

Attitudes of Accounting Students Towards Ethics and Ethics Education



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Abstract The cost of unethical behaviour in both the private and public sectors is astronomical. In South Africa, the Auditor-General and accounting professional bodies have received widespread public criticism for failing to uphold their duty to protect stakeholders and the economy from the impact of these ethical failures. Such failures are exacerbated by the mismatch between the rapid advances in technology and the slow pace of regulation. The literature makes clear how crucial and complex ethics are and that effective ethics education is critical to curb unethical behaviour. The South African Institute of Chartered Accountants (SAICA) has charged higher education institutions with the duty of providing effective ethics education as part of accounting education. Attitudes towards a field of study show a strong correlation with academic performance and future behaviours. Consequently, negative attitudes towards ethics and ethics education carry the risk of poor engagement with content and may weaken the intended impact of the educational initiative. The objective of this study is to examine accounting students' attitudes to ethics and ethics education through a quantitative approach. Thus, a survey was administered to accounting students at a school with SAICA accreditation. The results reveal that the participants' interest in ethics, and their conversational engagement with it, are strong. The participants reported a high level of comfort, enjoyment, and belief in ethics education. Furthermore, the analysis revealed that the participants had a positive attitude towards ethics and ethics education, derived from the strong sense of significance and relevance they accorded to ethics.

Keywords Attitudes to learning · Business ethics · Ethics · Ethics education · Ethics in accounting

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1 Introduction

1.1 *Ethics in the Spotlight*

In recent years, emphasis has been placed on the value of ethics as well as the consequences of a lack of ethics. Dishonest and careless business practices have bred mistrust among stakeholders (Weibel et al., 2020). Globally, this level of distrust has increased due to major corporate scandals such as Enron, Merrill Lynch and Martha Stewart in the United States, and Cadbury Nigeria Plc, Spring Bank Plc and Wema Bank Plc in Nigeria, to name a few (Ogbodu & Umoru, 2018). In South Africa, this trust has also been eroded by a string of high-profile corporate scandals such as Standard Chartered, SAP, Transnet, McKinsey, HSBC, KPMG, Eskom, BOSASA, Gold Fields, Tongaat Hulett, VBS Bank and Steinhoff (Business Insider, 2020; Nyamakanga & Diphoko, 2017; The Economist, 2017).

As we enter the Fourth Industrial Revolution, the accounting profession has a greater awareness of the importance of making ethical decisions. The rapidly emerging advances in technology will undeniably have a positive impact on the profession; however, these same technologies may also jeopardise critical ethical values. Values such as fairness, privacy, independence, beneficence, accountability, and responsibility have all been flagged as ‘at risk’ by the Big 4 audit firms, Deloitte, KPMG, PricewaterhouseCoopers and EY. These concerns have been echoed by smaller firms as well (Munoko et al., 2020). If ethics are considered at risk, then technologies such as quantum computing pose a great danger to finance and accounting in the form of encryption breaking of data and its misuse (MacPherson, 2021). While unethical behaviour causes businesses to lose approximately 5% of revenue each year (University System of Georgia, 2019) the financial impact of ethical values compromised through technology remains unknown.

In the educational sphere, the high incidence of academic dishonesty in online assessments has highlighted the need for student ethics education. The regulations imposed because of the COVID-19 pandemic necessitated a move to an online educational environment (Sangster et al., 2020). Online learning settings are linked to advantages such as greater accessibility and lower educational costs (Larmuseau et al., 2019). However, this same technology that spans social divides also has negative impacts, such as low student engagement, lack of discipline and academic dishonesty (Sithole et al., 2019).

Ethics has universal relevance. Education in ethics is necessary for an individual’s personal growth as well as their full participation in democratic society. Both every day ethical decisions as well as more complex moral dilemmas difficulties requires ethical reasoning (Nussbaum, 2010). A response to this important challenge in the context of accounting education at university is therefore essential.

1.2 Responses to the Ethics Challenge

In response to the corporate scandals worldwide, there has been a noticeable increase in regulation imposed by governments and regulatory bodies. For example, in the United States, the Sarbanes–Oxley Act (2002) was introduced, which included the establishment of the Public Company Accounting Oversight Board. In the United Kingdom, the Cadbury Report of 1992 (Cadbury Report, 1992) was implemented as well as the Audit Firm Governance Code (Financial Reporting Council, 2016). The Netherlands implemented a two-tier board structure, as required by the Dutch Corporate Governance Code (Bendixen & Thomas, 2000), while South Africa introduced best practice recommendations in the form of the King IV Code of Corporate Governance (Institute of Directors in Southern Africa, 2016).

Despite the implementation of comprehensive codes of conduct (Arjoon, 2000) and robust legislation to combat fraud, new waves of corporate scandals continue to surface (Fang et al., 2022). If increased regulations had been able to solve the problem, the benefits would certainly have been evident by now. This is because integrity goes beyond simple compliance with regulations (Kermis & Kermis, 2014) indicating that students need to be equipped with education.

When introducing ethics as a subject to students, it is crucial that they comprehend its significance as well as the reasons why rules and guidelines are necessary. The eventual limitations of the regulations are also an important aspect that needs to be examined. Therefore, ethics education is an important aspect in the accounting arena, together with the allocation of the responsibility thereof.

Ethics education is an important response to the challenge of ethics discussed earlier. It is widely agreed that accounting education, both undergraduate and postgraduate, must prepare future accounting executives to be honest, trustworthy and have the highest level of personal integrity (Kermis & Kermis, 2014). Psychologist, Martin Bloom, issued a warning as far back as 1981 that certain values will be imposed on society by future events if discernible values such as integrity and trustworthiness, are not consciously enforced now (Kermis & Kermis, 2014).

Ethics education is also essential for global relevance and employability of graduates. Within the context of employability after completing accounting education, both technical skills as well as reasoning and practicing ability are required (Mourik & Wilkin, 2019). Threshold capabilities for vocational accounting training are noted as critical analysis, communication, knowledge, problem-solving, teamwork, self-management, and judgement. Judgement is explained as “[e]xercising judgement under supervision to solve routine accounting problems, with appropriate use of perspectives (social, ethical, economic, regulatory, sustainability, governance and/or global)” (Mourik & Wilkin, 2019, p. 317). Most modern university degrees include the development of employability skills as a requirement for graduation (Cotronei-Baird, 2019).

The South African Institute of Chartered Accountants (SAICA, 2019) aligns with this practice through the inclusion of these capabilities in its 2025 Competency Framework. Moreover, based on the framework provided by International Education

Standard 3 (IES3) and International Education Standard 4 (IES4), the International Federation of Accountants (IFAC, 2019) established a competency framework or map that its members should adhere to. SAICA uses this competency framework to accredit higher education institutions (HEIs) to ensure that the required education, including ethics education, is taught in HEIs. This aim has been reinforced thanks to a recent review (SAICA, 2019). Therefore, in South Africa, the responsibility of ethics education for accountants lies with HEIs.

To craft appropriate responses to the importance of ethics and the challenge of the widespread unethical behaviour in business, the current state of ethics education must be considered. The literature suggests that accounting students perceive existing ethics education as being too theoretical (Lubbe, 2021). There are numerous opportunities and methods to provide a more effective ethics education, and these should therefore be explored.

1.3 Opportunities in Teaching and the Importance of Attitudes

When it comes to ethics education, what matters is not only what is taught, but how it is taught. In a study assessing the effectiveness of ethics interventions, it was concluded that educators need to find methods of learning that are precisely designed to advance moral development before standardising educational approaches (Ponemon, 1993). This educationalist angle opens an opportunity for reformist work towards the effective teaching of ethics education. Amid the Fourth, and even the emerging Fifth Industrial Revolutions, online learning and gamification experiences offer a scalable opportunity for learning (Mhlanga & Moloji, 2020).

The theory of planned behaviour is a psychological theory that connects attitudes and actions. According to the theory, an individual's behavioural intentions are shaped by three fundamental factors: attitude, subjective norms, and perceived behavioural control (Ajzen, 1991). In building towards improved curriculum and improved learning, attitudes are important. A positive attitude contributes to improved learning (Mazana et al., 2019; McKenzie, 2010; Osborne et al., 2003). Therefore, it is valuable to understand the attitudes of accounting students to ethics and ethics education before developing tools and standardising approaches.

1.4 Aim of the Study

The concerns regarding an unethical climate in accounting networks, that make up audit firms, the Government, the Auditor-General, and the relevant professional bodies, needs to be addressed. The expectation is for ethics education to be addressed at HEI level. Moreover, the negative attitudes of accounting students

towards ethics and ethics education could undermine the proposed educational process of ethics in accounting.

The aims of the study are to describe the context of the ethics challenge and the relevance and importance of business ethics, followed by the examination of the responsibility, effectiveness and approach to ethics education in the accounting profession. The study then aims to survey the attitudes of accounting students towards ethics and ethics education, to examine the risk of poor engagement in ethics education due to negative attitudes.

2 Literature Review

2.1 Importance and Relevance of Ethics

In business, ethics are relevant and crucial. To manage the diverse interests in the corporate environment, a solid code of ethics is required. As noted, the prevalence of fraud and unethical behaviour in the commercial sector, the public sector and the accounting network has highlighted the need for a robust response to strengthen ethics. The opportunistic behaviour that resulted from COVID-19 restrictions, coupled with the explosive development of new technology have made matters worse. These factors jointly heighten the need for a stronger emphasis on business ethics.

2.1.1 The Ethics Climate

a) Private sector

A series of business scandals have marred South Africa's corporate sector over the previous decade, each revealing a clear lack of ethics (Business Insider, 2020). These high-profile corporate scandals include Standard Chartered, SAP, Transnet, McKinsey, HSBC, KPMG, Eskom, BOSASA, Gold Fields, Tongaat Hulett, VBS Bank and Steinhoff (Business Insider, 2020; Nyamakanga & Diphoko, 2017; The Economist, 2017). Such behaviour has left a blight on the accounting profession. After a temporary lull in such unethical behaviours in 2019, the observed wrongdoings have resumed. According to global data, only one out of every seven employees works in an environment with a strong ethical culture. Both the global median for pressure to compromise standards and the rate of retribution have reached new highs (Ethics and Compliance Initiative, 2021).

b) Public sector

The impact of unethical behaviour in the public sector is profound. This behaviour infringes on the economic, social and cultural rights of individuals as well as their rights to development and a healthy environment (Union of International

Associations, 2021). Recent instances of unethical behaviour in South Africa have highlighted the relevance and importance of business ethics. A well-publicised example of unethical behaviour in the public sector is the government's relationship with the Gupta family (Business Insider, 2020). A database of stolen emails between Gupta family members and numerous senior South African state officials revealed the degree of the family's alleged power over the state's operations. The emails also revealed how the family were supposedly able to persuade authorities and important political appointments to achieve their objectives. The Guptas were accused of meddling in cabinet selections, using their influence on secure major contracts from state-owned businesses and organising a campaign of propaganda throughout the country (Business Insider, 2020).

Unethical behaviour at a municipal level is also prevalent. According to the Auditor-General, Tsakani Maluleke, the finances of local governments are under strain, with municipalities reporting R26 billion in irregular expenditure in the 2019–2020 financial year (Maluleke, 2021). The fact that only 27 of the 257 municipalities across the country earned clean audits reflects the worsening financial condition. Notably, 89 municipalities were unqualified, 66 municipalities were qualified, six municipalities were unfavourable and 12 municipalities were disclaimed, while audits in 57 municipalities were not finished. There were findings in both the unqualified and qualified audits (Felix, 2021).

Other than the many international legal instruments designed to curb corruption, South Africa has manifold local legislative responses; however, these do not seem to be sufficient to drive out the systemic corruption in our political spaces (Mubangizi, 2020). The Corruption Perceptions Index ranks the perceived levels of corruption in the public sector in 180 countries around the world, with a ranking closer to 1 being the least corrupt. In 2020, South Africa was ranked 69th out of 180 countries, after ranking 70th in 2019. Further findings in this report suggest that corruption not only jeopardises the global health response to COVID-19, but also leads to a lingering democratic crisis (Transparency International, 2019, 2020).

President Cyril Ramaphosa noted in October 2019 that the cost of corruption in South Africa has been as much as R1 trillion (Ramaphosa, 2019). This is a huge waste of government money at a time when the South African economy is in distress, experiencing slow growth and credit downgrades (Smith, 2020). In South Africa in 2020, 22 million tax payers jointly paid R528 billions of their hard-earned money to the fiscus with the largest source of income for the South African Revenue Service being personal income tax, which accounted to R1.25 billion. The Auditor-General issued a press statement on 31 March 2021, urging the government to deliver audit outcomes that are sustainable (Maluleke, 2021). Maluleke emphasised in the 2019/2020 general report on national and provincial government spending that accountability failures must be taken more seriously. According to the same study, irregular expenditure for the year totalled R54.34 billion. Because full quantities were not published, this figure might be up to 31% higher. The report also mentions that the year-end balance of irregular expenditure that had built up over several years and had still to be dealt with, was R262.3 billion (Du Plessis, 2021).

Other than the high cost of unethical behaviour to the public and private sectors, unethical behaviour is also eroding the value of the accounting profession. Audit firms, the Auditor-General and accounting professional bodies have also been affected by such behaviour, which illustrates the importance of business ethics and the capability of effective ethics education to curb the impact on a wide base of stakeholders.

c) Accounting network

i) Audit firms

Audit firms are under immense pressure after many audit failures. The previous chief executive officer of the Independent Regulatory Board for Auditors, Bernard Agulhas, noted that many audit failures in South Africa were caused by a lack of auditor ethics, accountability, tone and other related behaviours, rather than a lack of technical competence. Lack of independence, a lack of professional scepticism and, in some cases, corruption, are examples of such behaviours (SAICA, 2020). This was echoed in a recent survey of accounting trainees who were lacking ethical leadership and training, as well as a restricted focus on ethics counselling and mentorship (Lubbe, 2021). The relevance and importance of business ethics is highlighted by behaviours such as these, and even more so in state institutions where exponentially more stakeholders are affected.

ii) Government and the Auditor-General

The concerning state of misconduct on a government level as discussed earlier, highlights the role of the Auditor-General of South Africa. The Auditor-General plays a vital role in accountability, thereby fostering solid financial governance practices in South Africa through its audit efforts. The role provides “independent assurance to various legislatures on whether entities that use public funds have managed their financial affairs in accordance with sound financial principles, complied with the relevant legal framework and provided credible information on the achievement of their financial and performance goals” (Auditor-General, 2021). South African elected representatives hold executive and accounting authorities, officials as well as public entities accountable in this way. The Auditor-General’s work ultimately empowers citizens to hold the government accountable for its stewards public resources (Auditor-General, 2021). The state of government misconduct has heightened the need for accountability facilitated by the Auditor-General. The South Africa Corruption Report of 2020 indicated policing, public service, public procurement, and natural resources as high-risk areas for corruption (GanIntegrity, 2020).

iii) Professional bodies

Due to job losses and the erosion of savings, corporate failures cause enormous losses for South Africa’s working class. SAICA believes that restoring the auditing profession’s credibility is critical because this role could help resolve the socio-economic challenges that the country is experiencing due to corruption and business

failures. It is worth noting that this issue affects the entire financial reporting environment, and focusing solely on the auditing profession will not fix the problem in the long term (Nomvalo, 2021). Those in charge of an organisation's governance must continue to do more to defend the public interest through significantly stringent financial reporting and improved controls (Nomvalo, 2021).

To sustain business success, 'trust' within business or economic activity needs to be protected. The risk is that transactions such as economic exchange for goods or services occur at the cost of this trust relationship with society (Rossouw, 2002). To mitigate this risk, most professions become more regulated through the establishment of regulatory bodies, professional bodies, frameworks, standards of conduct or codes of ethics. With regard to a moral framework for the accounting profession, the code of ethics of the International Ethics Standards Board for Accountants would be relevant as it was adopted by SAICA and the South African Institute of Professional Accountants. With limited regulatory guidance on the implementation of this code in businesses, each professional body has issued additional guidance for its implementation. The IESBA (2020) established a conceptual framework for all professional accountants to ensure compliance with its five identified principles of ethics, namely, integrity; objectivity; professional competence and due care; confidentiality; and professional behaviour. The IESBA revised its code of ethics in 2019. The changes that come into effect in 2021 are mainly a clarification on independence requirements and assurance engagement guidelines. These changes have even informed changes to the international standards of the International Auditing and Assurance Standards Board.

To improve the financial reporting environment, SAICA has embarked on several confidence restoration efforts, including coordinating conversations on audit reform. This comprises broad stakeholder engagement to determine the root causes of the audit expectation gap, the affected public trust and measures to remedy it (Nomvalo, 2021). The value that has been eroded from designations such as Chartered Accountant (South Africa) is not quantifiable. SAICA does not offer accounting education but rather accredits institutions against its framework to facilitate this education. The SAICA 2025 Competency Framework is therefore a key directive that teaching institutions need to implement. The changes in the framework aim to develop a more holistic graduate, and all spheres of ethics are now included, namely, personal, business and professional. SAICA (2021) is going as far as setting out the cognitive, behavioural and managerial requirements to achieve this competence. Although some have criticised the framework for becoming too technical, it is evident that the level of importance has escalated. Due to the relationship between the SAICA professional body and the accredited organisations, educators are required to take ownership of the framework to create methods and models to teach these competencies effectively.

2.1.2 Mismatch Between the Speed of Technological Advances and Legislation

For all the benefits that technology brings, it also means an exponentially larger negative impact in case of misuse. The speed of technological innovation, coupled with the lack of ethics, has necessitated a strong and clear response to address unethical behaviour in HEIs. This is because technological advances are not matched by regulatory advances (Marchant, 2011). This creates a gap that needs to be addressed through principle-based guidance. The speed of technological advances is explained by Moore's Law. This Law states that the number of transistors on a microchip, or in a dense integrated circuit, doubles every 2 years (Massachusetts Institute of Technology, 2020). Transistors are conductors that enable processing speed and capability (Awati, 2022). This essentially indicates that the processing speed of a computer doubles every 18 months to 2 years (BigThink, 2011). This forecast has held true since 1965. As a result, every software-reliant organisation operating in the age of the Fourth Industrial Revolution and the Internet-of-Things does so in an environment with rapidly changing information technology, which carries risk with it.

The lagging regulation of technological advancement has led to the prioritisation of technological ethics by national governments and multinational agencies, such as the European Union and the United Nations as well as professional standards organisations (Institute of Electrical and Electronics Engineers, 2020). Such issues require dialogue, interpretation and implementation (Kretzschmar & Bentley, 2013). Thus, oversight boards have been established by major technological corporations such as Google and Facebook. Growing public awareness and concern about how technology affects and interferes with our interpersonal relationships and societal institutions has resulted in an increase in demand for specialists who can evaluate and anticipate ethical issues related to technology development and use (Deschesne, 2020).

Thus, ethics are more relevant and more important than ever. Unethical behaviour is prevalent and requires further intervention. As previously noted, the response has been a heightened focus on regulation and education. However, increased regulation has not been sufficient to curb unethical activity. More needs to be done to raise awareness about ethics and ethical behaviour. An educational response needs to be considered.

2.2 Ethics Education as Part of Accounting Education

2.2.1 Ethics Can be Taught

The question, 'can ethics be taught?', has been brought up repeatedly, usually when people feel that their community, society, or nation's ethics have let them down. A meta-analysis of 25 corporate ethics education programmes found that activities

emphasising students' cognitive abilities for ethical problem-solving and reasoning increased students' long-term ethical awareness (Waples et al., 2008). In another study, after a 10-week review of ethics cases, a pre- and post- defining issues test did not show any signs of improved moral development. This study by Ponemon (1993) attempted to test whether an ethics intervention improved the moral development and ethical behaviour of accounting students, but the findings seemed to contradict the premise that ethics can be taught. However, this must be considered along with the limitations of that study, which included the quality of the ethics case reviews, the mode of teaching and the outcome of 'moral development' being tested rather than 'applied ethics' (Ponemon, 1993).

Whether or not effective ethics education methods have been selected, De George (1999) states that there are moral pre-requisites for conducting business. No amount of education can ensure that all students will act morally since morality, whether in business or elsewhere, is always a question of human choice (Falkenberg & Woiceshyn, 2008). Therefore, it is important to emphasise to students that moral ambiguities and uncertainties occur in economic systems, businesses and interactions with many stakeholders. Instead of debating whether corporate ethics can be taught, the discussion should focus on improving the effectiveness of corporate ethics education (Falkenberg & Woiceshyn, 2008).

2.2.2 Regulation and Responsibility for Ethics Education

As noted in the introduction, the initial corrective response to unethical behaviour in business was the expansion of legislation, heightened focus on codes of conduct, revision of relevant professional codes, and notably, the industry relevant revision of IESBA's Code of Ethics (IESBA, 2020). This was followed by the revision of SAICA's Competency Framework for professional trainees and students (SAICA, 2021).

Improved regulation is however insufficient to change behaviour and thinking. While codes of conduct can be effective in promoting ethical behaviour (Buchholz & Rosenthal, 1998), they are limited because they were designed from a defensive standpoint to safeguard organisations (Betsy, 1996). Many codes are also either unimplemented (Lindsay et al., 1996) or unsuccessful (Kennedy, 1996). Consequently, codes of conduct and other forms of legislation alone, fail to noticeably curb unethical behaviour. Moral growth and development are also required (Poje & Groff, 2021), and ethics education is well suited to address moral growth and development. Jackling et al. (2007) support the improvement of ethics education as a possible solution to the accounting profession's ethical challenges.

Ethics education has been placed in the hands of educators and professionals. Regardless of existing narratives on the onus of instilling ethics, SAICA (2019) places the responsibility for ethics education in the chartered accounting profession with accredited HEIs. Hartman (2006) and Klein et al. (2007) concur that higher education needs to produce ethical professionals.

The revised SAICA CA2025 Competency Framework sets higher competence expectations. The 2013 Competency Framework only covered professional ethics and the only pervasive skills outcome related to ethics was “uses an ethical reasoning process” (SAICA, 2019, p. 14). The 2025 Competency Framework has expanded to all aspects of personal, business and professional ethics as well as citizenship. This expansion has occurred in content and on an advanced level of competence. Therefore, SAICA (2021) requires students to

demonstrate an in-depth knowledge and rigorous understanding of the subject matter, apply the knowledge where the data is unstructured and/or is derived from multiple sources. Integrated thinking is required. Evaluate solutions for specified and implicit problems – applying a high degree of rigour and/or exercise sound judgement in making recommendations and formulating solutions. (p. 14)

2.3 Importance of Student Attitudes to Education

While it has been established that ethics education is a necessary response to the current ethics climate, it is important to address relevant considerations in attitudinal studies. An attitude is a person’s learned predisposition to respond positively or negatively to an object, circumstance, concept or another person (Sarmah & Puri, 2014). Attitude therefore plays a role in predicting behaviour (Katz, 1960). There is a wide body of research on the benefits of a positive attitude in linguistics learning (McKenzie, 2010), science learning (Osborne et al., 2003) and mathematics learning (Mazana et al., 2019).

An in-depth examination of attitude reveals that it is linked to underlying psychological elements, such as needs, interests, feelings, beliefs and fundamental motivations (Gheorghe, 1998). This is supported by Ainley (2006), Dewey (1913) and Hidi (2006), who note that when one is interested, emotive responses, perceived value and cognitive processes all work together, and attention and learning come naturally. Belief about the importance and value of a topic determines interest and engagement. Enjoyment and comfort in an area of learning also has an impact, as demonstrated in attitude scales in biology learning (Russel & Hollander, 1975). The degree of challenge related to an experience also seems to have a direct impact on the attitude of a student towards the learning (Lee et al., 2021). Furthermore, the design of the questionnaires was influenced by suggestions from Blaikie (2000) for social research that included consideration of the worldview of participants. Research shows a strong correlation between the attitudes of students towards studies and their academic performance in various fields (Fennema & Sherman, 1976).

In summary, if accounting students have an interest in ethics and value this topic, it is expected that this will influence their views and attitudes towards ethics (Gheorghe, 1998). Moreover, if they believe the subject matter is important, it is likely that this will also influence their views and attitudes towards ethics education (Mager, 1968).

3 Methodology

This descriptive study uses a quantitative research approach and a positivist paradigm. The study gathered empirical numeric data through surveys to describe the attitudes of accounting students towards ethics and ethics education. The research strategy discusses where data is collected from. A descriptive, attitudinal study best addresses the research question by collecting data from a predetermined sample of people to learn more about the topic under investigation (Mouton, 2009). A survey strategy was deemed best suited because it would provide broad feedback. It is effective in collecting both structured and unstructured data. Although surveys have been criticised for lacking depth (Mouton, 2009), such a strategy can accommodate larger samples (Saunders & Tosey, 2013) and would therefore be well suited for large HEI classes.

The population of this study consists of accounting students receiving ethics education at SAICA-accredited institutions. As the researcher had permission to conduct research at the University of Johannesburg (UJ), the population was further refined to UJ students who fitted the criteria. The sample was the second-year Bachelor of Accounting students registered for the year module, Governance and Citizenship (GOV2AB01). At the time of the study, there were 1991 UJ students across all year groups registered as part of the SAICA-accredited programme at UJ, as confirmed by Lebogang Moemi, Faculty Officer at the College of Business Economics (Integrated Tertiary Software [ITS], 2022).

This study uses a non-randomised sampling method through judgemental or purposive sampling. When using this method, the researcher makes a judgement on participant criteria that would best address the research question (Quinlan et al., 2018). The focus of this study is on attitudes of accounting students towards ethics and ethics education. Therefore, this led to the selection of second-year Bachelor of Accounting students enrolled in a SAICA-accredited programme, receiving targeted ethics education for the first time in their academic careers. At the time of the study, the number of second-year students registered in a SAICA-accredited programme was 442 (ITS, 2022). This sample represents only 22% of the site population. While this is not a statistically significant sample and purposive sampling inherently holds the risk of perceived sample judgement bias, this non-randomised, purposive sample would still contribute sufficiently towards the aim of the study (Etikan et al., 2016). To mitigate any risks, care must be taken with the generalisability of the data in the conclusions. Participants were asked to voluntarily complete the questionnaires and anonymity from lecturer was preserved. A total of 185 students participated, representing a 42% response rate.

The time horizon relates to the point in time when the researcher conducts the research, producing either cross-sectional or longitudinal data. Cross-sectional research relates to a particular point in time, while longitudinal studies extend across an extended period (Saunders et al., 2012). The study was conducted towards the end of the first semester in 2022.

4 Findings

4.1 Ethics: Views and Attitudes and Level of Engagement

As noted in the literature review, the students’ views, attitudes and level of engagement towards ethics were expected to influence their overall attitude towards ethics and ethics education (Gheorghe, 1998). The following questions were aimed at gauging this element:

On a 5-point scale ranging from ‘Strongly agree’ to ‘Strongly disagree’, rate the following statements:

- I consider myself to be ethical.
- Accounting students act ethically.

On a 5-point scale ranging from ‘Always’ to ‘Never’, rate the following questions:

- How often do you think about ethics?
- How often do you talk about ethics with your friends and family?

While 91% of participants consider themselves ethical (Fig. 1), only 79% think that accounting students act ethically most of the time (Fig. 2). Of the participants, 41% indicated that they perceive themselves as acting ethically often, while 38% indicated that they always act ethically. With an overwhelming majority of participants (91%) stating that they are ethical, it is expected that this would engender a positive attitude towards ethics (Gheorghe, 1998).

When asked to reflect on the ethics of their peers, as accountants themselves, the participants’ assessment decreased to 79%. The respondents conveyed the perception that 41% of accounting students act ethically at times, 41% manage to behave ethically often and 38% of accounting students always act ethically. While 79% was still quite high, the difference between the perceptions of students’ own ethicality and the ethical behaviour of other accounting students might be explained by self-

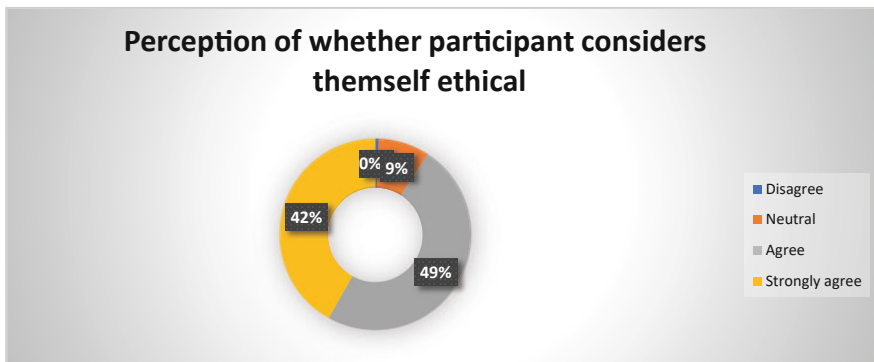


Fig. 1 Perception of own ethics. Source: Author’s own compilation

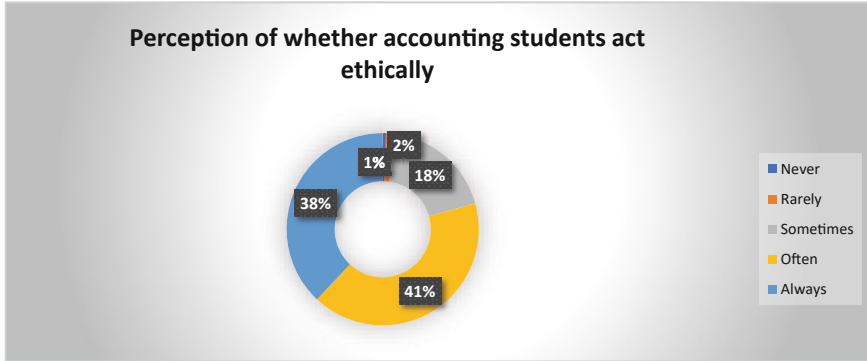


Fig. 2 Perception of ethics of others. Source: Author’s own compilation

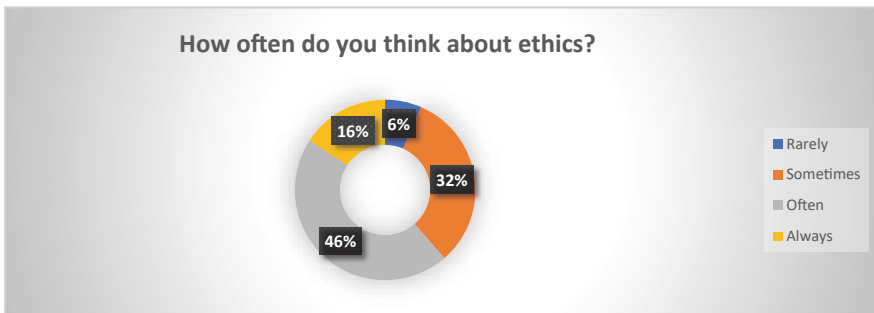


Fig. 3 Interest in ethics. Source: Author’s own compilation

enhancement bias. Self-enhancement bias is the tendency to rate oneself more favourably than the rating one assigns to others (Krueger, 1998).

When considering the level of engagement with the topic of ethics, 32% of respondents indicated that they think about ethics sometimes, 46% think about ethics often and 16% indicated that they always think about ethics (Fig. 3). This amounted to 94% of participants indicating that they think about ethics occasionally or more often. The responses therefore indicate a high interest in ethics.

When participants were asked about engagement with ethics in conversation, 37% noted that they talked about ethics sometimes, 29% indicated that they did so often, and 5% expressed that that they always talked about ethics. Therefore, 71% of participants indicated that they engaged with the topic of ethics in conversation on occasion (Fig. 4). The difference in rating between interest (engagement in thought) and engagement in conversation could be attributed to the complexity or controversy of the subject matter or the personality of the individual self. The interest and level of engagement with the subject matter of ethics seems moderately high. This level of engagement is expected to affect the participants’ views and attitudes towards ethics, as noted in the literature (Ainley, 2006; Dewey, 1913; Gheorghe, 1998; Hidi, 2006).



Fig. 4 Engagement with ethics in conversation. Source: Author's own compilation

4.2 Ethics Education: Views and Attitudes and Level of Engagement

As indicated in the previous section, the views and attitudes (Gheorghe, 1998) and level of enjoyment (Russel & Hollander, 1975) towards ethics education were expected to influence the attitudes of participants towards ethics education. The following questions in the questionnaire sought to gauge this element.

On a 5-point scale ranging from 'Strongly agree' to 'Strongly disagree', rate the following statements:

- Ethics is important as part of the accounting curriculum.
- I am satisfied with the relevance of the topics taught in GAC2AB01.
- Ethical principles and behaviours can be taught.

On a 5-point scale ranging from 'Very enjoyable' to 'Unenjoyable', rate the following question:

- Rate your level of enjoyment when learning about ethics.

On a 5-point scale ranging from 'Very comfortable' to 'Very uncomfortable', rate the following question:

- Rate your level of comfort when you are dealing with ethical dilemmas.

When it comes to the importance of ethics as part of accounting education, no participants indicated that they disagreed with this statement. With 2% being neutral, 12% agreeing and 86% strongly agreeing with the statement, it appears that 98% of participants agree that ethics is an important part of the accounting curriculum (Fig. 5). This is in line with the heightened focus on ethics education.

When participants rated the level of enjoyment of ethics education, 43% rated it as 'enjoyable' and 26% rated it as 'very enjoyable' (Fig. 6). Even though 98% agreed with the importance of the topic of ethics, only 69% found it enjoyable to learn about ethics.

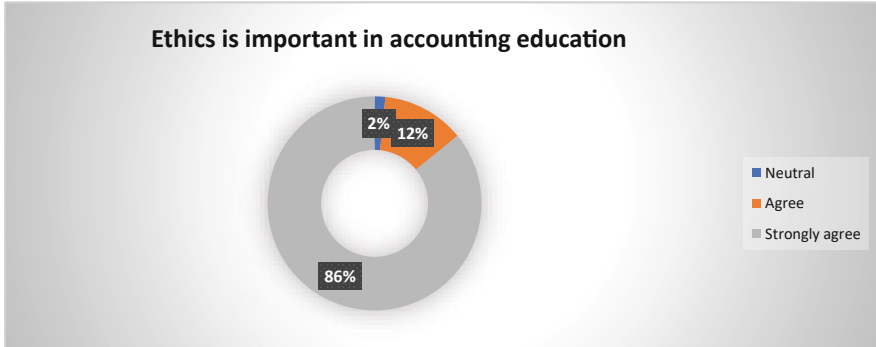


Fig. 5 Perception of the importance of ethics. Source: Author’s own compilation

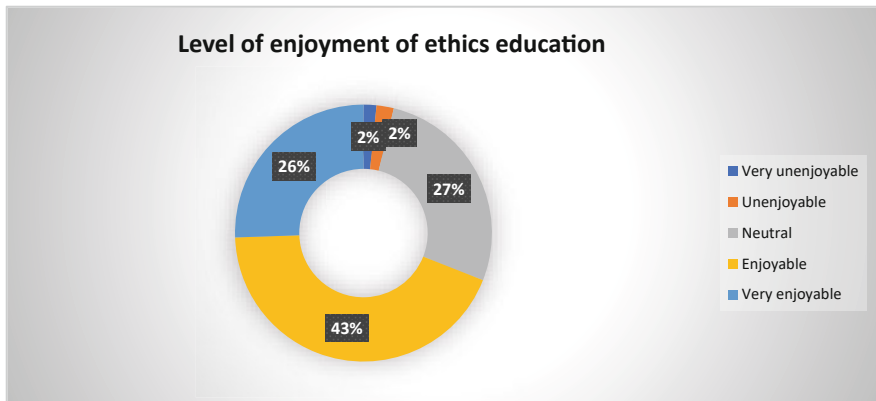


Fig. 6 Level of enjoyment of ethics. Source: Author’s own compilation

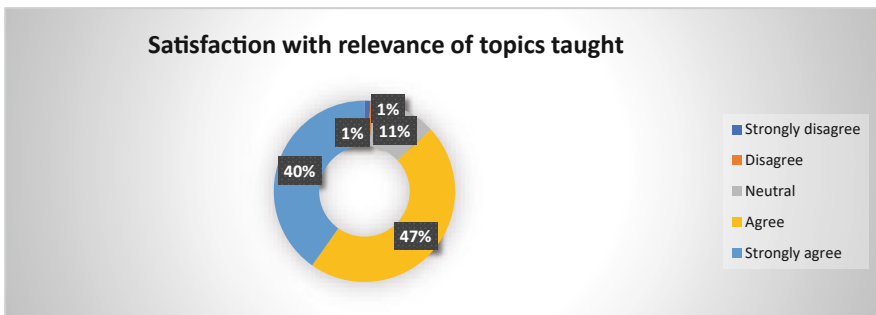


Fig. 7 Satisfaction with relevance of topics. Source: Author’s own compilation

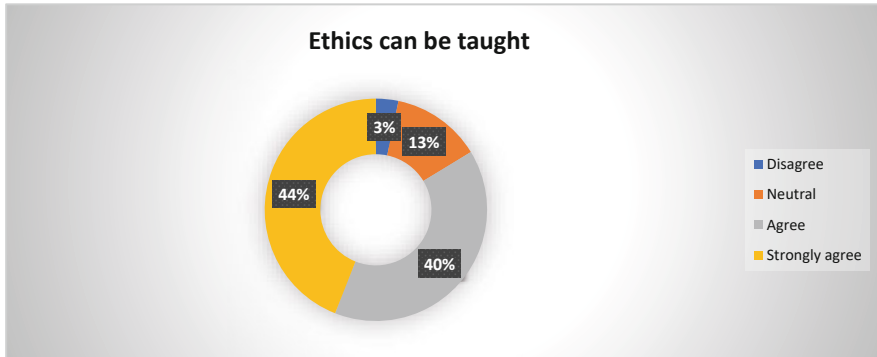


Fig. 8 Perception on whether ethics can be taught. Source: Author’s own compilation

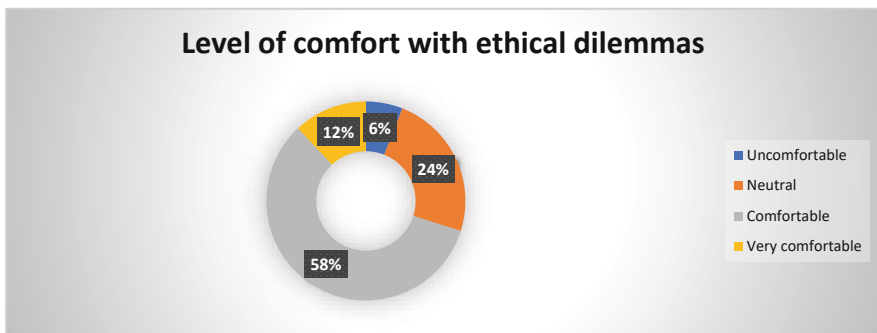


Fig. 9 Level of comfort with ethical dilemmas. Source: Author’s own compilation

When it comes to relevance, 87% of participants agreed that they were satisfied with the relevance of ethics topics taught (Fig. 7). This was in line with the high rating of importance.

Of the participants in this study, 84% believe that ethics could be taught, with 40% agreeing and 44% strongly agreeing (Fig. 8). The belief that ethics can be taught indicates a positive attitude towards ethics education. This strong belief in the education of ethics is expected to encourage a positive attitude towards various education methods (Gheorghe, 1998).

Participants indicated a high level of comfort when dealing with ethical dilemmas. While 6% felt uncomfortable and 24% indicated that they were ‘neutral’, 70% indicated feeling a level of comfort when dealing with ethical dilemmas (Fig. 9). This level of comfort may positively affect their attitude (Russel & Hollander, 1975).

The high incidence of participants viewing ethics in the accounting curriculum as important could be the result of the heightened response of the regulators towards the accounting profession, as noted in Sect. 2.3.1. The changed IESBA code of ethics, the revised SAICA 2025 Competency Framework and the focus on intentional ethics

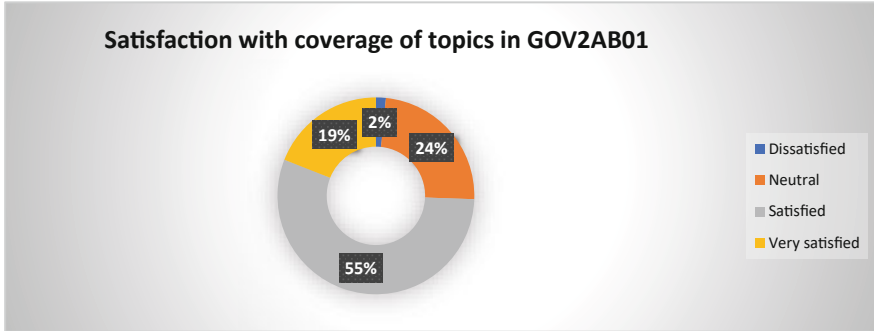


Fig. 10 Satisfaction with content coverage. Source: Author's own compilation

education (Lubbe, 2021) could be the reasons for this heightened awareness and the subsequent high rating of importance. A similar raised awareness by accounting students has also been recently observed among undergraduate accounting students in Nigeria (Okougbo et al., 2021). As per the literature review, the high rating of importance creates the expectation of positive attitudes towards ethics education (Eccles et al., 1983).

Enjoyment and comfort influence attitude (Gheorghe, 1998). The fact that 69% of participants found ethics education enjoyable, 70% experienced a level of comfort in dealing with ethics and 98% rated it as important could be explained by the complexity of the topic of ethics, although many other factors could influence this finding. Past research shows that between enjoyability, usefulness and difficulty, the latter did not appear to be the main driver of avoidance. Difficulty was seen as a low factor of influence, whereas 'enjoyment' and 'usefulness' were considered strong impact factors (Springate et al., 2008). The moderate level of enjoyment may have affected the attitudes of students towards ethics education.

When rating their level of satisfaction with the content coverage in GOV2AB01, only 2% of participants were dissatisfied with the coverage of topics (Fig. 10). Of the respondents, 55% were satisfied and 19% were very satisfied with content coverage. The 24% of participants who indicated that they were neutral in terms of rating their satisfaction with content coverage could be due to an unfamiliarity with ideal content coverage as this was their first experience with an ethics education module.

Therefore, in terms of coverage of topics, 74% of participants were satisfied. When participants considered relevance, 87% of respondents were satisfied (Fig. 5). The positive rating of coverage and relevance indicated a starting point of high satisfaction in the module.

4.3 Benefit of Ethics Education Activities

When asked to what extent the ethics education activity had improved their knowledge of ethics, 99% of students indicated an improvement of 56%, reflecting a significant improvement (Fig. 11). As noted in the literature, a high perception of value or importance has a significant influence on attitude towards learning and motivation. Therefore, this points to a very positive attitude towards ethics education (Eccles et al., 1983).

4.4 Summary of Findings

The participants displayed a high level of satisfaction with their second-year ethics education module. This deduction is based on the high perception of knowledge gained through ethics education activities. The vast majority (99%) of participants indicated an improvement in knowledge, with 55% representing a significant improvement. The high levels of satisfaction with ethics education activities could have been influenced by individual’s attitude towards the subject of ethics. A higher level of engagement or motivation may influence their level of satisfaction. With 91% of participants agreeing that it was important to be ethical (Fig. 5), this could well be the case. While the participants agreed that ethics were very important, their level of engagement with ethics was lower: 78% of participants indicated that they thought about ethics on occasion but 42% indicated that they rarely discussed the topic of ethics with friends or family (Figs. 3 and 4). The highly rated level of importance of ethics may have influenced the satisfaction rating, but the lower engagement levels increased satisfaction with the nature of ethics education activities.



Fig. 11 Extent to which knowledge of ethics was improved by ethics education activities. Source: Author’s own compilation

A higher level of engagement or motivation about their perceptions of ethics may have influenced the participants' level of satisfaction. With 91% of participants agreeing that it was important to be ethical (Fig. 5), this could well be the case. The participants' level of engagement with ethics was lower, with 78% indicating that they thought about ethics on occasion and up to 42% indicating that they rarely discussed the topic of ethics with friends or family (Figs. 3 and 4).

Based on the study data, it can be concluded that the attitude towards ethics and ethics education is positive. As expected from the literature review, this positive attitude appeared to be attributable to the high sense of importance and relevance of the topic of ethics (Gheorghe, 1998) and the high perception of value added or knowledge gained from the Ethical Ambassador (Eccles et al., 1983). This is in line with the findings of Marriot (2004) on attitudes based on improved knowledge, and Taplin et al. (2017) on the positive experiences of students with ethics education.

In line with the research objectives, the findings indicate that the attitude of accounting students towards ethics and ethics education was positive. This positive attitude could be an opportunity for exposure to more complex content and newer educational initiatives, such as online ethics.

5 Limitations and Recommendations

5.1 Limitations

The generalisability of this study is limited due to the sampling method. Normally, the generalisability of a survey strategy is one of its greatest strengths (Mouton, 2009). However, the purposive sampling strategy used in this study places a limitation on the conclusions that can be drawn from the population (Quinlan et al., 2018). Moreover, the findings are based on a homogeneous sample (19- to 20-year-old undergraduate students) that is relatively small ($n = 185$ for the pre-questionnaire and $n = 282$ for the post-questionnaire). This may have affected the results and influenced the generalisability of the findings. Lastly, the study was conducted at only one SAICA-accredited HEI; therefore, the findings are limited to the attitudes of the students at that institution only.

Another limitation lies in the inherent nature of an attitudinal study. Attitudes, as opposed to knowledge or behaviour, are abstract and could influence reliability and validity. Furthermore, attitudes were surveyed after the participants' first encounters with ethics education. Self-report bias is evident when researchers ask people to explain their ideas, feelings or behaviours, rather than measuring them directly and objectively (American Psychology Association [APA], 2022). This could possibly lead to methodological issues as participants may not give responses that are entirely accurate out of ignorance or out of a desire to appear intelligent (APA, 2022). Even though the response rates were acceptable for this study, Estelami (2015) points out that participants with a very negative attitude or perception usually do not even complete the questionnaires. Data on the most negative attitudes towards the subject

matter may therefore be missing, and consequently, the results should be interpreted with caution (Estelami, 2015).

6 Recommendations

The following recommendations are made based on the study findings:

- Accounting professional bodies should maintain the spotlight on ethics because this heightens awareness of ethics.
- Adequate and ongoing cooperation should be encouraged between audit firms, professional organisations and universities towards the strengthening of ethics education through relevance.
- The high level of comfort and satisfaction with ethics may indicate capacity for innovation in ethics education.

7 Conclusion

An effective response is needed to unethical behaviours within the accounting network. As part of this response, the present study sought to empirically gauge the attitudes of accounting students towards ethics and ethics education. The study results revealed that participants have a positive attitude towards ethics and ethics education. A large contributor to this positive attitude was the perceived high sense of importance and relevance of ethics. Any identified challenges were overshadowed by the sense of being relevant and stimulating and of value. Furthermore, the study findings confirmed that the ethics education curriculum is important, which could indicate capacity for innovation, with the ultimate goal of more effective ethics education and genuine individual accountability.

References

- Ainley, M. (2006). Connecting with learning: Motivation, affect and cognition in interest processes. *Educational Psychological Review*, 18, 391–405.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- APA Dictionary of Psychology. (2022). *American Psychological Association*. <https://dictionary.apa.org/self-report-bias>
- Arjoon, S. (2000). Virtue theory as a dynamic theory of business. *Journal of Business Ethics*, 18, 159–178.
- Auditor General of South Africa. (2021). *National Government*. <https://nationalgovernment.co.za/units/view/50/auditor-general-south-africa-agsa>
- Awati, R. (2022). *Techtarget*. <https://www.techtarget.com/whatis/definition/transistor>

- Bendixen, M., & Thomas, A. (2000). Perceived qualities of a 'good' chairman: A challenge for corporate governance in South Africa. *South African Journal of Business Management*, 31(20), 65–75.
- Betsy, S. (1996). Using the competing values framework to assess corporate ethical codes. *Journal of Business Communication*, 33(1), 71–84.
- BigThink. (2011). *Big idea: Technology grows exponentially*. <https://bigthink.com/think-tank/big-idea-technology-grows-exponentially>
- Blaikie, N. (2000). *Designing social research: The logic of anticipation*. Polity Press.
- Buchholz, R., & Rosenthal, S. (1998). *Business ethics: The pragmatic path beyond principles to process*. Prentice Hall.
- Business Insider SA. (2020). *The biggest South African business scandals over the last decade*. <https://www.businessinsider.co.za/the-top-south-african-business-scandals-the-past-decade-2020-1>
- Cadbury Report. (1992). *The financial aspects of corporate governance*. https://cadbury.cjbs.archios.info/_media/files/CAD-02271.pdf
- Cotronei-Baird, V. (2019). Academic hindrances in the integration of employability skills development in teaching and assessment practice. *Higher Education*, 79(2), 203–223.
- De George, R. (1999). *Business ethics*. Prentice Hall.
- Deschesne, F. (2020). *Review of the ethics of technology: Methods and approaches by Sven Ove Hansson*. Pluto Journals.
- Dewey, J. (1913). *Interest and effort in education*. Houghton Mifflin.
- Du Plessis, A. (2021, May 3). *Nothing short of a complete overhaul of government will fix the problems of corruption and incompetence*. Daily Maverick.
- Eccles, J. S., Adler, T. F., Futterman, R., Goff, S. B., Kaczala, C. M., Meece, J. L., & Midgley, C. (1983). Expectations, values and academic behaviors. In J. T. Spence (Ed.), *Perspective on achievement and achievement motivation* (pp. 75–146). W. H. Freeman.
- Estelami, H. (2015). The effects of survey timing on student evaluation of teaching measures obtained using online surveys. *Journal of Marketing Education*, 37(1), 54–64.
- Ethics and Compliance Initiative. (2021). *Global Business Ethics Survey*. <https://www.ethics.org/global-business-ethics-survey/>
- Etikan, I., Musa, S. A., & Sunu, R. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4.
- Falkenberg, L., & Woiceshyn, J. (2008). Enhancing business ethics: Using cases to teach moral reasoning. *Journal of Business Ethics*, 79(3), 213–217. <https://link.springer.com/article/10.1007/s10551-007-9381-9>
- Fang, V. W., Li, N., Wang, W., & Zhang, G. (2022). *Everlasting fraud*. European Corporate Governance Institute – Law Working Paper No. 617/2021.
- Felix, J. (2021). *SA's municipalities racked up 26 billion in irregular expenditure – AG*. <https://www.news24.com/news24/southafrica/news/sas-municipalities-racked-up-r26-billion-in-irregular-expenditure-ag-20210622>
- Fennema, E., & Sherman, J. A. (1976). Fennema–Sherman mathematics attitudes scales: Instruments designed to measure attitudes toward the learning of mathematics by females and males. *Journal for Research in Mathematics Education*, 7(5), 324–326.
- Financial Reporting Council. (2016). *Audit firm governance code revised 2016*. <https://www.frc.org.uk/getattachment/8e2026c0-cac0-4faa-8326-4713511f139a/Audit-Firm-Governance-Code-July-2016.pdf>
- GanIntegrity. (2020). *South Africa corruption report*. <https://ganintegrity.com/country-profiles/south-africa/>
- Gheorge, D. (1998). *Communication and learning, didactical and pedagogical*. Publishing House R.A.
- Hartman, E. M. (2006). Can we teach character? An Aristolelian answer. *Academy of Management Learning and Education*, 5, 68–81.
- Hidi, S. (2006). Interest: A unique motivational variable. *Educational Research Review*, 1, 69–82.

- Institute of Directors in Southern Africa. (2016). *King IV Report on Corporate Governance for South Africa*. <https://www.iodsa.co.za/page/king-iv>
- Institute of Electrical and Electronics Engineers. (2020). *Ethics in action in autonomous and intelligent systems*. <https://standards.ieee.org/industry-connections/ec/autonomous-systems/>
- Integrated Tertiary Software. (2022). *Qualification registrations cube report*. University of Johannesburg IT.
- International Ethics Standards Board for Accountants. (2020). *Handbook of international code of ethics for professional accountants*. <https://www.ethicsboard.org/publications/2020-handbook-international-code-ethics-professional-accountants>
- International Federation of Accountants. (2019). *Handbook of international education pronouncements*. <https://www.ifac.org/system/files/publications/files/Handbook-of-International-Education-Standards-2019.pdf>
- Jackling, B., Cooper, B. J., Leung, P., & Dellaportas, S. (2007). Professional accounting bodies' perceptions of ethical issues, causes of ethical failure and ethics education. *Managerial Auditing Journal*, 22(9), 928–944.
- Katz, D. (1960). The functional approach to the study of attitudes. *Public Opinion Quarterly*, 24(2), 163–204.
- Kennedy, R. (1996). Virtue and corporate culture: The ethical formation of baby wolverines. *Review of Business*, 17(2), 10–15.
- Kermis, G. F., & Kermis, M. D. (2014). Financial reporting regulations, ethics and accounting. *Journal of Academic and Business Ethics*, 8, 1.
- Klein, H. A., Levenburg, N. M., McKendall, M., & Mothersell, W. (2007). Cheating during the college years: How do business school students compare? *Journal of Business Ethics*, 72, 197–206.
- Kretzschmar, L., & Bentley, W. (2013). Applied ethics and tertiary education in South Africa: Teaching business ethics at the University of South Africa. *Verbum et Ecclesia*, 34(1), 1–9.
- Krueger, J. (1998). Enhancement bias in descriptions of self and others. *Personality and Social Psychology Bulletin*, 24(5), 505–516.
- Larmuseau, C., Desmet, P., & Depaepe, F. (2019). Perceptions of instructional quality: Impact on acceptance and use of an online learning environment. *Interactive Learning Environments*, 27(7), 953–964.
- Lee, P. T., Chau, M., & Lui, R. W. C. (2021). The role of attitude toward challenge in serious game design. *Journal of Computer Information Systems*, 61(4), 383–394.
- Lindsay, M., Lindsay, L., & Irvine, B. (1996). Instilling ethical behaviour in organizations: A survey of Canadian companies. *Journal of Business Ethics*, 15(4), 393–407.
- Lubbe, I. (2021, May). Trainees' perceptions and experiences regarding ethics. *Accountancy SA*. <https://www.accountancysa.org.za/trainees-perceptions-and-experiences-regarding-ethics/>
- MacPherson, S. (2021). *InTheBlack*. <https://intheblack.cpaaustralia.com.au/business-and-finance/potential-of-quantum-computing-for-finance>
- Mager, R. (1968). *Developing attitude toward learning*. Fearon Publishers.
- Maluleke, T. (2021, 31 March). Press Statement. Auditor-General calls on government leaders to ensure sustainable audit outcomes. <https://www.agsa.co.za/Portals/0/Reports/PFMA/201920/2021%20PFMA%20Media%20Release%20FINALISED%202.pdf>
- Marchant, G. (2011). The growing gap between emerging technologies and the law. In G. E. Marchant, B. R. Allenby, & J. R. Herkert (Eds.), *The growing gap between emerging technologies and legal: Ethical oversight* (pp. 19–33). Springer.
- Marriot, N. (2004). Using computerized business simulations and spreadsheet models in accounting education: A case study. *Accounting Education*, 13, 55–70.
- Massachusetts Institute of Technology Review. (2020). *We're not prepared for the end of Moore's Law*. <https://www.technologyreview.com/2020/02/24/905789/were-not-prepared-for-the-end-of-moores-law/>

- Mazana, Y. M., Calkin, S. M., & Casmir, R. O. (2019). Investigating students' attitude towards learning mathematics. *International Electronic Journal of Mathematics Education*, 14(1), 207–231.
- McKenzie, R. (2010). The study of language attitudes. In *The social psychology of English as a global language, 2010* (pp. 19–39). Springer. https://doi.org/10.1007/978-90-481-8566-5_2
- Mhlanga, D., & Moloi, T. (2020). COVID-19 and the digital transformation of education: What are we learning on 4IR in South Africa? *Education Sciences*, 10(7), 180.
- Mourik, G., & Wilkin, C. (2019). Educational implications and the changing role of accountants: A conceptual approach to accounting education. *Journal of Vocational Education and Training*, 71(2), 312–335.
- Mouton, J. (2009). *How to succeed in your Master's & Doctoral Studies*. Van Schaik.
- Mubangizi, J. C. (2020). *Corruption in SA: The politics, the law, the shenanigans in between*. <https://www.news24.com/citypress/voices/corruption-in-sa-the-politics-the-law-and-all-the-shenanigans-in-between-20201007>
- Munoko, I., Brown-Liburd, H. L., & Vasarhelyi, M. (2020). The ethical implications of using artificial intelligence in auditing. *Journal of Business Ethics*, 167(2), 209–234.
- Nomvalo, F. (2021). SAICA. <https://www.saica.co.za/News/NewsArticlesandPressmediareleases/tabid/695/itemid/6405/language/en-US/language/en-US/Default.aspx>
- Nussbaum, M. (2010). *Not for profit: Why democracy needs the humanities*. Princeton University Press.
- Nyamakanga, R., & Diphoko, W. (2017, 17 July). Corporate corruption unpacked: SA lost billions. *Cape Times*. <https://www.pressreader.com/south-africa/cape-times/20170714/281552290902588>
- Ogboodu, S. G., & Umoru, G. L. (2018). Imperatives of corporate governance on corporate citizenship in Nigeria. *Annual Survey of International and Company Law*, 23, 133.
- Okougbo, P., Okike, E. N., & Alao, A. (2021). Accounting ethics education and the ethical awareness of undergraduates: An experimental study. *Accounting Education*, 30(3), 258–276.
- Osborne, J., Simon, S., & Collins, S. (2003). Attitudes towards science: A review of the literature and its implications. *International Journal of Science Education*, 25(9), 1049–1079.
- Poje, T., & Groff, M. Z. (2021). Mapping ethics education in accounting research: A bibliometric analysis. *Journal of Business Ethics*, 179(2), 451–472.
- Ponemon, L. (1993). Can ethics be taught in accounting? *Journal of Accounting Education*, 11, 185–209.
- Quinlan, C., Babin, B., Carr, J., Griffin, M., & Zikmund, W. (2018). *Business research methods*. Cengage Learning.
- Ramaphosa, C. (2019, 14 October). *Question-and-answer session at the Financial Times Africa Summit, London*. <https://www.sabcnews.com/sabcnews/corruption-has-cost-sa-close-to-r1-trillion-ramaphosa/>
- Rossouw, G. (2002). *Business ethics in Africa*. Oxford.
- Russel, J., & Hollander, S. (1975). A biology attitude scale. *American Biology Teacher*, 37, 270–273.
- Sangster, A., Stoner, G., & Flood, B. (2020). Insights into accounting education in COVID-19. *Accounting Education*, 29(5), 431–562.
- Sarbanes–Oxley Act. (2002). <https://www.govinfo.gov/content/pkg/COMPS-1883/pdf/COMPS-1883.pdf>
- Sarmah, A., & Puri, P. (2014). Attitude towards mathematics of the students studying in Diploma Engineering Institute (Polytechnic) of Sikkim. *Journal of Research & Method in Education*, 4(6), 6–10.
- Saunders, M., Lewis, P., & Thornhill, A. (2012). *Research methods for business students*. Pearson.
- Saunders, M., & Tosey, P. (2013). The layers of research design. *Rapport, Winter*, 58–59.
- Sithole, A., Mupinga, D. M., Kibirige, J. S., Manyanga, F., & Bucklein, B. A. (2019). Expectations, challenges and suggestions for faculty teaching online courses in higher education. *Journal of Online Pedagogy and Course Design*, 9(1), 62–77.

- Smith, E. (2020). *South Africa looks to structural reform last investment grade credit rating falls*. <https://www.cnbc.com/2020/03/31/south-africa-looks-to-structural-reform-last-investment-grade-credit-rating-falls.html>
- South African Institute of Chartered Accountants. (2019). *Competency framework: Detailed guidance for academic programme*. SAICA.
- South African Institute of Chartered Accountants. (2020). *Steps taken to restore confidence in the auditing profession*. <https://www.bizcommunity.com/Article/196/511/205966.html>
- South African Institute of Chartered Accountants. (2021). *CA(SA) Competency Framework*. <https://www.saica.org.za/initiatives/competency-framework>
- Springate, I., Harland, J., Lord, P., & Wilkin, A. (2008). *The factors affecting A-level and undergraduate subject choice in Physics and Chemistry by ethnic group*. National Foundation for Educational Research.
- Taplin, R., Kerr, R., & Brown, A. (2017). Monetary valuations of university course delivery: The case for face-to-face learning activities in accounting education. *Accounting Education*, 26(2), 144–165.
- The Economist*. (2017, December 9). The big companies caught up in South Africa's 'state capture' scandal. <https://www.economist.com/briefing/2017/12/09/the-big-companies-caught-up-in-south-africas-state-capture-scandal>
- Transparency International. (2019). *Corruption Perceptions Index*. <https://www.transparency.org/en/cpi/2019>
- Transparency International. (2020). *Corruption Perceptions Index*. <https://www.transparency.org/en/cpi/2020>
- Union of International Associations. (2021). *Encyclopedia of world problems and human potential: Unethical practices in the public sector*. <http://encyclopedia.uia.org/en/problem/135368>
- University System of Georgia. (2019). *Costs of unethical behavior*. https://www.gcsu.edu/sites/files/page-assets/node-940/attachments/costs_of_unethical_behavior.pdf
- Waples, E., Antes, A. L., Murphy, S. T., Connelly, S., & Mumford, M. D. (2008). A meta-analytic investigation of business ethics instruction. *Journal of Business Ethics*, 87, 133–151.
- Weibel, A., Sachs, S., Schafheitle, S. D., & Laude, D. (2020). *Stakeholder distrust: The neglected construct in stakeholder relations*. <https://www.alexandria.unisg.ch/259644/>