interest in increased entrepreneurial activity convene and converge.

This study has shown that mass media intrapreneurial education facilitates the development of an entrepreneurial mindset that espouses the skillset required in this dynamic business and technological environment and entrepreneurial intentions required for venture creation (Ghafar, 2020; Johnson & Stage, 2018). Therefore, the following recommendations regarding radio are made:

7.4.4 Knowledge transfer channel

Radio should position itself as a key knowledge transfer channel for entrepreneurial education and best business practices. Radio can serve as a channel that interconnects the transfer of knowledge between institutions of higher learning (Qureshi & Mian, 2021), institutions of higher learning and the public, business and government, and various other stakeholders within the environment (Rae & Melton, 2017). By positioning itself within the ambits of knowledge transfer theory and through adherence to factors that influence the successful transfer of knowledge radio would be re-inventing itself for sustained competitiveness in a dynamic media environment (Qureshi & Mian, 2021; Sari et al., 2021). It will further be setting up quality control frameworks focusing on elements such as mass media entrepreneurial education, the quality of the programme, the quality of the transfer team, and quality evaluation processes to assess the most creative attention-holding approaches for different kinds of listeners (Qureshi & Mian, 2021; Sari et al., 2021; Silva et al., 2018). This must also consider the contextual factors that may influence the effectiveness of the channel (Meoli et al., 2020). The immediacy of radio presents the advantage of curriculum evolutions and sharing that can move at the speed of change reaching masses with relevant entrepreneurial education (Laguía & Moriano, 2021; Madalena et al., 2014).

7.4.5 Content creators

Listener engagement is the core business of radio through any program and the right content can act effectively to attract a large following (Silva et al., 2018). As presented in the results that entrepreneurial education influences entrepreneurial intentions, it becomes paramount to ensure that the right content is curated and presented in the language that is understood by the receiver (Qureshi & Mian, 2021). African language stations have a big and loyal following (BRCSA, 2021; SABC, 2021) and given the fact that there are low literacy levels, the use of the mother tongue can be an effective way to increase understanding. The content creators must take advantage of the knowledge that entrepreneurship education has influence and thus should be created in a simplified way to be more effective.

7.5 Limitations of the investigation

In addition to the methodological limitations identified in chapter four, there are aspects that could have had an impact on the study. Although data was collected using an online questionnaire it was restricted to South Africa-based radio listeners as respondents. Most of the respondents of this study are based in two provinces, while a small number is spread across a few more. Gauteng and the Free State emerged as the two provinces that provide most of the collected data.

Due to the broadcast frequency spill over into neighbouring countries that include Eswatini, Lesotho, Mozambique, Zimbabwe, and Namibia, and those who listen to South African radio content online through various streaming platforms, the inclusion of data gathered from South African radio listeners based in these countries could have amplified the research findings. Information or data gathered by including these countries, as an online questionnaire does not have border boundary constraints, would have added to the pool of respondents. Due to the constant population movement of people between these countries, many are exposed to South African radio.

Another phenomenon that emerged from the data that was gathered in the study is that the respondents were predominantly based in two out of the nine South African provinces. Data proportionally gathered from nine provinces would have enhanced the findings and made them more generalisable to represent real conditions in all provinces. Therefore, future research needs to be conducted with higher penetration

and higher reach of the radio listenership in South Africa the results offering enhanced diversity that is generalisable.

Additionally, the limitation of this study is also found in using the quantitative method exclusively, where the use of a mixed method and a longitudinal model may provide a deeper understanding of the impact of mass media intrapreneurial education on intrapreneurial preparation and enhancement of intrapreneurial activity within the country.

7.6 Suggestions for future studies

More research is solicited to understand the impact that African languages have in the propagation of mass media entrepreneurial education to influence entrepreneurial intentions development. Particularly, given the low levels of literacy of most of the entrepreneurs that enter the business environment without any formal education (Swartz et al., 2022). Additionally, research focusing on mass media entrepreneurial education presented on traditional media and digital media is currently on the rise (Ferguson & Greer, 2018; Sari et al., 2021).

Just as Cui et al. (2021) lamented the scarcity of entrepreneurial mindset development research, this study calls for increased focus on antecedents of entrepreneurial mindset development, also focusing on the mediation role of creativity between this construct entrepreneurial mindset, and new venture creation intentions (Gabrielsson et al., 2020; Shi et al., 2020).

Increasing the amount of available academic research on the behavioural dimension of the theory of planned behaviour, can assist with providing insights regarding why some people do what they intend to and others don't (Cui & Bell, 2022). This research would prove to be valuable in the context of mass media entrepreneurship education.

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APENDICES

Appendix 1: Questionnaire



I am currently a student at the University of Pretoria's Gordon Institute of Business Science and completing my research in partial fulfillment of an MBA.

I am conducting research on the impact of mass media entrepreneurship education on entrepreneurial mindset and intentions to start a business. To that end, you are asked to complete a survey. This will help us better understand how you have been impacted by entrepreneurial education received through the radio platform and should take no more than 15 minutes of your time. Your participation is voluntary, and you can withdraw at any time without penalty. Your participation is anonymous and only aggregated data will be reported. By completing the survey, you indicate that you voluntarily participate in this research. If you have any concerns, please contact my supervisor or me. Our details are provided below.

Your participation is voluntary, and you can withdraw at any time without penalty. All data will be reported without identifiers. If you have any concerns, please contact my supervisor or me. Our details are provided below.

Researcher name: Seipati Seoke

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The Survey Form:

Please mark your choice by putting the (√) in the appropriate box				
Do you listen to radio?	Yes		No	
Does the radio station offer business content?	Yes		No	
Do you follow business education content on radio?	Yes		No	
Preferred radio language? (African Language Station (ALS) or English/Afrikaans (EAL))				
	ALS		EAL	
Age:	0 – 17 [If a respondent selects this age group, the survey will automatically close and they will not participate]		45 - 54	
	18 - 24		55 - 64	
	25 - 34		65 +	
	35 - 44			
Gender:				
	Male		Female	
	Other			
Level of education				
	Grade 8 – 9		Post Graduate Diploma/ Honours degree	
	Grade 12 Matric		Master's degree	
	Post Matric/High school certificate		Doctorate	
	Undergraduate		Post-Doctoral	

	Degree		studies	
Ethnicity	African (Black)		Indian	
	Coloured		White	
	Chinese		Other	
Location:	Eastern Cape		Mpumalanga	
	Free State		Northwest	
	Gauteng		Northern Cape	
	KZN		Western Cape	
	Limpopo			

Please mark your choice by putting the (√) in the appropriate box

In this Questionnaire, Strongly Disagree (SD) = 1, Disagree (D) = 2, Neutral (N) = 3, Agree (A) = 4, Strongly Agree (SA) = 5						
Independent Factors		SD	D	N	A	SA
Generalised Entrepreneurial Education (GEE)						
GEE1	Entrepreneurial Education is mostly organized by mass media platforms, like Radio					
GEE2	Mass media (Radio) has a high involvement in entrepreneurial education					
GEE3	Radio stations arrange specialized entrepreneurial education programme content					
GEE4	The radio station I listen to has adequate programmes that focus on entrepreneurial education					
GEE5	The station has a monitoring system of its entrepreneur listeners					
GEE6	Many listeners of the Entrepreneurial Education programs look for business opportunities passionately					
GEE7	Many listeners of the station I listen to are able to identify Entrepreneurial opportunities					
GEE8	Many listeners of Entrepreneurial Education radio programmes are disciplined in pursuing business opportunities					
GEE9	The listeners of the Radio station I listen to talk about having/starting their own business					
GEE10	Many listeners of the Radio station improved their learning by listening to Entrepreneurial Education programs					

GEE11	A lot Radio station callers of radio I listen to ask many questions about starting a business					
GEE12	Many listeners of the radio station have an intention to start their own business					
GEE13	Entrepreneurial Education is appropriate for the listeners of this particular specialised program					
Motivation Entrepreneurial Education (MEE)						
MEE1	The station arranges the Entrepreneurial Education programme in such a way that helps most listeners to access it					
MEE2	The Radio station's Entrepreneurial Education programme helps most listeners feel positive about Entrepreneurship					
MEE3	The Entrepreneurial Education program on Radio builds self-confidence to succeed under difficulties					
MEE4	The Entrepreneurial Education programmes on Radio remind listeners about the benefits of entrepreneurship					
MEE5	The station helps many Radio listeners to become more career advanced					
MEE6	The Entrepreneurial Education programmes builds high self-confidence in the listeners					
Augmented Entrepreneurial Education (AEE)						
AEE1	Present Entrepreneurial Education Radio content requires substantial changes to develop entrepreneurial qualities					
AEE2	Arranging more interaction with Entrepreneurs					
AEE3	Collaborating with various Entrepreneurship Development Support Agencies					
AEE4	Give more assignment/project related competitions/engagements on Entrepreneurial Development					
AEE5	Give socialisation in Entrepreneurship Development					
AEE6	Include more syllabus/content on Entrepreneurship Development (Adding newer angle(s)/show(s)) on ED					
Entrepreneurial Mindset (EM)						
EM1	I often come up with new business ideas.					

EM2	It's easy for me to solve problems creatively.					
EM3	I feel that I am good at generating novel ideas					
EM4	In general, I have a tendency to first try new approaches or methods in my work.					
EM5	I am curious to find out more information about business and entrepreneurship					
EM6	I often think about how I think, what I think about, and how I make decisions					
EM7	I often think about ways of solving problems during difficult times					
EM8	When I see an opportunity to do business, I use it					
Entrepreneurial Intentions (EI)						
EI1	I'm ready to do anything to be an entrepreneur.					
EI2	My professional goal is to become an entrepreneur.					
EI3	I will make every effort to start and run my own firm.					
EI4	I am determined to create a firm in the future.					
EI5	I have very seriously thought of starting a firm.					
EI6	I have the firm intention to start a firm someday					
In this Questionnaire, Very Low (VL) = 1, Low (L) = 2, Average (A) = 3, High (H) = 4, Very High (VH) = 5						
Dependent Factor		VL	L	A	H	VH
Entrepreneurship Development						
Role of Mass Media Entrepreneurial Education on Entrepreneurial Mindset development and intentions for venture creation						

Thank you very much for your cooperation

Appendix 2: Ethical clearance Approval

GIBS ETHICAL CLEARANCE APPLICATION FORM 2021/22

RESEARCH PROJECT INFORMATION

NAME:	Seipati Seoke
STUDENT NUMBER:	5023506
PHONE NUMBER:	
E-MAIL ADDRESS:	05023506@mygibs.co.za
PROPOSED TITLE OF STUDY:	The impact of mass media entrepreneurship education on entrepreneurial mindset and intentions to start a business.
RESEARCH SUPERVISOR:	Anastacia Mamabolo
E-MAIL OF SUPERVISOR:	Mamaboloa@gibs.co.za
RESEARCH CO-SUPERVISOR	
E-MAIL OF CO-SUPERVISOR	

The purpose of this Research Ethics process is to ensure that all research conducted under the auspices of GIBS is done so in an ethical manner, in accordance with the University's policy and in such a way that **the rights of all stakeholders** associated with the research are protected.

In order for the GIBS Research Ethics Committee to assess your application, you are required to submit a **description of your Research Methodology** that must contain sufficient detail to ensure that the required steps have been taken to achieve this purpose, in the research design, data collection, analysis and storage of data used in the conduct of this research.

Please indicate the nature of the output your research is aimed at producing (mark one box only):

- ABP Applied Business Project
- MBA/MPhil Research Report
- MBA Project Publish Article
- MBA Teaching Case Study
- MBA Entrepreneurship Stream Portfolio
- MBA Consulting Stream Portfolio/MBA Health Stream
- GIBS Faculty/Research Associate/Staff member or others undertaking research under the GIBS affiliation

GIBS Ethics Policy distinguishes between FOUR main types of data and THREE main types of methodology. Please complete the table for ALL the data types that you plan to use. Note that all applications must be accompanied by a description of the methodology to be used in the study. Initial all sections that apply to your research

GIBS ETHICAL CLEARANCE APPLICATION FORM 2021/22

Section of form and type of data or methodology	Attachments – including methodology chapter (please mark that they are included)
A Pre-existing personal records of human subjects, e.g. performance reviews	<input type="checkbox"/> Methodology section of proposal <input type="checkbox"/> Description of the nature of the records to be used <input type="checkbox"/> Signed permission letter from appropriately authorised person in the organisation to use the data
B New data solicited from human subjects, e.g. through interviews or surveys	<input checked="" type="checkbox"/> Methodology section of proposal <input checked="" type="checkbox"/> Informed consent statement attach proforma (separate for qualitative data collection; as part of survey questionnaire for quantitative data collection) <input checked="" type="checkbox"/> Interview guide / survey questionnaire / pre-existing proprietary test instrument / description of intervention <input checked="" type="checkbox"/> IF pre-existing proprietary test instrument, letter of permission from the owner/copyright holder (e.g. the MBTI)
C Public non-human data, e.g. World Bank or other databases (no letter needed)	<input type="checkbox"/> Methodology section of proposal <input type="checkbox"/> Explanation of the nature of the data, how you will source it and how you will use it
D Private Organisation-specific non-human data, e.g. financial statements, marketing or safety records	<input type="checkbox"/> Methodology section of proposal <input type="checkbox"/> Explanation of the nature of the data, how you will source it and how you will use it <input type="checkbox"/> Permission letter from the owner/organisation to use the data
E Indicate which methodology you will be using. Choose one only	<input type="checkbox"/> Qualitative <input checked="" type="checkbox"/> Quantitative <input type="checkbox"/> Mixed methods

GIBS ETHICAL CLEARANCE APPLICATION FORM 2021/22

SECTION A. PRE-EXISTING PERSONAL RECORDS OF HUMAN SUBJECTS

1. Specify the nature of records and how they will be used
2. Confirm that permission has been obtained from an appropriately authorised person to study and report on these records.

Remember to attach permission letter(s).

I confirm

3. Provide the name and job title of the person in the organisation who has authorised the use of the records.

Name:

Job Title:

4. How will **confidentiality** (when the identity of the respondent is known to the researcher e.g. when data collection is via interviews) and/or **anonymity** (when the identity of the interviewer is not known to the researcher e.g. when data collection is via surveys) of the respondents and their data be assured?

Mark all that apply – ensure this is included in your methodology chapter.

- No names will be requested
- No names will be reported
- Data will be stored without identifiers
- Only aggregated information will be provided
- Other. Please specify

SECTION B. NEW DATA OBTAINED FROM HUMAN SUBJECTS

5. Does the nature of your research require you to collect data from respondents who constitute a 'vulnerable population' (defined as those who are particularly susceptible to coercion or undue influence or who have difficulty giving free and informed consent to being the subjects of research)

No

Yes.

IF yes, explain the nature of the population and what measures will be put in place done to reduce or minimise this vulnerability. Ensure this is included in your methodology chapter.

6. Please confirm that no incentive is to be offered to respondents to participate in the study.

I confirm

7. Mark the applicable box(es) to identify the proposed procedure(s) to be carried out to obtain data.

Interview guide Attach if applicable

Survey questionnaire Attach if applicable

Pre-existing proprietary test instrument, e.g. MBTI Attach if applicable

IF a pre-existing proprietary test instrument is used, confirm that permission has been obtained to use it.

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I confirm
Remember to attach permission letter(s) to use proprietary test instrument/s from an appropriately authorised person.

- Intervention, e.g. training or experiment Describe in full in methodology chapter

8. Confirm that the data gathering is accompanied by a consent statement.

- I confirm

9. Where is the consent statement found?

- As part of the survey questionnaire, if quantitative data collection, in the introduction section of the questionnaire.
- As a separate document, if qualitative data collection, remember to attach.

10. Is there a risk that the respondents may not fully understand the nature of the study, or instructions or questions, or their rights as a result of language barriers between themselves and the researcher?

- No, there is not a risk
- Yes, there is a risk.
IF yes, how will the subjects' full comprehension of the content of the research, including giving consent, be ensured? Please specify, and include in methodology chapter

11. Do any respondents risk possible harm or disadvantage (e.g. financial, legal, reputational or social) by participating in the research?

- No
- Yes.
IF yes, explain what types of risk and what is done to minimise and mitigate those risks and include in methodology chapter.

12. Are there any aspects of the research about which subjects are not to be informed?

- No
- Yes.
IF yes, explain why, and how subjects will be debriefed, and include in methodology chapter.

13. Will the audio or video recorded data be transcribed and/or translated by an independent transcriber and/or translator?

- No
- Yes.
If yes, confirm that the transcriber and/or translator will be required to sign a non-disclosure agreement to protect the respondent's confidentiality, and include in methodology chapter

- I confirm. Remember to attach a pro-forma non-disclosure agreement

14. How will **confidentiality** (when the identity of the respondent is known to the researcher e.g. when data collection is via interviews) and/or **anonymity** (when the identity of the interviewer is not known to the researcher e.g. when data collection is via surveys) of the respondents and their data be assured? Include in methodology chapter

- No names will be requested, relevant when the identity of the respondent is not known to the researcher

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- No names of individuals or organisations will be reported, relevant when the identity of the respondent is known to the researcher
- Only aggregated information will be reported
- Data will be stored without identifiers
- Other. Please specify

15. Is the topic of your research and the nature of the interview or survey questions about one or more particular organisations or to be conducted within one or more particular organisations?

- No
- Yes. If yes, confirm that appropriately authorised person/s have provided written permission for you to conduct this research
- I confirm. Remember to attach signed permission letter/s

SECTION C. PUBLIC NON-HUMAN DATA

16. Specify the nature of records to be used: Explain how they will be selected, where the data will be sourced and how the data will be used, and include in methodology chapter:

17. Confirm that this pre-existing non-human data is in the public domain, is legally accessible and is free of any copyright.

- I confirm

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SECTION D. PRIVATE ORGANISATION-SPECIFIC NON-HUMAN DATA

18. Specify the nature of records (e.g. financial reports, marketing reports or safety records) and how they will be used.

19. Confirm that permission has been obtained to study and report on these records.

I confirm. Remember to attach a signed permission letter(s).

20. Provide the name and job title of the person in the organisation who has authorised the use of the records.

Name: _____ Job
Title: _____

21. Do companies risk possible harm or disadvantage (e.g. financial, legal, reputational or social) by participating in the research?

- No
- Yes. Explain what types of risk and what is done to minimise and mitigate those risks. Include explanation in methodology chapter

22. How will **confidentiality** (when the identity of the respondent is known to the researcher e.g. when data collection is via interviews) and/or **anonymity** (when the identity of the interviewer is not known to the researcher e.g. when data collection is via surveys) of the respondents and their data be assured? Include in methodology chapter

- No names will be requested, relevant when the identity of the respondent is not known to the researcher
- No names of individuals or organisations will be reported, relevant when the identity of the respondent is known to the researcher
- Only aggregated information will be reported
- Data will be stored without identifiers
- Other. Please specify

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ALL APPLICANTS MUST COMPLETE SECTIONS E AND F

E. CONFIDENTIALITY OF RESEARCH REPORT SUBMITTED FOR EXAMINATION OR PUBLICATION

23. Please select the relevant option relating to the confidentiality of the research report you will submit for examination:

- Free access, i.e. report not embargoed
- No access for a period of two years after research report is submitted for examination
Note that in exceptional circumstances, GIBS, being the copyright holder of the published research, may consent to an embargo of the report submitted for examination for a period of no more than two years. If you wish to apply for such an embargo, please provide reasons for this in a separate attachment.
- No access under any circumstance for an undetermined period.
A letter of permission from the Vice- principal: Research and Postgraduate Studies at the University of Pretoria must be obtained prior to making this application – and attached to this application for ethical clearance.

F. DATA STORAGE AND DISSEMINATION OF RESEARCH REPORT SUBMITTED FOR EXAMINATION

24. Please confirm that you will use appropriate methods to ensure your data is safely stored in an accessible format for a minimum period of 10 years

- I confirm

25. Confirm that the details of your data storage method are set out in your attached methodology chapter

- I confirm

26. It is a goal of GIBS to make research available as broadly as possible. Mark the boxes below for the medium/media in which you do NOT wish results to be made available.

- | Academic dissemination | Popular dissemination |
|---|--------------------------------------|
| <input type="checkbox"/> Research report | <input type="checkbox"/> TV |
| <input type="checkbox"/> Scientific article | <input type="checkbox"/> Radio |
| <input type="checkbox"/> Conference paper | <input type="checkbox"/> Lay article |
| <input type="checkbox"/> Book | <input type="checkbox"/> Podcast |
| | <input type="checkbox"/> Book |

Provide reasons for any limitation on publication marked above

27. Confirm that the consent obtained from participant in the research is aligned with the extent of dissemination, specified in question 26. For example, consent if you are planning to use the research to launch a consulting career will be more comprehensive than in the case of research that is intended only for a scientific audience.

- I confirm

28. IF you wish to describe any other information which may be of value to the committee in reviewing your application

- No
- Yes. Provide details in a separate sheet attached to this application

GIBS ETHICAL CLEARANCE APPLICATION FORM 2021/22

G. APPROVALS FOR/OF THIS APPLICATION

When the applicant is a student of GIBS, the applicant must please ensure that the supervisor and co-supervisor (where relevant) has signed the form before submission

STUDENT RESEARCHER/APPLICANT:

29. I affirm that all relevant information has been provided in this form and its attachments and that all statements made are correct.

Student Researcher's Name in capital letters: SEIPATI SEOKE

Date: 31 Jul 2022

Supervisor Name in capital letters: ANASTACIA MAMABOLO

Date: 31 Jul 2022

Co-supervisor Name in capital letters:

Date: 31 Jul 2022

Note: GIBS shall do everything in its power to protect the personal information supplied herein, in accordance to its company privacy policies as well the Protection of Personal Information Act, 2013. Access to all of the above provided personal information is restricted, only employees who need the information to perform a specific job are granted access to this information.

Decision:

Approved

REC comments:

Date: 26 Aug 2022

Appendix 3: Copyright form



COPYRIGHT FORM

Copyright Declaration:

Why must I complete this form?

You need to acknowledge that you are aware of the following conditions:

All rights regarding intellectual property produced by a university student vest in the University, i.e. the University holds the copyright of all research done at the university.

No copyright laws have been broken by using copyrighted material without prior permission or acknowledgement.

The University is not responsible or liable for any breach of intellectual property rights or copyright infringements.

Based on the ethical clearance process, you need to indicate if your report must be embargoed due to confidential information

This must be done in accordance with your supervisor and the ethical clearance process.

Research will only be embargoed for a period not exceeding two years.

If permanent embargo is required, you and your supervisor must apply through the office of the Vice-Principal: Research and Postgraduate Studies.

You need to give us permission to make your research report publicly available via the University's repository, UPetd

Note: GIBS shall do everything in its power to protect the personal information supplied herein, in accordance to its company privacy policies as well the Protection of Personal Information Act, 2013. Access to all the above provided personal information is restricted, only employees who need the information to perform a specific job are granted access to this information.

COPYRIGHT DECLARATION FORM

Student details			
Surname:	Seoke	Initials:	S.M.
Student number:	05023506		
Email:	05023506@mygibs.co.za		
Phone:	(+27) 73 5060999		
Qualification details			
Degree:	MBA	Year completed:	2022
Title of research:	The impact of mass media entrepreneurial education on entrepreneurial mindset and intentions to start a business.		
Supervisor:	Ana Mamabolo		
Supervisor email:	mamaboloa@gibs.co.za		
Access			
A.	My research is not confidential and may be made available in the GIBS Information Centre and on UPSpace.		
I give permission to display my email address on the UPSpace website			
Yes	X	No	
B.	My research is confidential and may NOT be made available in the GIBS Information Centre nor on UPSpace.		
Please indicate embargo period requested			
Two years		Please attach a letter of motivation to substantiate your request. Without a letter embargo will not be granted.	
Permanent		Permission from the Vice-Principal: Research and Postgraduate Studies at UP is required for permanent embargo. Please attach a copy permission letter. Without a letter permanent embargo will not be granted.	
Copyright declaration			

I hereby declare that I have not used unethical research practices nor gained material dishonesty in this electronic version of my research submitted. Where appropriate, written permission statement(s) were obtained from the owner(s) of third-party copyrighted matter included in my research, allowing distribution as specified below.

I hereby assign, transfer and make over to the University of Pretoria my rights of copyright in the submitted work to the extent that it has not already been affected in terms of the contract I entered into at registration. I understand that all rights with regard to the intellectual property of my research, vest in the University who has the right to reproduce, distribute and/or publish the work in any manner it may deem fit.

Signature: 	Date: 30 October 2022
Supervisor signature: 	Date: 30 October 2022

Appendix 4: Certification of data analysis support

CERTIFICATION OF DATA ANALYSIS SUPPORT

(Additional support retained or not - to be **completed by all students**)

Please note that failure to comply and report on this honestly will result in disciplinary action

I hereby certify that (please indicate which statement applies):

- ***I DID NOT RECEIVE*** any additional/outside assistance (i.e. statistical, transcriptional, and/or editorial services) on my research report:

N/A

- ***I RECEIVED*** additional/outside assistance (i.e. statistical, transcriptional, and/or editorial services) on my research report:

Yes - Statistician

If any additional services were retained– ***please indicate below which:***

Statistician

Transcriber

Editor

Coaching

Please provide the name(s) and contact details of all retained:

Name: Dr. Matolwandile Mtotywa

Email Address: Andile@bsri.co.za

Contact Number: (012) 023-1130

Type Of Service: Statistical

Name: Mamashoabathe Noko

Email Address: Shoabi@kico.co.za

Contact Number: (+27) 72 205378

Type Of Service: Document Editing

Name:

.....

Email Address:

Contact Number:

Type Of Service:

I hereby declare that all *statistical write-ups and thematic interpretations of the results for my study* were completed by myself without outside assistance

Name Of Student: Seipati Monono Seoke

Signature:



.....

Student Number: 05023605

Student Email Address: 05023506@mygibs.co.za