



Reimagining Accounting and Economics Curricula in South African Universities: An ERA 5.0 Perspective on Human-Centred and Digital Accounting Education.

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Abstract

The rapid advancement of artificial intelligence, digital technologies, and sustainability imperatives has intensified global calls to reimagine accounting and economics education within higher education institutions. Emerging frameworks such as Education for the Anthropocene and Society 5.0 (ERA 5.0) emphasise human-centred, ethically grounded, and socially responsive learning approaches, positioning universities as critical agents in preparing future-ready accounting and economics professionals. Despite increasing international discourse on ERA 5.0, there remains limited systematic synthesis of how these principles are reflected in accounting and economics curricula, particularly within South African universities. This study undertakes a Systematic Literature Review (SLR) guided by the PRISMA 2020 framework, analysing fourteen (14) peer-reviewed articles published between 2020 and 2026, sourced from the Scopus database. Grounded in Human Capital Theory and Social Cognitive Theory, the review examines curriculum and pedagogical developments through the dual lens of graduate capability formation and learning processes. Findings reveal that while digital technologies and artificial intelligence are increasingly acknowledged within higher education discourse, accounting and economics curricula remain predominantly content-driven and examination-oriented. There is limited integration of human-centred pedagogy, ethical reasoning, collaborative learning, and reflective practice. The study argues that this misalignment constrains the development of digitally competent, ethically aware, and socially responsive graduates required in the ERA 5.0 era. The paper contributes to accounting education scholarship by proposing a theoretically grounded framework for curriculum transformation and highlights critical pedagogical implications for educators and curriculum designers seeking to align accounting and economics education with emerging global demands.

Keywords: *Accounting Education; ERA 5.0; Curriculum Transformation; Digital Competencies; Human-Centric Learning; South Africa*

JEL Classification: M41, A22, A23, I23, O33

1. Introduction

Accounting and economics education globally is undergoing profound transformation as digitalisation, automation, artificial intelligence (AI), and sustainability imperatives reshape the accounting profession. Universities

are increasingly challenged to ensure that curricula remain relevant for complex professional environments characterised by rapid technological change, ethical uncertainty, and evolving stakeholder expectations. In South Africa, these pressures are intensified by persistent skills mismatches, graduate unemployment, and policy-driven demands for curriculum transformation that is both globally competitive and locally responsive (DHET, 2020; SAICA, 2024).

In response, ERA 5.0, However, Education 5.0 has emerged as a higher education paradigm that extends beyond technology centric reform. Contrary to Education 4.0, which foregrounded digitalisation and automation, ERA 5.0 emphasises human-centred, ethically grounded, and socially responsive education, positioning technology as an enabler of human capability rather than a substitute (Agarwal, Verma, & Ferrigno, 2025; OECD, 2022). Therefore, accounting education where professional judgement, ethics, and public trust are foundational this shift is particularly consequential.

ERA 5.0 reframes accounting and economics curricula from narrow technical mastery toward the development of digitally competent, ethically aware, adaptable, and socially responsible graduates. However, this has direct implications for curriculum design, pedagogy, assessment, and graduate attributes. Contemporary accounting graduates are expected to demonstrate proficiency in data analytics and AI-enabled tools, collaborate across disciplines, adapt to hybrid professional roles, and critically engage with ethical challenges associated with algorithmic decision-making (Moloi & Marwala, 2020; Zawacki-Richter et al., 2023).

Despite growing international discourse on Education 5.0 and Society 5.0, systematic attention to the operationalisation of ERA 5.0 within South African university accounting and economics curricula remains limited. Current studies often focus on isolated technological interventions or employability gaps rather than holistic curriculum reimagining guided by coherent theoretical frameworks (Ngwenya, Sithole, & Okoli, 2023). This gap is especially visible in accounting education, where content-heavy curricula persist alongside incremental pedagogical innovation.

Grounded in Human Capital Theory (HCT) and Social Cognitive Theory (SCT), However, the study addresses this gap through a Systematic Literature Review (SLR) of ERA 5.0 oriented curriculum reform in South African universities. HCT frames curriculum reform as an investment in long-term employability and national productivity (Becker, 1993), therefore SCT emphasises learning as a socially mediated process shaped by self-efficacy, modelling, and interaction (Bandura, 1986). However, these theories provide a robust lens for examining digital competence, ethical awareness, collaboration, and professional readiness in ERA 5.0 contexts.

2. Research Problem

Despite significant transformation in the accounting profession, South African university accounting and economics curricula remain predominantly grounded in traditional pedagogical models prioritising technical knowledge and professional compliance. Competencies central to ERA 5.0 critical thinking, ethical reasoning, digital literacy, creativity, and social responsibility are often underemphasised (OECD, 2019; Agarwal et al., 2025).

However, local scholarship has addressed employability and professional alignment, there is limited synthesis of ERA 5.0 principles within accounting and economics curriculum reform. The absence of an evidence-based, theoretically grounded understanding of ERA 5.0 implications constrains effective curriculum transformation and risks producing graduates who are technically proficient yet ill-prepared for ethical, technological, and societal challenges.

3. Research Aim and Objectives and Research Questions

The study aim is to systematically examine the implications of ERA 5.0 for accounting and economics curricula in South African universities.

Specific objectives: the study seeks to

- Analyse ERA 5.0 conceptualisations in accounting and economics education literature.
- Identify dominant curriculum and pedagogical approaches in South African universities.

- Examine the extent to which curricula support ERA 5.0 competencies.
- Evaluate curriculum transformation through a Human Capital Theory lens.
- Assess pedagogical implications using Social Cognitive Theory.

The study is guided by the following research questions:

Main Research Questions:

Main Research Question

How are accounting and economics curricula in South African universities being reimagined to align with Education Revolution/ERA 5.0 principles, and what implications do these transformations have for digital readiness, innovative pedagogy, collaboration, and future graduate competencies?

Sub-Research Questions

- How do reimagined accounting and economics curricula promote digital competencies and technological readiness aligned with ERA 5.0 expectations?
- What innovative teaching and learning approaches are employed to support ERA 5.0 oriented accounting education, and how do these approaches influence student engagement and learning?
- How do curriculum designs foster collaboration, networking, and social learning among accounting and economics students in ERA 5.0 contexts?
- In what ways do ERA 5.0 aligned curricula prepare accounting and economics graduates for future professional roles characterised by digitalisation, automation, and hybrid skill demands?
- How is ethical awareness, including responsible and ethical AI use, integrated into accounting and economics curricula, and what educational outcomes are reported?

4. Literature Review

4.1 ERA 5.0 and Higher Education Transformation

ERA 5.0 represents a shift in higher education philosophy that integrates technological advancement with human-centred values, ethical responsibility, and social relevance (Agarwal et al., 2025). However, within this paradigm shift, Higher education is expected not only to respond to labour market demands but also to cultivate graduates capable of ethical reasoning, critical reflection, and meaningful societal contribution. However, this perspective is increasingly influential in higher education policy and curriculum reform discussions, particularly in disciplines closely linked to public accountability, such as accounting and economics. According to studies by Agarwal et al., 2025 reveal that accounting and economic education in ERA 5.0 is significant because it challenges narrowly technocratic approaches to curriculum reform. Rather than positioning AI, automation, and digital tools as curriculum endpoints, ERA 5.0 emphasises their integration within broader learning outcomes that prioritise professional judgement, adaptability, and ethical awareness. This aligns with calls within accounting education literature for curricula that balance technical competence with higher-order cognitive and social skills.

4.2 Digital Competencies as Human Capital in Accounting Education

Digital competence has become a central concern in accounting and economics education as technological innovations transform accounting practice. From a Human Capital Theory perspective, curriculum investment in digital skills represents a strategic response to labour market demands, enhancing graduates' productivity, employability, and professional longevity. Studies in accounting education increasingly highlight the importance of data analytics, accounting information systems, and AI literacy as core curriculum components. (Moloi & Marwala, 2020; Quy et al., 2023). However, ERA 5.0 extends focus by emphasising that digital competence must be embedded within human-centred learning environments. Rather than producing technically proficient but ethically disengaged graduates, ERA 5.0 aligns curricula seek to develop reflective practitioners who can critically evaluate and responsibly apply digital tools in professional contexts. (Moloi & Marwala, 2020; Quy et al., 2023).

4.3 Innovative Teaching Methods and Social Learning

Traditional lecture of accounting and economics-based pedagogies have been widely criticised for their limited capacity to develop critical thinking, problem-solving, and professional judgement in accounting students. In response, accounting education research increasingly advocates for innovative teaching methods, including case-based learning, simulations, blended learning, and technology-enhanced instruction. feedback (Antonazzo & Peters, 2026; Mian et al., 2020). However, these pedagogical approaches align closely with Social Cognitive Theory, which emphasises learning as a socially mediated process shaped by interaction, modelling, and feedback. ERA 5.0 reinforces this perspective by promoting student-centred, experiential, and collaborative learning environments. Such approaches enable students to actively construct knowledge, develop self-efficacy, and engage meaningfully with complex accounting scenarios reflective of real-world practice. feedback (Antonazzo & Peters, 2026; Mian et al., 2020).

4.4 Collaboration, Networking, and Professional Identity Formation

ERA 5.0 highlights the importance of collaboration and networking in addressing complex societal and professional challenges. However, in accounting and economics education, this translates into curriculum designs that promote group work, interdisciplinary engagement, and partnerships with industry and professional bodies. Research suggests that collaborative learning not only enhances conceptual understanding but also supports the development of communication skills, professional identity, and ethical awareness. (Quirós-Alpera et al., 2025; Simeunovic et al., 2022). From a Social Cognitive Theory perspective, collaborative learning environments provide opportunities for observational learning and social modelling, reinforcing professional norms and behaviours. These elements are particularly relevant in preparing accounting graduates for team-based and cross-functional professional roles. Quirós-Alpera et al., 2025; Simeunovic et al., 2022).

4.5 Preparing Students for Future Accounting Roles

The accounting profession is increasingly characterised by hybrid roles that combine technical expertise with strategic, analytical, and interpersonal skills. ERA 5.0 aligns accounting education therefore prioritises adaptability, lifelong learning, and continuous professional development. Human Capital Theory supports this emphasis by framing education as an ongoing investment in skills development rather than a one-time credential. (Opesemowo et al., 2025). Recent studies indicate that curricula that integrate real-world problem-solving, digital tools, and reflective practice are more effective in preparing students for evolving professional roles. However, evidence from South African contexts suggests uneven implementation of such approaches, highlighting the need for systematic analysis. (Tavares et al., 2023).

4.6 Ethical AI Use and Responsible Accounting Education

Ethical considerations are central to both ERA 5.0 and accounting education. The increasing use of AI and automated systems in accounting raises concerns related to transparency, bias, accountability, and professional judgement. ERA 5.0 explicitly calls for the integration of ethical reasoning and responsible technology use into curricula. (Abulibdeh et al., 2024; OECD, 2022). However, Accounting and economics education literature underscores the importance of embedding ethics across curriculum content rather than confining it to standalone modules. By aligning ethical AI use with professional values, ERA 5.0 informed curricula aim to strengthen public trust and uphold the social responsibility of the accounting profession. (Abulibdeh et al., 2024; OECD, 2022).

5. Theoretical Framework

The study is underpinned by Human Capital Theory (HCT) and Social Cognitive Theory (SCT), which together provide a comprehensive framework for analysing curriculum transformation within an ERA 5.0 context.

5.1 Human Capital Theory

Human Capital Theory posits that investment in education enhances individuals' skills, productivity, and economic value (Becker, 1993). However, higher education, curricula are central mechanisms through which human capital is developed. Therefore, accounting and economics education HCT underscores the importance of aligning

curricula with labour market demands, technological change, and professional competencies. professionals (Agarwal et al., 2025). Therefore ERA 5.0 extends the concept of human capital beyond technical proficiency to include digital competence, ethical judgment, sustainability awareness, adaptability, and innovation. From an HCT perspective, reimagining accounting curricula in line with ERA 5.0 strengthens graduate employability and contributes to national economic development. Conversely, previous curricula represent inefficient investments in human capital. professionals (Agarwal et al., 2025).

5.2 Social Cognitive Theory

Social Cognitive Theory emphasises the interaction between personal factors, behaviour, and learning environments (Bandura, 1986). Central to SCT are concepts such as self-efficacy, observational learning, motivation, and role modelling. In accounting education, educators, curriculum structures, and institutional cultures shape students' learning experiences and professional identities. Therefore, ERA 5.0 aligns curricula that promote active learning, collaboration, ethical reflection, and real-world engagement enhance students' confidence and motivation. SCT thus highlights that curriculum reform must address not only content but also pedagogical practices that influence how students internalise knowledge and develop professional competence.

Together, HCT and SCT provide a holistic lens for understanding curriculum transformation as both an economic investment and a socially mediated learning process.

6. Research Design and Methodology

6.1 Research Design

This study adopts a qualitative Systematic Literature Review (SLR) design guided by the PRISMA 2020 framework. The review draws on peer-reviewed journal articles indexed in Scopus, published between 2020 and 2026 (Page et al., 2021). Inclusion criteria focused on universities accounting and economics education, curriculum transformation, digitalisation, sustainability, and pedagogy.

The research adopted the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020, which offers a replicable and systematic procedure for literature selection, screening and synthesis. The application of PRISMA ensures the research comply with the highest standards of evidence-based research and transparency (Page et al., 2021).

6.2 Data Sources and Search Strategy

The study adopted the Scopus database, given its comprehensive coverage of peer-reviewed journals in accounting, economics, education, and social sciences.

On 09 February 2026, a comprehensive online search with an aim of identifying prior research addressing the reimagining of accounting and economics curricular, with specific focus on ERA 5.0, on human centred and digital accounting education in South African Universities.

The search string was customised as per database functionalities. The databases were queried using tailored Boolean search strings between 2020 and 2026 indicated in Table 1. The final search, date. Table 1 illustrates the exact search strings, filters, and parameters used for database. The search included articles, abstract and keywords, in the subject area (Economics and Accounting), keywords, including "ERA 5.0, Accounting Education, digital competencies, human-centred pedagogy, sustainability integration, ethical education, curriculum alignment, and stakeholder expectations.

The search will be limited to peer-reviewed journal articles published between 2020 and 2026 to capture contemporary developments aligned with digital transformation and post-4IR educational reforms.

The structured search strategy using Boolean operators was employed. Selected studies were screened, assessed for quality, and analysed using thematic analysis. Themes were synthesised narratively and interpreted through the lenses of ERA 5.0, HCT, and SCT.

Table 1: Search Strategy

Database	Search String	Date of Search	Filters
Scopus	TITLE-ABS-KEY (Challenges AND opportunities AND industry 4.0) AND PUBYEAR > 2019 AND < 2027 AND PUBYEAR > 2019 AND PUBYEAR < 2027 AND (LIMIT – TO (OA , “all”) AND (LIMIT – TO SUBJAREA ,”BUSI”) OR LIMIT-TO (SUBJAREA , “SOCT”) AND (LIMIT-TO (DOCTYPE , “ar”) AND (LIMIT-TO (LANGUAGE, “English”) AND (LIMIT-TO (EXACTKEYWORD, “Artificial Intelligence”) OR LIMIT-TO (EXACTKEYWORD, “Industry 5.0”) OR LIMIT-TO (EXACTKEYWORD, “Technology”) OR LIMIT-TO (EXACTKEYWORD, “Higher Education”) OR LIMIT-TO (EXACTKEYWORD, “Challenges”) OR LIMIT-TO (EXACTKEYWORD, “Learning”) OR LIMIT-TO (EXACTKEYWORD, “Human Capital”) OR LIMIT-TO (EXACTKEYWORD, “Education 4.0”) OR LIMIT-TO (EXACTKEYWORD, “Education”) OR LIMIT-TO (EXACTKEYWORD, “Curricula”) OR LIMIT-TO (EXACTKEYWORD, “Commerce”))	9 February 2026	Year (2020-2026); Subject Area (Accounting, Economics, Business, Management, Education, and Social Sciences.). Article type (Articles). Keywords (Accounting education, Economics education, Higher education, University accounting curriculum, Accounting and economics curricula) Language: (English); Open Access

The study employed the SPIDER framework (Sample, Phenomenon of Interest, Design, Evaluation, and Research Type) to structure the review comprehensively and systematically.

Table 2: The SPIDER Framework

Element	Description
S - Sample	Peer-reviewed journal articles published between 2020-2026 that focuses on University-level accounting and economics education contexts, including undergraduate and postgraduate programmes, educators, students, and curriculum structures within South African universities and comparable Global South contexts.
PI – Phenomenon of Interest	Curriculum transformation in accounting and economics education, with specific focus on ERA 5.0 principles such as human-centred learning, digital competence, innovative pedagogy, collaboration, ethical AI use, and preparation for future professional roles.
D - Design	Qualitative, mixed-methods, conceptual, and review-based research designs, including systematic reviews, qualitative case studies, conceptual frameworks, curriculum analyses, and pedagogical evaluations.
E- Evaluation	Educational outcomes and processes, including curriculum alignment, pedagogical effectiveness, student engagement, self-efficacy, ethical awareness, digital capability development, and professional identity formation.
R – Research Type	Qualitative, mixed-methods, and conceptual research relevant to accounting and economics education; quantitative studies were included where they contributed clear pedagogical or curriculum-related insights.

Source: Adapted from Methley, Campbell, Chew-Graham, McNally and Cheraghi-Sohi (2014)

7. Data Filtering and Refinement

The Scopus database search initially identified 2 220 records related to accounting and economics education, curriculum transformation, digitalisation, and ERA 5.0-related concepts. After applying the publication period filter (2020–2026), 2 218 articles remained, ensuring the inclusion of recent studies reflecting contemporary developments in higher education transformation.

The search was further refined by limiting the subject areas to Business, Management and Accounting, Economics, and Social Sciences, resulting in 781 articles, followed by restricting the results to peer-reviewed journal articles, which reduced the dataset to 341 studies. Additional keyword-based filtering using terms aligned with the study objectives, including Accounting Education, Curriculum Transformation, Artificial Intelligence, Digital Competencies, Higher Education, Industry 5.0/ERA 5.0, Sustainability, and Innovative Pedagogy, narrowed the sample to 76 articles. The language filter retained only English-language publications, resulting in 75 articles, while the open-access filter produced 39 accessible studies for further assessment. Finally, the open access filter produced 14 studies.

The Table 3 illustrates the inclusion and exclusion criteria that guided the selection of journal articles included in this study.

Table 3: Inclusion and Exclusion Criteria (Scopus)

Inclusion Criteria	Exclusion Criteria
Published between 2020 and 2026	Published before 2020 or after 2026
Articles written in English language	Not in English
Peer-reviewed research and review articles	Non-peer-reviewed sources, editorials, or opinion pieces
Articles published in Subject area (Accounting, Economics, Business, Management, Education, and Social Sciences)	Studies published outside accounting, economics or management accounting fields
Document/article type: articles	Conference papers, book chapter, or grey literature
Publications in open access	Restricted access or unavailable full-text papers
Publications focusing on university-level accounting and/or economics education, including curriculum design, pedagogy, teaching, learning, or assessment align with ERA 5.0 principles	Studies unrelated to Articles to accounting practice without educational implications and Studies unrelated to curriculum or pedagogical transformation

Final articles included as per inclusion criteria

Details	Scopus	Details
Search terms (all fields)	2220	Search terms (all fields)
Filtered by year	2 218	Filtered by year
Filtered by subject area	781	Article type
Filtered by document type	341	Filtered by subject area
Filtered by keywords	76	Filtered by open access
Filtered by Language	75	-
Filtered by open access	39	-
Filtered by language	14	Filtered by open access
Final studies included in synthesis	14	Open access filter applied

Source: authors' own work

Screening for eligibility

A total of 2 220 articles were identified through a systematic search conducted using the Scopus database. During this process 2 218 were excluded for in Scopus, not meeting the inclusion criteria set out in the Table 3.

The papers were assessed and selected according to the criteria set out in the Table 3. The titles and abstracts were assessed/screened independently, and once selected, the articles were analysed in full. The full text of remaining 39 articles was reviewed, resulting in the further exclusion of 25 for non-compliance with criteria The article section and screening workflow are shown in Figure 1 below.

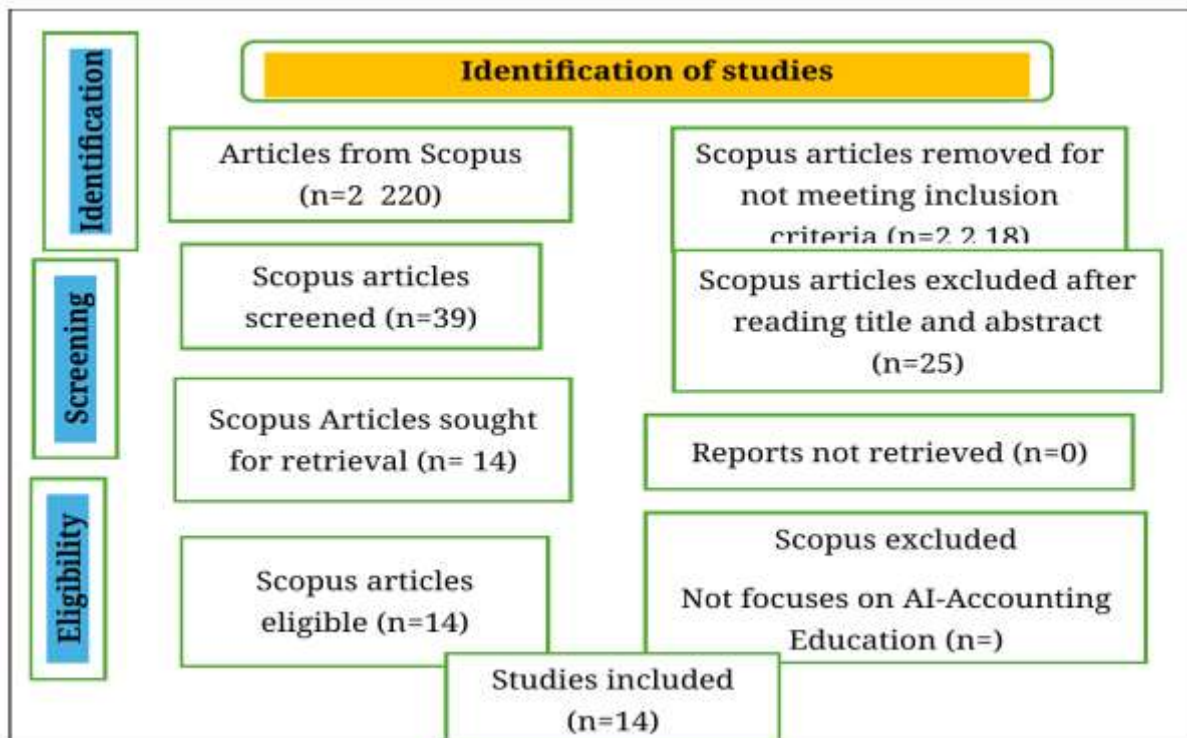


Figure 1. PRISMA Statement 2020 diagram

Source: Authors owns elaboration adapted from Page et al. (2021)

A total of fourteen (14) peer -reviewed studies were systematically analysed to understand the emerging discourse on reimagining ERA 5.0 in accounting and economics curricular in South African universities. The synthesis of these studies reveals Five dominant and interrelated themes shown in Table 3.

Table 3. Theme from Synthesis of Reviewed Articles

Theme	Prior Research	Implications for Accounting & Economics Education
Digital and Future-Oriented Competencies	Studies consistently emphasise digital literacy, AI, data analytics, and technology-enhanced learning as essential graduate skills (Olaitan et al., 2024; Quy et al., 2023; Abulibdeh et al., 2024; Mian et al., 2020). However, digital readiness varies significantly across institutions, particularly in developing contexts.	Accounting and economics curricula must move beyond generic ICT exposure to discipline-specific digital competencies, including accounting analytics, AI-assisted auditing, and digital decision-making, framed as investments in human capital.
Innovative Teaching and Learning Approaches	Evidence shows a shift towards experiential, student-centred, and problem-based pedagogies (Antonazzo & Peters, 2026; Quirós-Alpera et al., 2025; Mian et al., 2020). Nonetheless, traditional lecture-dominated approaches remain prevalent due to staff capacity and institutional constraints	ERA 5.0 requires pedagogical redesign, not only content updates. Accounting educators should adopt case-based learning, simulations, and technology-enhanced instruction to support active and socially mediated learning.
Collaboration, Industry Engagement, and Networking	Multiple studies highlight the value of university–industry collaboration, dual training models, and stakeholder engagement in enhancing curriculum relevance (Quirós-Alpera et al., 2025; Simeunovic et al., 2022; Poltronieri et al., 2025). Such models are unevenly implemented.	Accounting programmes should strengthen industry partnerships, work-integrated learning, and collaborative projects to support professional socialisation and bridge theory–practice gaps.
Preparation for Future Professional Roles and Employability	Employability, adaptability, and hybrid skill development are dominant concerns (Opesemowo et al., 2025; Rincón-Rodríguez et al., 2025; Laciok et al., 2021). Curricula are increasingly evaluated based on graduate readiness for digitally transformed professions	Accounting and economics curricula must explicitly align learning outcomes with future-oriented professional roles, emphasising lifelong learning, adaptability, and professional judgement alongside technical competence.
Ethical Awareness, Sustainability, and Responsible AI Use	Ethical dimensions of AI, sustainability, and social responsibility are strongly emphasised (Abulibdeh et al., 2024; Haloui et al., 2024; Mian et al., 2020). However, explicit curriculum integration of ethical AI use remains limited	ERA 5.0 calls for embedded ethics and responsible AI use across accounting curricula, reinforcing public trust, professional accountability, and ethical decision-making in technology-driven environments.

Source: Compile by authors

8. Finding and Discussions

This study reveals that South African university accounting and economics curricula demonstrate incremental adaptation to technological change, alignment with ERA 5.0 remains fragmented. However, the discussion is structured around five interrelated themes central to ERA 5.0-oriented accounting education.

8.1 Enhancing Digital Competencies

The literature indicates growing acknowledgement of digital skills such as data analytics, accounting software proficiency, and technology-assisted assessment. However, digital competence is often treated as an *add-on* rather than a core curriculum outcome. ERA 5.0 reframes digital competence as a human-centred capability, requiring not only technical skills but also critical evaluation, ethical reasoning, and adaptability.

From a Human Capital Theory perspective, insufficient integration of advanced digital competencies undermines the economic value of accounting graduates in an AI-driven labour market. Graduates equipped only with basic software skills are less competitive in environments increasingly shaped by automation, big data, and intelligent systems. Social Cognitive Theory further suggests that limited exposure to authentic digital learning environments constrains students' self-efficacy and confidence in applying technology meaningfully in professional contexts.

8.2 Innovative Teaching Methods

The review highlights continued reliance on traditional lecture-based and examination-driven pedagogies in accounting education. While some studies report the use of blended learning and learning management systems, innovative pedagogical approaches such as problem-based learning, simulation, case-based instruction, and experiential learning remain underutilised.

ERA 5.0 advocates for active, reflective, and student-centred learning, positioning learners as co-creators of knowledge. Through an SCT lens, innovative teaching methods enhance observational learning, motivation, and self-regulated learning by engaging students in authentic accounting tasks. When pedagogical innovation is limited, students may struggle to develop higher-order cognitive skills such as professional judgment and ethical decision-making.

8.3 Collaboration and Networking

Collaboration and networking both within and beyond the classroom emerge as weakly developed dimensions in existing curricula. However, ERA 5.0 emphasises collaborative intelligence, interdisciplinary engagement, and partnerships between universities, industry, and professional bodies.

From an HCT collaboration enhances social capital and workplace readiness, increasing graduates' employability and adaptability. SCT underscores the role of social interaction and role modelling in shaping learning behaviours and professional identity. The literature suggests that limited industry engagement and peer collaboration reduce opportunities for students to observe professional practices, engage in mentorship, and internalise professional norms essential to accounting practice.

8.4 Preparing Students for Future Roles

The accounting profession is undergoing role redefinition, with accountants increasingly acting as strategic advisors, data analysts, and sustainability stewards rather than mere record keepers. However, the review reveals that curricula often remain focused on historical reporting and compliance-oriented competencies.

ERA 5.0 calls for preparing students for future-oriented roles that require critical thinking, interdisciplinary knowledge, adaptability, and ethical leadership. Through the lens of HCT, curricula that fail to anticipate future professional roles represent a misalignment between educational investment and labour market needs. SCT further highlights that exposure to future-oriented roles through curriculum design influences students' career aspirations and professional confidence.

8.5 Ethical AI Use in Accounting Education

Ethical AI use emerges as a critical yet underdeveloped area in accounting and economics education. However, AI tools are increasingly accessible, limited guidance exists on ethical use, academic integrity, bias, accountability, and responsible decision-making.

ERA 5.0 places ethical responsibility at the centre of technological integration. From an HCT perspective, ethical competence enhances long-term professional credibility and trust in the accounting profession. SCT emphasises that ethical behaviour is learned through modelling, reinforcement, and institutional norms. Furthermore, Curricula that neglect ethical AI education risk normalising uncritical or unethical technology use among future accounting professionals.

9. Implications for Accounting Education

Drawing on the five ERA 5.0 dimensions, this study proposes several implications for reimagining accounting and economics curricula in South African universities.

9.1 Curriculum Design

The accounting and economics curricula should embed digital competencies that include data analytics, AI literacy, and digital ethics as core learning outcomes rather than optional modules. However, Curriculum frameworks must explicitly align technical accounting knowledge with ethical reasoning and societal impact.

9.2 Pedagogical Transformation

Educators should adopt innovative teaching methods such as problem-based learning, simulations, case studies, and technology enhanced assessments. These approaches align with SCT by strengthening student self-efficacy, motivation, and active engagement while supporting ERA 5.0's human-centred ethos.

9.3 Collaborative Learning and Industry Engagement

Universities should strengthen collaboration and networking through partnerships with industry, professional bodies, and interdisciplinary departments. Collaborative projects, mentorship programmes, and work-integrated learning can enhance both human and social capital development.

9.4 Future-Ready Graduate Development

Accounting education must explicitly prepare students for future professional roles by integrating sustainability accounting, strategic decision-making, and interdisciplinary problem-solving into curricula. Such alignment ensures that graduates remain adaptable in rapidly evolving professional landscapes.

9.5 Ethical AI Integration

Institutions should develop clear policies and pedagogical strategies for ethical AI use, including guidelines on responsible technology adoption, academic integrity, and professional accountability. Ethical AI education should be reinforced through assessment design, role modelling by educators, and institutional culture.

9.6 Synthesis of Findings

The synthesis of findings reveals that the reimagining of accounting and economics curricula within South African universities is occurring in a fragmented yet converging manner, shaped by broader higher education responses to digitalisation, automation, and sustainability rather than by discipline-specific curriculum frameworks. However, the reviewed literature demonstrates growing alignment with ERA 5.0 principles, this alignment is often implicit and uneven, particularly within accounting education.

Across the studies, digital competence emerges as the most dominant driver of curriculum reform, reflecting strong alignment with Human Capital Theory. Digital skills are consistently framed as critical investments in graduate employability and adaptability in technologically mediated professional environments. However, the synthesis indicates that digitalisation is frequently approached as a technical upgrade rather than as part of a holistic, human-centred curriculum transformation. As a result, accounting and economics programmes risk prioritising tool-based proficiency at the expense of critical judgement, ethical reasoning, and professional identity formation.

Pedagogical transformation represents a secondary but less consistently implemented dimension of ERA 5.0. Although innovative teaching approaches—such as experiential learning, simulations, and problem-based instruction—are widely advocated, their adoption remains constrained by institutional capacity, academic readiness, and entrenched teaching practices. From a Social Cognitive Theory perspective, this limits opportunities for social learning, modelling, and self-efficacy development, which are essential for meaningful engagement in accounting education.

The synthesis further reveals that collaboration and industry engagement are recognised as essential mechanisms for bridging theory and practice, yet they are often peripheral rather than embedded components of accounting and economics curricula. Where collaborative and work-integrated learning models are present, they contribute positively to professional socialisation and graduate readiness. However, the absence of structured, discipline-specific partnerships suggests a disconnect between institutional reform agendas and the professional realities of accounting practice.

Preparation for future professional roles is consistently emphasised, yet the findings suggest a misalignment between curriculum intentions and implementation. While employability, adaptability, and lifelong learning are widely articulated goals, curricula often remain content-heavy and assessment-driven. This tension reflects a broader challenge in translating ERA 5.0 ideals into coherent curriculum design that balances technical rigour with future-oriented capabilities.

Ethical awareness and responsible AI use emerge as critical but underdeveloped dimensions of curriculum reform. Although ethics and sustainability are frequently acknowledged in the literature, their integration into accounting and economics curricula is often confined to standalone modules or abstract discussions. ERA 5.0 challenges this approach by positioning ethics as a core, embedded outcome of education, highlighting a significant gap between conceptual recognition and curricular enactment.

Overall, the synthesis indicates that ERA 5.0 provides a compelling conceptual framework for reimagining accounting education, yet its transformative potential remains largely unrealised in practice. The findings point to the need for integrated, theory-driven curriculum reform that simultaneously addresses digital competence, pedagogy, collaboration, professional preparation, and ethical responsibility. Such integration is essential if accounting and economics education in South African universities is to produce graduates who are not only technologically capable, but also ethically grounded, socially responsive, and professionally adaptable.

Table 4. Summary of Review Studies on Reimagining Accounting and economics Curricular in South African Universities.

No	Authors and Year	Journal	Research focus	Key Findings/Contribution to ERA 5.0 Curriculum Transformation
1	Antonazzo and Peters (2026)	International Journal of Training and Development	Human Capital 4.0: Readiness of Initial Vocational Education Programmes in Italy and Germany	Highlights the importance of developing human capital through future-oriented skills, digital readiness, and curriculum adaptation to prepare graduates for technology-driven workplaces.
2	Opesemowo et.al (2025)	Discover Sustainability	Exploration of employability skills among Osun state undergraduate students in the era of 4IR	Identifies the need for universities to strengthen employability skills, including digital literacy, adaptability, communication, and problem-solving competencies required in the 4IR/ERA 5.0 environment.
3	Rincón-Rodríguez et.al (2025)	Multidisciplinary Journal of Educational	Human Talent Management in Higher Education Institutions: Facing Challenges and Taking Advantage of	Demonstrates that higher education transformation requires effective talent management, staff development, and

No	Authors and Year	Journal	Research focus	Key Findings/Contribution to ERA 5.0 Curriculum Transformation
		Research	Opportunities in the 4.0 Era.	institutional strategies to support digital and pedagogical innovation.
5	Quirós-Alpera et.al (2025)	Societies	(Quirós-Alpera, Roets et al. 2025)	Emphasises the importance of connecting academic learning with practical experiences, sustainability principles, and industry collaboration to improve graduate readiness.
6	Moenck et.al (2025)	CEAS Aeronautical Journal	Industry 5.0 in aircraft production and MRO: challenges and opportunities	Shows that Industry 5.0 requires a balance between advanced technologies and human expertise, highlighting the need for human-centred curriculum approaches.
9	Poltronieri et. Al (2025)	Journal of Entrepreneurship, Management and Innovation	Toward Industry 5.0: Mapping technologies, competencies, and research opportunities	Identifies emerging technologies and competencies required for future professionals, supporting curriculum redesign towards digital, innovative, and interdisciplinary learning
15	Olaitan, Vijayalekshmi and Kumar (2024)	International Journal of Learning, Teaching and Educational Research	Integrating 4IR Technologies into Higher Education in South Africa: Opportunities, Challenges, and Strategies	Reveals opportunities and challenges of integrating digital technologies into South African universities, including infrastructure, educator readiness, and digital skills development
16	Haloui et.al (2024)	Sustainability (Switzerland)	Bridging Industry 5.0 and Agriculture 5.0: Historical Perspectives, Opportunities, and Future Perspectives	Highlights the transition towards human-technology collaboration, sustainability, and responsible innovation as central elements of future education systems.
18	Abulibdeh, Zaidan, Abulibdeh, (2024)	Journal of Cleaner Production	Navigating the confluence of artificial intelligence and education for sustainable development in the era of industry 4.0: Challenges, opportunities, and ethical dimensions	Finds that AI integration in education provides opportunities for personalised learning and innovation but requires ethical frameworks and responsible implementation.
20	Quy et.al (2023)	Sustainability (Switzerland)	AI and Digital Transformation in Higher Education: Vision and Approach of a Specific University in Vietnam	Demonstrates that AI adoption enhances teaching and learning effectiveness but requires institutional strategies, digital infrastructure, and staff training.
21	Jugembayeva and Murzagaliyeva (2023)	Sustainability (Switzerland)	Physics Students' Innovation Readiness for Digital Learning within the University 4.0 Model: Essential Scientific and Pedagogical Elements That Cause the Educational Format to Evolve in the Context of Advanced Technology Trends	Shows that digital learning readiness depends on technological competence, innovative pedagogy, and supportive learning environments
24	Simeunovic, Milic and Pajrok (2022)	Sustainability (Switzerland)	Higher Education in the Eyes of Economic Operators	Indicates the need for stronger university-industry collaboration to align curricula with labour market expectations and professional requirements.
31	Laciok et.al (2021)	Sustainability (Switzerland)	Trends and opportunities of tertiary education in safety engineering moving towards safety 4.0	Highlights the importance of curriculum flexibility, technology integration, and competency-based education in preparing graduates for emerging industries.
36	Mian et.al (2020)	Sustainability (Switzerland)	Adapting universities for sustainability education in industry 4.0: Channel of challenges and opportunities	Demonstrates that universities must integrate sustainability, digital transformation, and innovative teaching practices to address future societal and economic challenges.

Source: Compile by authors

Synthesis of Reviewed Studies

The reviewed studies indicate that accounting and economics education is undergoing significant transformation driven by ERA 5.0 principles, focusing on human-centred learning, digital innovation, sustainability, ethical awareness, and future-ready graduate competencies. Universities are shifting from traditional curriculum models towards flexible, interdisciplinary, and technology-enhanced approaches that respond to the demands of Industry 4.0 and 5.0. The literature highlights the growing importance of digital competencies, artificial intelligence, and data-

driven skills in preparing graduates for changing professional environments, while also recognising challenges such as limited technological infrastructure, educator readiness, and ethical concerns. Furthermore, innovative teaching approaches, including student-centred, collaborative, and problem-based learning, are identified as essential for improving engagement, critical thinking, and practical skills. The studies also emphasise the integration of sustainability and social responsibility into curricula to develop graduates capable of addressing complex economic and societal challenges. Overall, the findings suggest that ERA 5.0 curriculum transformation requires continuous curriculum renewal, educator development, digital readiness, and stronger collaboration between universities, industry, and professional bodies to produce adaptable, ethical, and future-oriented accounting and economics graduates.

10. Conclusions

This study examined how accounting and economics curricula in South African universities are being reimaged in response to ERA 5.0, focusing on digital competencies, innovative teaching practices, collaboration, future professional readiness, and ethical AI integration. Guided by Human Capital Theory and Social Cognitive Theory, the systematic review highlights that ERA 5.0 provides a transformative framework for moving accounting education beyond traditional technical knowledge towards human-centred, digitally enabled, ethically responsible, and socially responsive learning. The findings reveal increasing emphasis on digital literacy, data analytics, technology-enhanced learning, and professional skills development; however, implementation remains uneven due to limited institutional capacity, educator preparedness, and fragmented curriculum approaches. Human Capital Theory reinforces the importance of investing in digital and professional competencies to enhance graduate employability, while Social Cognitive Theory emphasises the role of collaboration, modelling, and learner confidence in achieving meaningful curriculum transformation. The study further highlights the necessity of embedding ethical AI practices, professional judgement, and accountability within accounting education to maintain public trust in the profession. In South Africa, ERA 5.0 aligned curriculum reform presents opportunities to address graduate unemployment, skills gaps, and digital inequality through stronger partnerships among universities, industry, and professional bodies. Overall, the study contributes to accounting education scholarship by demonstrating the need for future-ready curricula that develop graduates who are digitally competent, ethically aware, adaptable, and capable of responding to evolving professional and societal demands. Future research should investigate the effectiveness of ERA 5.0 interventions and explore the experiences of educators and students across diverse higher education contexts.

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