





“Attitudes towards infopreneurship among information science students at a higher education institution”

AUTHORS	Thobekani Lose   Sebenzile Khuzwayo 
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Thobekani Lose, Dr., Researcher,
Faculty of Commerce and
Administration, Manager of the Center
for Entrepreneurship Rapid Incubator,
Walter Sisulu University, South Africa.
(Corresponding author)

Sebenzile Khuzwayo, Master of
Commerce, Lecturer, Faculty of
Commerce and Administration,
Department of Economics and Business
Sciences, Walter Sisulu University,
South Africa.

Thobekani Lose (South Africa), Sebenzile Khuzwayo (South Africa)

ATTITUDES TOWARDS INFOPRENEURSHIP AMONG INFORMATION SCIENCE STUDENTS AT A HIGHER EDUCATION INSTITUTION

Abstract

This study aimed to explore the attitudes of students of a higher education institution towards infopreneurship. The study emanated from observations that the widespread use of information technologies has created a new sector in the labor market – infopreneurship. The study adopted the case study research design based on focus group discussions to establish the students' attitudes towards infopreneurship. The participants for the focus groups were students of the Information Science department at the University of Technology, Cape Town. Data collection during the focus group discussions was based on unstructured interviews. Quantitative data analysis was applied based on data reduction from codes to categories. An enterprising attitude (26.4% code frequency) dominated the positive responses while negative attitudes were mainly reflected by a critical attitude (20.8% code frequency) towards infopreneurship. While it appeared that positive attitudes were more prevalent than negative attitudes, there were notable observations that the respondents were critical or neutral towards the essence of infopreneurship in the South African context. It was found that the belief that infopreneurship is not a viable form of employment was still prevalent. Some respondents believed that employment means working for someone. They felt that there is greater respect in being employed than engaging in infopreneurship. Some respondents, however, appear to have stronger entrepreneurial orientations and felt that infopreneurship offers the best employment opportunities. The study recommends changes in higher education curricula and the creation of a stimulating environment for infopreneurship.

Keywords

information, technology, infopreneurship,
entrepreneurship, small business, attitudes

JEL Classification

L25, L26, L53, M13

INTRODUCTION

This study focused on the attitudes of infopreneurship among information science students at the selected higher education institution (HEI). It concerned two important concepts, which are relevant in today's socio-economic environment, namely: (1) information and (2) entrepreneurship. These two constructs have received worldwide attention and they remain key variables for development in many nations across the globe. The information revolution has overtaken the world, and the importance of information has no doubt permeated across the globe (Masron et al., 2017, p. 1221). In acknowledgment of the above arguments, Adesemowo et al. (2016) claimed that information has become a vital asset for the effectiveness of all types of organizations in the private and public sectors. Such sentiments demonstrate the essential position of information in modern societies. While the recognition of information adds a vital asset (Adesemowo et al., 2016) to the development, it might be a relatively new phenomenon as entrepreneurship has long been considered a pillar of national growth



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(Ndlovu & Makgetla, 2017, p. 1). Given the high rate of unemployment in South Africa, entrepreneurship in its various forms is seen as essential. The ideal situation would entail a high survival rate for entrepreneurial initiatives. It has been argued over the years that strong survival of entrepreneurial activities and small businesses, in general, is ideal for the growth of the economy as it has the potential to increase the gross domestic product (GDP) of a country, reduce unemployment, address inequalities, reduce poverty, and lead to national development. However, concerns have been raised regarding the survival rate of small businesses in South Africa. As a result of this challenge, unemployment has remained high, and entrepreneurship has continued at levels that are below expectations. In the same way, most infopreneurs are survivalists, characterized by temporality, and often quit to pursue other jobs or forms of entrepreneurship (Masron et al., 2017, p. 1224). Infopreneurs are information-based entrepreneurs within the knowledge economy, which is highly dependent on information and knowledge; thus, the reasons and perceptions of infopreneurs deserve exploration.

1. LITERATURE REVIEW

The findings of Schumpeter (1934 cited in Campagnolo & Vivel, 2012) are thought to be a culmination of other prior formations in the field of entrepreneurship. Since then, the concept of entrepreneurship has been of intense academic interest, aided by its recognition as a necessity for national development. Bux and van Vuuren (2019) commented that entrepreneurship is recognized as an important strategy for poverty reduction, which the United Nations (UN) ranked as a top Global Sustainable Development Goal. Reports indicate that more than 55% of South Africans live in poverty thereby making entrepreneurship an exciting prospective field for South Africa. One enduring concept that has been associated with entrepreneurship over the years is that of 'an entrepreneurial opportunity' (Eckhardt & Shane, 2003). Opportunities are often seen as ways in which productive forces can be combined in creative ways that enhance the introduction of a new service or product in a beneficial way (Bux & van Vuuren, 2019). The surge of information as a critical factor of production in the knowledge economy has presented notable opportunities for information-based business undertakings, hence, the emergence of the concept of an infopreneur. The paper provides a discussion of the critical concepts, namely: (1) information, (2) entrepreneurship, and (3) infopreneurship. The review of these concepts is important, given that the term infopreneur arises from combining the information concept and the construct of entrepreneurship. After a discussion of the meaning of these concepts, the dialogue proceeds to consider a possible theoretical framework to inform this study.

The term entrepreneurship, as mentioned above, has gained prominence in national and economic discourse. Most nations, including South Africa, have actually set up a government Ministry to overlook the entrepreneurship and small business functioning. In South Africa, the Department of Small Business Development (DSBD) was set up to foster national entrepreneurial development. Other bodies such as the Small Business Development Agency (SEDA) have also been established to encourage and support small business development (Lose, 2019). This simply serves to illustrate, briefly, the realization that entrepreneurship is a critical component of national development. According to Adetayo and Hamzat (2021), entrepreneurship is defined as taking of risks by individuals who play a leading role in combining factors of production and combining them to produce goods and services. Dutta and Crossan (2005) noted that entrepreneurship as a field of inquiry and practice is dynamic and has evolved over time. Commenting on the available entrepreneurship research literature, Dutta and Crossan (2005) observed that both idealism and constructivism philosophies have dominated entrepreneurship research. Research on how to measure entrepreneurship has also been significant over the years with the concept of 'entrepreneurial intention' taking dominance as the basis for measuring the likelihood of engaging in entrepreneurship (Bowmaker-Falconer & Herrington, 2020). The rate of small business formation in any nation and unemployment rates are also close indicators of the vibrancy of entrepreneurship in an economy (Lose, 2021a). Perhaps, information as a distinct notion is likely to have emerged from the advancements of revolution discourse to the in-

formation revolution. Du Toit (2000) emphasized that information has become a key ingredient of the knowledge economy. According to Masronet et al. (2017), information is defined as a commodity with special features such as transferability and modifiability, and that can be traded, stored, customized, distributed, as well as replicated.

The term infopreneurship was coined from the terms: entrepreneurship and information (Adetayo & Hamzat, 2021). It refers to an entrepreneur whose business opportunity is based on the recognition that information has become a critical factor of production. Chandler (2007, p. 1) claims that infopreneurship is simply a business undertaking that is based on selling information, which can be in the form of books, eBooks, special reports, audio products, videos, teleseminars, and web seminars, in-person seminars/workshops, workbooks and any other forms of information dissemination. These descriptions also match that of El-Kalash et al. (2016, p. 241) who confirmed that an infopreneur is someone who does the business of gathering and selling electronic information. The infopreneur has become a prominent form of economic activity in many economically developed nations with associated notions such as 'internet business', 'web money', and 'electronic entrepreneurship' taking central recognition. Despite many challenges associated with such forms of business, such as cyber risks, misinformation, reliability, legalization, and credibility issues, Chandler (2007, p. 2) mentions several advantages associated with infopreneurship. Infopreneurship brings passive income, has a low

start-up cost, presents an expert status opportunity to the entrepreneur, is easy to market, and can be grown easily (Chandler, 2007, p. 4). Table 1 summarises some of the key activities performed by infopreneurs.

These provided descriptions suggest the relevance of infopreneurship in the economic discourse of any country. However, as impressed in the problem statement mentioned earlier, it has been observed that most infopreneurs do not sustain. They seem to be a survivalist and end up quitting to look for other forms of employment. In South Africa, this has been compounded by the general high failure rate of small businesses. To investigate this problem, the Technology-Organization-Environment (TOE) framework is used as a lens to view it, as well as guide the empirical research into this problem. Despite there being some empirical studies on the attitude of students towards infopreneurship, research into the concept is still new and characterized by notable sector and context-based gaps and inadequacies. The paper describes the TOE theory and sets a conceptual framework for further analysis.

While many theories inquire into the acceptance and use of technologies that are relevant to business management studies, this study employs the theory of Tornatzky and Fleischer (1990). Tornatzky and Fleischer (1990) postulated that the implementation and use of a technology or information systems (IS) tool is determined by three contextual factors, namely: (1) organizational factors, (2) technological factors, as well as (3) envi-

Table 1. Activities of infopreneurs

Infopreneur	Key activity
Adetayo and Hamzat (2021)	Record management automation
	Data management services such as database creation and management, cloud services, and data analysis
	Content analysis and development
	Online teaching, webinars, workshops, etc.
	Records management, information-based consulting services
	Knowledge management services
Jennings (1998)	Online marketing services
	Webmaster, cybrarian, web managers, private and public cloud services
Du Toit (2000)	Speeding up the flow of information
	Repackaging information
	Around the clock delivery of information
	Leveraging information
	Information customization
	Facilitating information access

ronmental factors. This theoretical framework seems to be useful for the present study as it allows for an exploration of how students in the information department to be analyzed perceive information technologies, information-based organizations, as well as South African socio-cultural and economic environments. Olaitan and Flowerday (2016) used the framework to study information governance issues among small businesses, while Nurhadi and Purnomo (2018) called on the theory to study e-commerce adoption in selected organizations from the hotel sector. Earlier, Mudzana and Kotze (2015) evoked the TOE framework to study the adoption of business intelligence systems in some developing countries. This theory was, therefore, deemed relevant as a lens to understand the perceptions of students from the Information Science department selected to participate in the study.

Following this theory, this study is based on the assumption that there are organizational, technological, as well as environmental factors that shape students' perceptions of infopreneurship and cloud their willingness to consider infopreneurship as a lifelong career. Following the above arguments, the study considered technological, environmental, and some university-based factors that influence perceptions of infopreneurship among students at the selected university (Figure 1). Informed by the TOE framework, the study postulated that technological-related, environmental, and university-based factors have an influence on the choice of infopreneurship as a career opportunity for students of the Information Science department at the selected HEI.

2. METHODS

The study was hinged on the analysis of perceptions, which were seen as a human construct, and only the people informed were believed to be capable of providing credible data for the study. The focus group research design was adopted for the collection of data as informed by the research approach and paradigm. This study explored the perceptions of participants on infopreneurship as a career option for them. The study of perceptions and experiences often fits phenomenological studies (Williams, 2007). As a result, data collection was considered based on the phenomenological research design. Phenomenological research designs are qualitative and emanate from the constructivist paradigm based on the construction of meaning by respondents. Creswell et al. (2007) explained that the phenomenological research design is based on the need to collect exclusive in-depth data based on the perceptions or experiences of a certain group of people. As such, the phenomenological design seems to suit the study as it allows for the collection of detailed data on the technological, environmental, and university factors that affect the desire to pursue a lifelong career in infopreneurship. Consistent with focus groups, data collection for the study was based on unstructured interviews to allow for the collection of detailed data on the issues under study.

The population for this study was the students in the Information Science department at the University of Technology in Cape Town. All students in the department were free to decide whether to be included in the study. It should be noted

Source: Authors' elaboration.

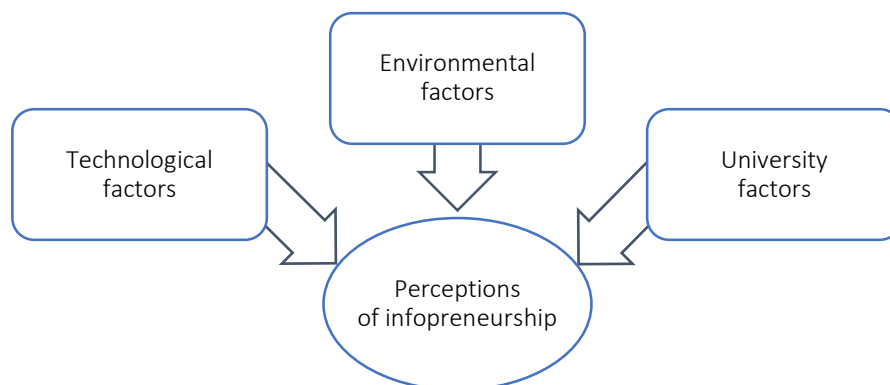


Figure 1. Conceptual framework

that students in the Information Science department are likely to be educated towards infopreneurship than students from other departments. It is also likely that students in this department are likely to have infopreneurship courses as part of their studies. The convenience sampling based on time and cost conveniences for the respondents was adopted. An email was sent to the head of the department who then emailed out a request for participation among students in the department. Those who responded positively were expected to provide data relevant for attending to the objectives and purpose of the study. Focus group interviews were adopted as per Dawson (2002) who describes focus groups as a method of data collection that involves group discussion on a particular issue of interest. The main data collection tool for focus group discussions is an unstructured questionnaire that allows for the collection of in-depth data (Saldaña, 2016). An initial focus group discussion was conducted involving a group of 12 students from the Department of Information Science at the university. The study involved the collection of in-depth data on the perceptions, views, and attitudes of students in the Information Science Department at the selected HEI.

The analysis involves the consideration of a broad scope of views, attitudes, and perceptions of the respondent. Noble and Smith (2014) explained that qualitative data analysis involves transcribing data, immersing oneself within the data to gain detailed insights into the phenomena being explored, constructing a data coding structure, and creating links and relationships among the codes. It was argued that qualitative data analysis is a data reduction process whereby data is reduced from a large chunk to a few useful data segments (Johnson & Onwuegbuzie, 2004).

3. RESULTS

During the focus group discussions, a moderator was appointed by the respondents to facilitate the discussions. Three focus group discussions were conducted. The moderator's summaries were recorded on a summary sheet. The summary sheet was later subjected to a coding analysis using the Atlas.ti qualitative data analysis software. Table 2 shows the focus group recording sheet that was

prepared during the discussions and the coding procedure implemented using thematic codes and their abstraction into categories.

Table 2. Focus group discussion record sheet

Category	Code	Description
Positive attitudes	Enterprising	The Enterprising code describes a positive attitude to infopreneurship, which is related to the desire to be involved in infopreneurship and having positive feelings for such an engagement
Positive attitudes	Techno-generation	This code was used to note the argument that today's generation is a technological generation whose activities are now based on technology; as such, entrepreneurship has become a technological phenomenon
Positive attitudes	Excitement to be an economic player	The code captured the feelings and positive attitudes associated with contributing to economic progress through infopreneurship
Positive attitudes	The basis for future entrepreneurship	The code describes assertions that future entrepreneurship is likely to be based on infopreneurship hence the need to adopt it for the present
Positive attitudes	New business models	The code describes infopreneurship as offering new business models for the future
Negative attitudes	Infopreneurship is rhetorical	The code describes negative attitudes to the effect that infopreneurship is just a word being said with no relevance or practical significance
Negative attitudes	Critical	The code reflects on the critical side of entrepreneurship and involves negative feelings or an indifferent attitude to infopreneurship
Negative attitudes	Neutral	The code describes the attitude of being different and unmoved by the relevance of infopreneurship
Negative attitudes	Survivalist	Responses that relate to infopreneurship as an undertaking simply for survival
Negative attitudes	Unprofitable	Responses that relate to infopreneurship as an unprofitable option were coded within this code

The categories and codes were further analyzed in terms of density and frequencies. Table 3 shows the categories and codes presented in terms of their frequencies. Most students had positive attitudes towards infopreneurship, and their attitudes can best be described as enterprising (26.4% code

Table 3. Code frequencies

Infopreneurship	Count	% Codes	Cases	% Cases
Positive attitudes				
Enterprising	14	26.4%	1	100.0%
Techno-generation	7	13.2%	1	100.0%
Excitement to be an economic player	1	1.9%	1	100.0%
The basis for future entrepreneurship	3	5.7%	1	100.0%
New business models	2	3.8%	1	100.0%
Negative attitudes				
Infopreneurship is rhetorical	3	5.7%	1	100.0%
Critical	11	20.8%	1	100.0%
Neutral	4	7.5%	1	100.0%
Survivalist	5	9.4%	1	100.0%
Unprofitable	3	5.7%	1	100.0%

frequency). On the other hand, those who had a negative attitude were mainly critical (20.8% code frequency) of infopreneurship.

A closer analysis of the interlinkages among the codes resulted in the network diagram is shown in Figure 2. The network diagram shows that the attitudes of the respondents were classified as either negative or positive. These attitudes were then traced to in-vivo codes from the responses provided by the respondents. It was found that positive attitudes were associated with fascination.

4. DISCUSSION

The results clearly show that while there is recognition that infopreneurship has the potential to be a source of employment and an important matrix in solving the unemployment problem, a significant number of youths remain critical of it (Masron et al., 2017, p. 1224). As established in this study, several respondents contended that infopreneurship can be exciting and fascinating for entrepreneurs while others believed that it could be regarded as a short-time form of employment (Adesemowo et

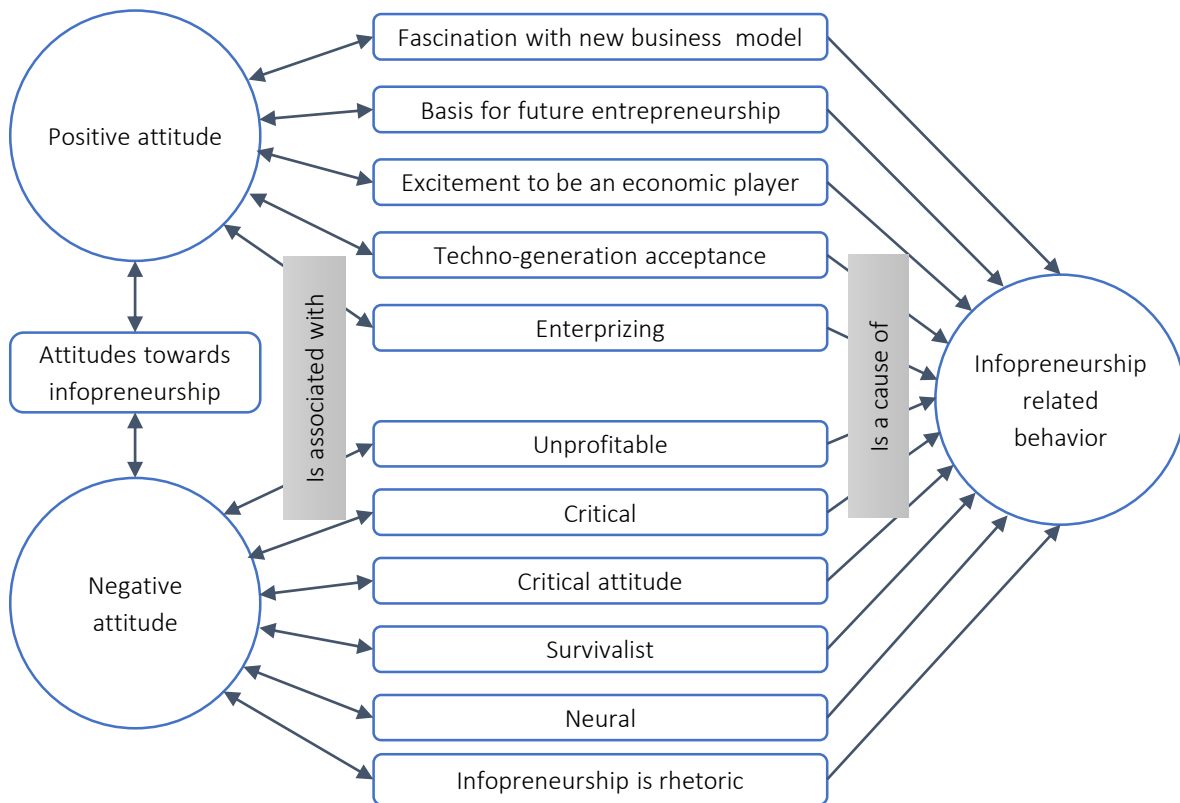


Figure 2. Network diagram for the attitudes of respondents towards infopreneurship

al., 2016). Respondents who opined that infopreneurship is an exciting engagement possessed an intrinsic drive and appreciation of the technology as it offers an opportunity for them to be economic players through the adoption of new business models. Evidence from the study suggested that some students were sensitive to the technological revolution and the disruptions it has caused to existing businesses systems. These results seem to complement those of Calvo-Porrall and Pesqueira-Sanchez (2020) who found that youth belong to a new generation that is characterized by a fascination with technology and an appreciation of the positive role of technology in economic activities. Positive attitudes and perspectives towards infopreneurship seem to emanate from the acceptance that this is a new and emerging technology-driven sector or industry. Many mature sectors and industries are dominated by big businesses and have strong barriers for new entrants. Despite the majority of the respondents demonstrated a positive attitude towards infopreneurship, negative views and attitudes to infopreneurship manifested in the form of pessimism to its viability as a form of employment or career. There was evidence that some of the respondents did not think that infopreneurship was profitable and some even held the

view that it was a sector that cannot be considered for lifelong economic reliability. These attitudes seem to be based on the belief that entrepreneurship is not a respectable option. The results indicate that some students still hold strong beliefs that being employed in big companies is the best because it offers economic and job security rather than self-employment. These results concur with those of Adesemowo et al. (2016) who observed that recent graduates held the view that infopreneurship and other general forms of entrepreneurial ventures are for short-term sustainability and do not form lifelong sustainable forms of employment. In respect of the TOE framework, it can be concluded that technological factors related to a fascination with technological systems, university support in developing the correct attitude, and environmental factors such as the support of families and friends, as well as general rhetoric, affected students' attitude to infopreneurship. These findings resonate Bowmaker-Falconer and Herrington's (2020) assertions that entrepreneurship in South Africa needs to be supported by the right education if efforts to reduce unemployment are to be realized. It appears that graduates from the South African education system value being employed than engaging in entrepreneurship.

CONCLUSION

The study aimed to establish the infopreneurship attitudes of students at the Information Science department at the selected higher education institution in Cape Town. The literature review and empirical analysis of data demonstrated that students held both positive and negative attitudes towards infopreneurship. Whereas it appears that most of them held a positive attitude, the majority who had negative attitudes were critical concerning the strength of infopreneurship as a career choice. It appears that a significant number of respondents felt that infopreneurship initiatives do not entail a respectable form of employment. However, those who possessed positive attitudes felt that infopreneurship was fascinating and formed the basis for future employment opportunities. From these findings, it can be concluded that there is a need to ensure higher education curricula embraces infopreneurship as an important form of employment. The results of this study suggest a need to develop a relevant curriculum that promotes infopreneurship aspirations among students, especially those in the Information Science departments. The study also recommends the widespread use of information technologies to promote their use for entrepreneurial ventures.

AUTHOR CONTRIBUTIONS

Conceptualization: Thobekani Lose, Sebenzile Khuzwayo.

Data curation: Thobekani Lose, Sebenzile Khuzwayo.

Formal analysis: Thobekani Lose.

Investigation: Thobekani Lose, Sebenzile Khuzwayo.

Methodology: Thobekani Lose, Sebenzile Khuzwayo.

Project administration: Thobekani Lose.

Resources: Sebenzile Khuzwayo.

Supervision: Thobekani Lose, Sebenzile Khuzwayo.

Visualization: Thobekani Lose.

Writing – original draft: Thobekani Lose.

Writing – review & editing: Thobekani Lose, Sebenzile Khuzwayo.

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