YESTERDAY & TODAY

No. 34
December 2025

Published by

ESI
LABS • PRESS • REACH

Editorial Policy: Yesterday & Today

1. Overview

Yesterday & Today is a peer-reviewed, scholarly journal focusing on History Education, History in Education, and the History of Education. The journal welcomes research contributions that advance understanding in these fields through empirical, theoretical, and pedagogical perspectives. The journal has been accredited since 2012 and is committed to academic excellence, scholarly integrity, and educational impact.

2. Submission Guidelines

- Contributions may be submitted by individuals or collaboratively authored.
- Manuscripts must be submitted electronically to the Editor-in-Chief, Professor Johan Wassermann, at: johan.wassermann@up.ac.za. Confirmation of receipt will be issued within 72 hours.
- All manuscripts are subject to a double-anonymized peer review process to ensure scholarly rigor.

3. Language Policy

The official language of the journal is English. However, abstracts may be submitted in any of South Africa's 11 official languages. The English used must be accessible to the journal's readership.

4. Formatting Requirements

- Manuscripts must be submitted in Microsoft Word format using Times New Roman, 12-point font, 1.5 spacing.
- Articles should preferably not exceed 8,000 words, including references, tables, and figures.
- A structured abstract of no more than 250 words must accompany all submissions.
- Article titles should preferably not exceed 15 words.
- Each submission must include the full name(s) of the author(s), institutional affiliation(s), city, country, ORCID iD, and email address(es).

5. Referencing Style

- Authors may choose between the Harvard and Footnote method of referencing. The preferred style must be applied consistently.
- Reference formatting must be clear and comprehensible to a general academic audience.
- Authors must follow the chosen method's *Yesterday & Today* referencing guidelines.

6. Visual Material

- High-resolution editorial materials such as illustrations, photographs, tables, and graphs are encouraged.
- Images must be at a minimum resolution of 200dpi with sources indicated.
- Large media files should be submitted as separate, clearly numbered attachments.

7. Declaration and Fees

- All authors must submit a signed author declaration form upon submission.
- A publication fee of R300.00 per page is applicable for South African authors and payable by their institution. Authors are responsible for ensuring payment.

8. AI Use Policy

To promote transparency and academic integrity in history education, the journal applies the following AI policy:

- Accountability: Only human authors bear full responsibility for the integrity, accuracy, and ethical compliance of the published work, including any AI-assisted content.
- Transparency: The use of AI tools must be mandatorily disclosed by authors.
- Integrity: Authors must critically review and verify all AI-generated information, references, data, and conclusions. Concealment or misuse of AI tools constitutes a breach of scholarly integrity.
- Confidentiality: Manuscripts must not be uploaded to external AI tools (especially public-facing, third-party platforms) if those tools lack a secure, closed system that guarantees privacy and prevents the content from being used to train the AI/LLM.

Permitted Uses of AI

Authors can use AI and AI-assisted technologies for the following tasks, provided that human oversight is maintained:

- Language and Readability: Improving spelling, grammar, and general language clarity.
- Administrative Tasks: Minor language editing or grammar correction that does not alter the intellectual content or conclusions.

Prohibited Uses and Human Responsibility

AI tools must not replace essential authoring tasks, which require uniquely human intellectual input:

- Intellectual Input: AI cannot be used to fabricate data, generate conclusions, or substitute for the author's original legal insights or historical conclusions/recommendations.
- Authorship Eligibility: AI cannot be listed as an author or co-author. Only humans who meet the journal's full authorship criteria may be credited.

Disclosure Requirements

Authors are obligated to disclose the use of AI/AI-assisted technologies in their manuscripts.

- What to Disclose: The declaration must specify the tool name/version, how it was used, and where in the manuscript it was used (e.g., text, images, data).
- Exception: If a tool is used only for correcting language and grammar (e.g., Grammarly) and not for generating content, disclosure is not required.
- Citation: Authors are encouraged to cite or acknowledge AI tools when they contribute substantively to the work.

Policy Development and Updates

Yesterday & Today acknowledges the dynamic nature of AI technology. This policy will be continuously monitored and reviewed periodically to remain current with advancements in AI/AI-assisted technologies.

9. Open Access and Archiving

- *Yesterday & Today* is an Open Access journal under the Creative Commons Attribution-ShareAlike 4.0 License (CC BY-SA 4.0).
- The journal is preserved through the Portico digital preservation system.
- It is registered with SHERPA RoMEO for Green Open Access.

10. Data Availability Statement

Authors should provide links to relevant datasets and cite data sources where applicable.

11. Sustainable Development Goals (SDGs)

Authors are encouraged to indicate relevant SDGs in their article keywords.

12. Copyright and Licensing

Copyright remains with the authors. All articles are published under the Creative Commons Attribution-ShareAlike 4.0 License.

13. Social Media and Outreach

Yesterday & Today can be followed on its LinkedIn handle.

e-ISSN 2309-9003

YESTERDAY & TODAY EDITORIAL BOARD

Contact Details: Editor-in-Chief

Prof Johan Wassermann, Department of Humanities,Education Faculty of Education
Groenkloof Campus, University of Pretoria Private Bag X20, Hatfield, 0028
Telephone: (012) 420 4447 | Email: johan.wassermann@up.ac.za

Submissions accepted electronically via the UPJournals site -
https://upjournals.up.ac.za/index.php/yesterday_and_today/about/submissions
ISSN 2223-0386 (Print version) | ISSN 2309-9003 (Online version)

TABLE OF CONTENTS

ARTICLES

e-ISSN 2309-9003

TEACHERS VOICE / HANDS-ON ARTICLES

CONFERENCE REPORTS

BOOK REVIEWS

EDITORIAL

DOI: Editorial http://dx.doi.org/10.17159/2223-0386/2025/n35a1

History Education greetings,

The contributions in this issue of Yesterday & Today arrive at a pivotal moment for history education in South Africa and Africa. As global debates around artificial intelligence, decolonisation, pedagogical innovation and curriculum transformation intensify, the research presented in Volume 35 reminds us that the South African context, shaped by profound inequalities, a complex past, and a rapidly shifting technological landscape, requires thoughtful, locally grounded responses. What emerges across the seven articles in this edition is a shared concern, namely, that history education is being reshaped by powerful forces that all history educators need to take cognisance of.

The opening conceptual article by Michael Stack argues for a structured and authentic approach to integrating Artificial Intelligence (AI) in social sciences and history teacher training. In a sector where students often access AI tools without guidance and sometimes use them to circumvent learning, the author warns of a genuine risk: producing graduates who, through over-reliance on AI-generated work, enter classrooms insufficiently prepared. This is not simply a technological issue but an ethical one, one that strikes at the heart of teacher professionalism and the integrity of the South African education system. The article's call for hospitable institutional environments, clear policy guidance and didactic training for ethical AI use is both timely and urgent.

From a complementary angle, Adigun's reflective piece on archaeology students at a distance university paints a candid picture of the "copy-and-paste" culture emerging in the Generative AI era. Through Kolb's experiential learning cycle, she acknowledges the promise of AI while exposing the pitfalls of uncritical adoption. Her insights reinforce the argument that students must be taught, not merely told, how to use AI to enhance, rather than replace, their thinking. history and archaeology, disciplines rooted in interpretation and critical engagement with evidence, are particularly vulnerable when these cognitive processes are outsourced to AI.

Technological innovation remains a central theme in Volume 35 in the study of virtual reality (VR) head-mounted displays in pre-service teacher training for history. VR's ability to transport learners into immersive historical environments, such as Holocaust museums

and battlefield re-enactments like Pearl Harbour, signals new possibilities for cultivating historical empathy, spatial understanding, and self-directed learning. Notably, the research shows that VR is not a gimmick but a pedagogical tool capable of fostering motivation, critical thinking and reflective engagement. In a context where textbook-based learning dominates due to resource constraints, such technologies offer both excitement and a reminder of the access disparities that continue to shape educational opportunity.

Decolonisation, another pressing thread in South African and African scholarship, surfaces powerfully in the critique of colonial-era Northern Rhodesian (now Zambia) textbooks. The authors, Kabombwe and Masinire, demonstrate how content steeped in Eurocentric ideology shaped generations of learners' understandings of Africa's past. Their findings prompt a broader reflection: although some strides have been made in revising curriculum content, the colonial logic embedded in many inherited teaching materials, such as programmatic curricula, still requires scrutiny. Decolonisation, as the authors argue, is not simply about adding African content but interrogating the ideological foundations of the narratives we present to learners.

A related historical-pedagogical intervention is offered through the study of colonial infrastructure and economic geography by Fru and Olatoye. In this transdisciplinary article, the authors trace the spatial logic of ports, railways, and power grids, which are designed to extract rather than develop, and expose enduring spatial inequalities. Their call for integrating critical cartography, Geographical Information Systems (GIS) and place-based inquiry highlights the transformative potential of historically grounded geographic literacy, a powerful antidote to the "historical amnesia" they identified in their article.

Policy debates emerge sharply in the article, which examines the perspectives of South African history lecturers on making history compulsory in the 12th grade. While the proposal of compulsion promises broader historical consciousness, lecturers anticipate significant strain on already stretched university systems. This would include larger classes, more diverse academic preparedness and potential dilution of rigour. Their reflections underscore the need for institutional planning and investment, should such a policy be revived as part of the Ministerial Task Team's recommendations.

Closing Volume 35, Mvenene's analysis of pedagogical strategies adds a practical dimension. The documented shift from traditional, teacher-centred instruction toward inquiry, collaboration, role-play and other learner-centred approaches signals genuine progress. Yet the study also calls on history teachers, not technologies alone, to create

classrooms where understanding takes precedence over memorisation and historical problem-solving becomes central.

Taken together, the papers in this issue remind us that the future of history education lies at the intersection of innovation, identity and pedagogy. New technologies, such as AI and VR, can reimagine how history is taught and learned, but only if they are integrated critically, ethically, and with a clear pedagogical purpose. Simultaneously, the ongoing work of decolonisation demands vigilance, reflection and the courage to rethink historical narratives and teaching practices.

Complementing the seven articles in Volume 35 are a book review, conference reports on history education in African contexts, and two hands-on contributions.

As the landscape of education continues to shift, Yesterday & Today remains committed to fostering scholarship that equips South African and African history education educators, researchers, and policymakers to navigate these complexities with insight and integrity.

Prof Johan Wassermann

Editor-in-Chief

e-ISSN 2309-9003

A rationale for authentic AI integration in South African social sciences and history teacher training programmes

DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a2

Michael Stack
University of the Free State
Bloemfontein, South Africa
Orcid: https://orcid.org/0000-0002-9108-4718
StackMDL@ufs.ac.za
DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a2

Abstract

In this conceptual review paper, we discuss the need for integrating AI tools in social science and history teacher training programmes in South Africa. Despite the proliferation of an ever-growing pool of AI tools, their uptake in pre-service teacher training has been limited in South Africa's institutions of higher learning. Without clear policies regarding AI use, decisions on AI integration have often fallen to the responsibility of individual lecturers. Education students have ready access to free and paid AI tools; however, they frequently lack the skills to employ them as supporting tools. Instead, they attempt to shortcut the academic process rather than opting to enrich their learning. By default, these broad concerns within higher education are of paramount importance to didactic modules in professional teacher education degrees that prepare future social science and history teachers. This paper contends that AI integration should look beyond its use in higher education and consider preparing social science and history pre-service teachers for integrating AI into teaching and learning, as well as workplace practices. Without adopting AI integration practices, there is a very real danger of graduating teachers who are essentially untrained due to committing fraud by using AI to complete their assessments during their teacher training programme. This could have serious consequences for learners, the teacher, the schools and provincial departments that employ them as newly qualified teachers. AI tools have the potential to support and streamline tasks in the teaching workspace as well as promote teaching and learning in the classroom. As a conceptual review paper, a broad literature base on AI in education is employed that narrows its focus to social science and

history education. The primary question this paper seeks to answer is "How should AI be integrated into South African social science and history teacher training programs?" This paper found that examining and adapting to the sociocultural-digital context of students, lecturers and future learners is of paramount importance in integrating AI authentically as a tool that can support teaching and learning and decolonial approaches within social sciences and history education. This paper considers the impact of South African university policies on AI integration within social science and history student teacher didactic training. The paper ultimately recommends that South African universities should continue to establish policies and procedures that can support and guide social science and history education lecturers in integrating AI into their modules. The implication is that a hospitable environment to ethical AI integration is crucial to any social science and history education lecturer's attempts to train student teachers to ethically integrate AI as a tool.

Keywords: AI integration; history education; history teacher training; pre-service teachers; social sciences education.

Introduction and background

Despite the proliferation of research literature extolling the benefits of AI in higher education, social science and history education students in South Africa have been left to their own devices in a policy-scarce environment. Undergraduate education students are experiencing unprecedented pressures in 2025, often working while studying, difficulties accessing reliable funding and are often unable to find accommodation close to residential, face-to-face universities (Mlambo & Mpanza, 2024). Without supportive policy frameworks, social science and history lecturers are presented with unmitigated risk in their attempts to navigate AI integration in their modules. The primary pedagogical concern is that final year students have not developed their academic literacy any further since 2022. The implication is that final year social science and history students have been using (or misusing) AI since the first year. Therefore, any student depending on AI to replace them for assessment has only the skills bequeathed to them by the primary and secondary schooling.

The concern is that these 'graduates' with essentially plastic degrees will then teach social sciences and history through the intermediate, senior and FET phases, with calamitous consequences for social sciences and history in those phases (Roe et al., 2025). Furthermore, their product will enter the tertiary system within several years from the FET phase, while more 'plastic' newly qualified teachers (NQTs) join the in-service teacher

cohort. We have already sent three years of BEd and PGCE social science and history teachers into the field. 2026 will be the first year when NQTs will have had access to AI for the duration of their entire BEd programme.

Higher education institutions (HEI) have been caught largely unprepared by the sudden and unprecedented proliferation of generative AI (GenAI) from 2022. Their response to AI has been neither cohesive nor timely. While COVID necessitated digitisation within the higher education sector due to online learning and social distancing, AI has not received a similar sense of urgency. Awareness of AI has spread among staff slowly, compounded by academics who fall into the digital immigrant and refugee categories. Even digital natives find themselves immigrants within AI in education.[1] While AI has perhaps been a rude and recent awakening for those in the academic space, AI has been with us since the 1950s. AI originated from the Dartmouth workshop in 1956 (Doruodi, 2022). Intelligent-based tutoring systems and computer-based learning environments were conceived in the mid-1960s. Education has been entwined with AI since its inception and has undergone various phases of development and progression. GenAI is simply the latest waypoint of that journey.

AI in Education (AIED) has the potential to positively impact three main areas in higher education, namely the student, the lecturer and the administrator (Holmes & Tuomi, 2022). Of note are the possibilities of scaffolding learning for students and implementing tutoring support in more sophisticated ways than earlier models. AIED has the potential to personalise learning in ways that would usually be impossible in large lecture groups. AI also presents opportunities for innovation in both assessment and teaching strategies (Rudolph, Tan (Samson) et al., 2023). AI can reduce the research workload by assisting with planning, conducting and presenting research (Rudolph, Tan (Shannon) et al., 2023). It can also serve as a catalyst for the decolonial project at South African HEIs in terms of multilingualism.

The use of AI in assessment has presented some challenges. Concerns have been raised regarding academic integrity as well as the degree to which GenAI produces falsified information. Assessing students has become problematic as AI has been used in a variety of ways to write assessments. AI can be used to evaluate student assessments, however,

[1] Digital natives who are born during the advent of digital technologies and find it easy to adapt to digital technology. Digital immigrants were born before the digital age, but have been able to adapt to the various advances of digital technology. Digital refugees are those who have had their lives disrupted by digital technology and find it extremely challenging to adapt advances in digital technology.

there may be less obvious biases due to the nature of the data sets that the AI tool may have been trained with. Pervasive AI use by students may cast doubt on whether they meet the graduate competencies or attributes outlined in modules (De Villiers-Botha, 2024). Integrating AI in higher education modules could have a positive impact on students' employability in the workplace. University AI policies, or lack thereof, further compound these challenges. As of May 2023, 26.3 per cent of the top 500 universities had AI policies, while 32.6 per cent had banned ChatGPT and AI outright (Xiao et al., 2023). This is indicative of a slow response globally to integrate AI in education that is hardly unique to South Africa, despite the clear potential of AI and evidence of its benefits (Hutson et al., 2022). Calls for the integration of AI in education have adopted an augmentative position where AI is used to enhance teaching and learning. This would necessitate a training focus for both students and lecturers.

The misuse of AI has significant pedagogical implications for social sciences and history teacher training. Content training is either completed prior to, or during didactic training, depending on the faculty. Without a policy on AI in education, any online assessment is conceivably vulnerable to AI misuse and academic misconduct. In terms of history or geography content, in the case of extensive AI misuse, the content level of the student remains the same as when they joined the university after matric. Therefore, any newly qualified social sciences and history teachers from a university with a poor policy environment are less likely to have any university-level content knowledge. The same holds true for didactics training. The aim is to equip pre-service social sciences and history students with the professional skills that they will practice throughout their careers. If a poor policy environment exists in conjunction with a lack of attendance policies, poor attendance stemming from AI misuse will result in only a portion of students being trained in various professional skills. Assessment would also not be a true reflection or measurement of achievement and module outcomes would not be met by most students. These issues are, however, not limited to subject specialist didactic modules, they impact teacher training programmes in their entirety. Even teaching practice may not fully serve its purpose. Without AI screening, there would be no indication that students can prepare lessons and their support materials independently of AI.

This review seeks to demonstrate the urgency and seriousness of the research problem and propose several paths that future research should take to address it. The proposed paths will go beyond mere policing of AI and move toward creating an ecosystem that promotes ethical and authentic use of AI in teacher training modules for social sciences and history

pre-service teachers. A salient theme of this paper is the impact of AI on the decolonial project at South African HEIs. This study is limited to pursuing research paths for social sciences and history teacher training. Despite a real and growing need, proposing research interventions for in-service social science and history teachers who lack various skills expected in the profession, is beyond the scope of this conceptual review paper.

Research design and methodology

Purpose and justification

The chief purpose of this conceptual review paper is to establish a robust rationale for authentic AI integration in social sciences and history teacher training programmes through various research pathways. As such, pertinent literature will be reviewed with the aim of delineating an appropriate gap in research and buttressing the salient arguments of this paper. While this paper focuses specifically on social sciences and history didactics modules, the paths for future research could inspire similar projects in future AI research in a range of school subject didactics modules within the South African HEI context. Pivotal to this rationale, will be a frank assessment of the impact of environmental factors on AI in higher education and its impact on social sciences and history teacher training modules.

There is a lack of published data on the AI habits specific to social science and history pre-service teachers. General studies also tend to focus on interviews and surveys, rather than examining assessments. This limits the effectiveness of departmental and lecturer responses towards AI. Data limitations impact on the design of AI policies. The research emanating from this paper may allow policymakers to consider the impact of policy at the module level. Currently, the lack of AI policies, except for UCT, has created a vacuum, where policy is devolved to HODs and individual lecturers. South African HEIs have been slow to adopt AI policies, opting for guidelines or position statements where several HEIs are still in the process of drafting them. This conceptual review paper is a necessary step toward research projects that seek to further AI integration in social sciences and history education modules.

Problem statement

AI integration in social science and history didactic modules is neither authentic nor cohesive. This stems largely from students misusing AI and not perceiving AI as a tool within an environment, lacking policies that mandate ethical use and integration of AI. As a result,

there is a tangible risk of pre-service teachers not meeting their graduate competencies and attributes through flawed assessment practices and teaching strategies. This should be of grave concern to the teaching profession as NQTs may have a qualification and South African Council for Educators registration, yet possess few of the requisite skills to perform their duties. A lack of AI integration in teacher training programmes would also negatively impact pre-service teachers' preparedness for authentic AI integration in a school setting and the classroom.

Methodology

This is a conceptual review paper that will make an argument for research that will further authentic AI integration applications in social science and history teacher training. This theory will guide the discussion and the aim of the future research that this conceptual review paper aims to motivate. The research will use a qualitative approach to engage with research literature and allow for a more thematic analysis. Themes were derived from components of the environment that are considered high impact in terms of enabling or disabling the advent of more authentic AI integration in social science and history teacher training programmes. Sources that were considered pivotal to those themes were essentially analysed on that thematic basis and how they contributed to the theme. The lack of research literature specific to AIED in social sciences and history education has necessitated the focus of the review on AI in education more broadly in South African higher education before discussing various themes at the level of social sciences and history teacher training programmes.

Vygotsky's (1978) theories on the use of tools and reading of the Zone of Proximal Development (ZPD) in relation to the use of tools is the theoretical lens by which this paper considers the research problem and engages with research literature in the discussion and findings. According to Vygotsky (1978), children's use of tools is a crucial aspect of their development. By extension, the same could be said regarding university students. In the case of children, using tools often begins with imitating adults. It would follow that the social sciences and history lecturers would then need to demonstrate ethical AI integration before expecting students to do the same. Vygotsky (1978:55) writes, "the tool's function is to serve as the conductor of human influence on the object of activity". The tool is seen as an externally orientated instrument in the way it leads to change on the object (Vygotsky, 1978). This is crucial for understanding how AI is a tool that is designed to assist humans with a specific task. The author adds that "if one changes the tools of thinking available

to a child, his mind will have a radically different structure" (Vygotsky, 1978:126). The ready availability of AI for undergraduate social sciences and history education students and its impact on them is hardly quantified in research literature. Vygotsky (1978:127) stated "Like words, tools and non-verbal signs provide learners with ways to become more efficient in their adaptive and problem-solving efforts." AI certainly allows students to give the superficial impression that they are advanced in this regard. However, misusing AI beyond its design as a tool is detrimental to the development of students in terms of academic skills.

The ZPD is an area of learning where children can learn with some assistance from a teacher or peers. It is the gap between what they can do unaided and what they are not able to do without help (Vygotsky, 1978). The effect of AI misuse on AI development is evident from a close reading of how tools interact with the ZPD. Tools serve a similar purpose in assisting learners in the ZPD, where teachers would also provide scaffolding and assistance. Misuse of AI brings an assessment task into the easiest section of the ZPD, where little effort is required on the part of the student. Therefore, according to how the ZPD functions, no further development can take place while a student remains in the first phase, as all the tasks are reduced to the easiest category. Assessment also loses its value as a tool of measurement in terms of outcomes, "only the independent activity of children, not their imitative activity, indicates their level of mental development" (Vygotsky, 1978:88). An important consideration is the design of AI tools. According to Leont'ev (1978:47), "a tool is a material object in which are crystallised methods and operations and not goals". For example, a wood saw is designed for cutting wood and used by a man who must saw wood. For all the hype around AI, they are tools and misusing them as a substitute for academic effort in assessment keeps students from developing academic skills, as well as any module outcomes. The strength of AI is in its use to assist and enhance within the actual ZPD, in conjunction with lectures and tutors.

This paper will use a pivotal strategy in selecting research literature that has a significant impact on the various themes under discussion. The focus of the discussion is on making a case for future research pathways that will promote a more ethical and authentic engagement with AI integration in social sciences and history education modules. The study uses the following inclusion criteria: peer-reviewed journal articles published between 2022 and 2025. The articles should constitute South African research written in English. A variety of search commands designed around AI in education and teacher training programmes in South Africa will be used. The exclusion criteria are as follows: No non-journal articles

will be used except for relevant chapters; no non-English articles will be used; papers that do not focus on AI in higher education and universities in South Africa will not be used; only articles in a PDF format will be used; other media, such as video, will not be used. The review will make use of Google Scholar, Google and Research Gate as information sources. These criteria will support the screening of journal articles. Due to a scarcity of specific research literature on AI integration in social sciences and history education in South Africa, the literature survey will focus on AI in higher education in South Africa.

The findings and discussion will explore AI integration in social science and history teacher training and the role that research could play in promoting the use of AI as a tool in line with its role in terms of the ZPD. The intention of this paper is to make a well-supported recommendation for future research on AI integration in this specific area. The narrow focus of the conceptual review papers has several limitations to consider. As this conceptual review paper used a pivotal strategy in selecting papers and screened papers mainly due to geographical criteria, it can hardly purport to be an exhaustive review of AI integration in higher education within or outside South Africa. The scope of the review is to make arguments for future research that is focused on promoting ethical and authentic AI integration in social sciences and history teacher training programmes in South Africa. Therefore, it does not purport to make similar arguments for the whole of the higher education sector in terms of teaching and learning. Possible inference to other modules is purely incidental, though it may be considered of interest given the pervasiveness of AI use and misuse at South African universities.

Literature survey

COVID-19 Pandemic

The COVID pandemic precipitated the shift of South African HEIs to digitisation. This period demonstrated the possibility of changing education systems and practices rapidly. (Mhlanga et al., 2022). It has also resulted in the establishment of digital infrastructure and moderately digitally competent staff with ongoing professional development (Moloi & Salawu, 2022).

Potential of AI in South African higher institutions of education

The provision of digital infrastructure and improvement of digital literacies have created a platform for the integration of AI in higher education. From the outset, the recent advances

in AI have resulted in calls for curriculum reform, particularly in digitalising course offerings with online learning (Wessels & Wyk, 2022). Integration of AI and digitalisation of university degrees would prepare students for the twenty-first-century workplace (Nhleko & Westhuizen, 2022). AI also presents the possibility for personalised virtual tutors. AI can provide feedback on the assessment (Wessels & Wyk, 2022). AI's potential regarding university support services and the enhancement of teaching and learning are recurring themes in South African research on AI in HEIs (Van Wyk, 2022). AI may be helpful in proofreading at South African HEIs, saving time and reducing the financial burden on academic staff (Tarisayi, 2024).

Risks of AI in HEI

Despite its potential, AI presents many risks to HEIs. De Villiers-Botha (2024) has raised a series of ethical risks that can only be fully mitigated by AI policies. These are as follows: Unfairness; privacy violations; misinformation; lack of transparency and threats to autonomy. Of particular importance to the South African context is the impact of the digital divide on the use of AI in education. Students facing socio-economic challenges find it more difficult to access digital technology and improve their digital literacy levels. This, in turn, impacts access to AI and AI literacy (De Villiers-Botha, 2024). Despite the evident potential for AI in Education, there is also considerable scope for risks in Higher Education. Like any tool, AI can be both beneficial and harmful. The most pertinent ethical risk for social science and history education is in terms of autonomy. According to De Villiers-Botha (2024:176), "Students may fail to acquire important skills if they become too reliant on LLM-based and/or other AI systems." Scholars who are familiar with the South African context may go a step further and suggest that the level of risk is high, as many students entering the university system arrive with low levels of literacy, academic literacy, as well as socio-economic challenges that severely impact the digital divide. The marketing and hype around using AI could easily persuade such students to misuse AI in order to contend well with the university environment and assessment. This points to where ethical and unethical use of AI leads to considerable benefits or severe damage to the development of academic skills, with a vastly diminishing middle ground.

Challenges in integrating AI in South African HEIs

The challenges experienced when integrating AI at HEIs only serve to compound ethical risks. Teaching and learning at South African HEIs are faced with integrating a student body mainly comprised of millennials and post-millennials, with academic staff primarily

consisting of baby boomers and Generation X (Wessels & Wyk, 2022). These students generally demand greater flexibility and delivery modes that allow ready access to education (Wessels & Wyk, 2022). While AI has the potential to improve teaching and learning, it can also be used by students as a shortcut for completing academic assessments. Traditional plagiarism software is unable to detect AI use (Makeleni et al., 2023), which makes it difficult to detect cases of academic dishonesty. However, Turnitin has introduced an AI detection tool that can assist lecturers. Concerns have been raised regarding the limited language options of AI tools and the limited data sets trained on English data rather than African languages. (Makeleni et al., 2023).

While AI could be used to manage the workload of staff effectively, it may also promote laziness and encourage an overreliance on AI that may limit the ability of staff to do tasks manually (Makeleni, 2023). However, the prevailing challenge is contextual; the show of Apartheid creates severe socio-economic divides that exacerbate the digital divide, which in turn impacts the AI divide among the student body.

Fourth Industrial Revolution and the impact of the digital divide in South Africa

The digital divide in South Africa has resulted in an uneven distribution and access to GenAI. Some research has opted to contextualise AIED within the Fourth Industrial Revolution (4IR). While the 4IR is being adopted at the administrative and management level, its adoption in teaching and learning has been slower due to a variety of 1st and 2nd order barriers. Namely, lecturers' varying perceptions of the 4IR and the availability of infrastructure (Lubinga et al., 2023). However, efforts at South African HEIs to align with the 4IR are obfuscated by inequality. The realities of the prevailing socio-economic context of students have implications for AI integration and are set to further widen the digital divide. South Africa has not fully achieved the Third Industrial Revolution (3IR) in terms of ICT and internet access. The gains of the Second Industrial Revolution (2IR) are also brought into question due to load shedding and a lack of provision of electricity in some rural areas (Hlatshwayo, 2022). The legacy of Apartheid and post-Apartheid government policies has bequeathed a fragmented context whereby different parts of South Africa have asynchronous development in terms of IR 2, 3 and 4. This, in turn, fragments the student body in how it is able to access and engage with AI during their studies. One cannot assume homogeneous literacy, academic literacy, ICT literacy, or even AI literacy in any undergraduate cohort. This fragmentation speaks to the need for more differentiated approaches required for equitable access to AI in education (Faloye & Ajayi, 2021).

GenAI and ChatGPT

Equitable accessibility to GenAI would support leveraging its potential across the university. Sevnarayan's (2024) study has made a crucial contribution to this corpus by investigating the experiences of both lecturers and students from a distance learning and E-learning university. Sevnarayan (2024) considers the relationship between the perceptions of staff and students using ChatGPT with various challenges experienced during its use. While some lecturers perceived GenAI as an obstacle for students in the development of their academic voice, others saw the potential for developing critical thinking and research skills. It was clear from student interviews on assessment that they held concerns regarding laziness and saw AI as a collection of support tools that would help navigate academic pressure. Realising the potential of AIED will require collaboration between students, lecturers and administrators. It is evident that lecturers must upskill in the face of AI or risk becoming obsolete (Sevnaraya & Potter, 2024). Singh (2023) followed a similar line of research, interviewing South African professors in senior management positions. Through ChatGPT, Singh (2023) established that assessment design flaws were more of an issue than plagiarism. Questions were raised about the fairness of academic literacy expectations, given the limited nature of assessment feedback in large lecture groups. Generative AI was seen as a useful academic literacy tool for students who did not speak English as a first language (Singh, 2023). Research on how ChatGPT was used by postgraduate students showed that students used it to refine research topics, paraphrase and improve academic writing and grammar (Chauke et al., 2024). Bosch et al. (2023) found that undergraduate students use of AI primarily involved supporting and enhancing academic writing.

There is a continual tension between the advantages and challenges that AI can present. ChatGPT performs well enough on online traditional assessments that academic dishonesty and cheating can bypass learning. This is the counterweight to the perceived benefits of GenAI in providing an interactive search engine that can save time and promote critical thinking skills (Naidu & Sevnarayan, 2023). This may necessitate a return to invigilated and oral exams, as advanced proctoring and AI detection software are not entirely foolproof (Naidu & Sevnarayan, 2023). It was contended that ChatGPT had greater potential for integration in teaching and assessment practices. It could, for example, assist lecturers in marking and feedback (Naidu & Sevnarayan, 2023). However, these studies relied on surveys and interviews and did not triangulate data with evidence of student assessment. Cox et al. (2024) demonstrated the efficacy of using GenAI to develop open-access learning resources for medical students.

South African review papers

South African research is not limited to empirical studies. There is a growing body of literature reviews on AI in higher education in South Africa. They have been predominantly systematic literature reviews focusing on a narrow year range of papers. Some have been more general reviews, such as Khoalenyane and Ajani (2024) and Funda and Piderit (2024). In comparison, Funda and Mbangeleli (2024) focused their review on how AI could be used to overcome various challenges faced by South African HEIs. This theme was partially shared by another systematic review that considered both the potential benefits of AI against its various challenges at South African HEIs (Ajani et al., 2024). This paper made a more global review and was not limited to South African peer-reviewed journal articles. One paper specifically focused on the integration of AI at South African universities, however, took a general focus rather than narrowing the lens on individual disciplines or faculties (Mogoale et al., 2025). Mogale et al. (2025) concluded that training and ethical standards were crucial in order to integrate AI in teaching and learning in higher education in South Africa.

AI Policy in South Africa at the national and university level

South Africa's national policy guidelines and legal framework, or lack thereof

The policy environment at South African universities functions in the context of national AI policy and law in South Africa. There is currently no legal framework in South Africa that can allow for the protection of rights regarding the use of AI in any part of South Africa (Brand, 2022). However, as of August 2024, a national policy framework was designed to lay a guiding framework for a future National AI Policy (Department of Communications and Digital Technologies, 2024). This position is not unlike that of the North-West University referred to below. There is no legal requirement or national imperative that requires South African universities to develop their own AI policies (Brand, 2022). This lack of legislation presents a significant challenge to senior management when considering the need for policy, against a legal landscape that is hardly supportive of the process. However, there have been several papers proposing approaches to drafting a future national regulatory framework. Mtuze and Morige (2024) point to the urgent need for legislation to be developed sooner rather than later. The crux of these authors' proposal lies in an imperative to align this legislation with the Constitution of South Africa. This means that both the university and

the lecturer concerned are open to liability in any case of AI misconduct on the part of the student. Even if the university or lecturer could prove beyond a reasonable doubt that a student used AI unethically, without a law or university policy in place, it would be unclear how a judge would rule in such cases.

AI Policies, Position Statements, Policy Frameworks and Guidelines at South African Higher Institutions

Without national legislation in place, public universities in South Africa have no legal imperative to create AI policies. While this paper is not intended to be an exhaustive review of AI policy in South African HEIs, these polices, or lack thereof, form an integral part of the ecosystem that social science and history education lecturers and students must operate in. The University of Cape Town (UCT) is the only university at the time of writing that has published binding AI policy components as part of its August 2024 Digital and Online Education Policy (UCT, 2024). UCT have taken significant steps towards creating an environment that is both hospitable to ethical AI use among staff and students, while creating a more inhospitable environment for the unethical use of AI with various academic misconduct safeguards. Stellenbosch University (SU) relies on a different framework that is based primarily on a senate ratified position statement on the use of AI in academic activities. It is unclear how binding this policy would be in practice when faced with cases of AI academic misconduct. That said, the statement refers to AIgerism and links the statement to pre-existing plagiarism policies (SU, 2024). The University of Johannesburg (UJ) has no AI policy and relies on a series of guidelines (UJ, 2023). North-West University (NWU) also has AI guidelines, but has published a policy framework that is aimed at developing a concrete AI policy in the foreseeable future (NWU, 2024). The University of the Free State (UFS) has no published guidelines. However, UFS are in the process of drafting such guidelines, four years after the fact. This lack of regulatory structure is indicative of an environment where unethical AI usage can thrive unchecked. Thus, the risk of unethical AI is unmitigated; neither students nor staff have a framework to guide the use or integration of AI in academic pursuits. Perhaps such universities without any AI framework should make the sagacious decision to formulate and adopt policies and principles for AI in higher education. Until then, research recommended by this paper may remain unpracticable in environments unsuited to unethical AI integration.

Therefore, aside from UCT, no university in South Africa, to date, has a legal standing to manage staff or student use of AI. Without formal policies, students could argue that

they were not aware that AI usage could constitute plagiarism. A policy review would allow for fair notice of what constitutes plagiarism in the context of AI (Tarisayi, 2025). While current university AI guidelines refer to older plagiarism policies, legal ramifications could ensue from attempts to penalise students for AI usage. Chauke et al. (2024) recommend designing innovative AI policies at HEIs that are cognisant of the complexities of AI use beyond copying from generative AI. While Turnitin may highlight a body text lifted directly from ChatGPT as well as text paraphrased from a student's original work, AI-enhanced writing should be distinguished from blatant plagiarism (Chauke et al., 2024).

AI and ethics at South African HEIs

An important aspect of AI policy in South African HEIs is their alignment with ethics in AI. According to Goffi (2023), international codes on AI ethics are based on Western perspectives and philosophy. These Global North codes of AI ethics are seen by scholars of the Global South as inherently supportive of Western vested interests (Goffi, 2023:15). According to Goffi (2023:15) "Western concerns are presented as universal". This runs the risk of African concerns and interests being largely ignored in favour of Western ones. GenAI has been trained on datasets that largely perpetuate the Western bias in responses. Ayandibu (2024) posits that HEIs should "continuously evolve an ethical and policy support framework" for AI in education. This is a laudable argument. However, HEI's decision-making processes are lengthy and cumbersome, which has led to a preference for guidelines that are easier to evolve and update as needed in HEIs

The principles that De Villiers-Botha (2024) outlines could also assist in formulating and framing policy, as principles are likely to evolve far more slowly than specific regulations, and could create a framework where only aspects of an AI policy would need to be updated. Briefly, the principles are as follows: Beneficence or the good or benefits that would stem from AI. Non-Maleficence: AI would not cause harm. Also impacting autonomy and rights enshrined in law. Justice and fairness, which would consider fair access as well as inclusivity, explainability and transparency and a form of due process before incorporating AI systems into teaching and learning, for example (De Villiers-Botha, 2024).

Decolonising education at South African HEIs

Integrating AI in South African HEIs without a policy framework may impact the decolonial project negatively, rather than using AI as a catalyst. Historically, the colonisers of Africa have used education to manage and control the colonised (Du Plessis, 2021). According to

Fatar (2018), decolonising education means the complete integration of all of humanity's varied knowledge systems into the curriculum at the tertiary level. However, while the curriculum has often been the focus of decolonial theory (Ajani & Gamede, 2021), there are myriad aspects that are crucial to the ongoing decolonisation process in higher education in South Africa. For example, how we teach and assess, as well as the continued dominance of English, a colonial language, as the medium of instruction at South African universities. The cost of multilingual education before the recent advances in AI in 2022 was considerable. It is challenges like this that create a degree of friction that impedes the decolonisation policies that South African universities have in place.

Despite such challenges, AI could help realise the multilingual aspect of the decolonial project at South African universities. A promising, if cautious, study explored the potential for AI and machine translation to convert English study materials into Sintu languages (Senekal & Brokensha, 2023). While translation would assist multilingualism in degree offerings, AI tools could realise this potential in a more ambitious manner. For example, AI could be used to provide mother tongue virtual tutor support, as well as an academic literacy development tutor that could explain academic writing in a mother tongue. Assessment could be translated into the Sintu languages, as well as articles and PowerPoint presentations. Lectures could be recorded, transcribed and translated using AI. However, with the potential to assist in decolonisation, comes various risks that could potentially derail efforts to decolonise South African HEIs.

The first issue that could negatively impact the decolonial project is that AI tools are generally designed in the Global North, regardless of contenders from other regions. With this comes Western bias problems stemming from more Western-centric training data (Goffi, 2023). AI does not yet include all knowledge systems in the way decolonial theorists espouse for higher education in South Africa. While the potential for cheaper translation exists, if students are not trained, they may assume that AI can only function in English. An English that is quite American, where British English is of more use to a South African university student. That assumption may lead to very few attempts to engage AI in mother tongues. While ChatGPT can potentially converse in most of South Africa's official languages, many other AI apps are not able to do this. Furthermore, if South African students lose their autonomy due to misuse and overreliance on AI, this could be considered a second colonisation of the mind that takes place during the decolonisation process. The result would be graduates who are not fit for purpose and would echo colonial and Apartheid efforts to provide substandard education to South African students of

colour.

This literature review has considered the issue of AI integration through research on AI in higher education under the proviso that there is a critical shortage of AIED literature that specifically focuses on social sciences and history education. The discussion that follows explores and argues for the next steps that could be taken in research to promote and facilitate a more authentic integration of AI in social sciences and history teacher training programmes.

Findings and discussion

Social sciences and history teacher training programmes in relation to AI policy environments

The primary challenge to authentic AI integration is the current state of the AI policy environment in South African HEIs. There is considerable variance among AI policy, guides, position statements, frameworks, or anything but a library guide in the sample of South Africa's universities. It follows that it would be crucial to investigate the present impact of these varied environments on how social sciences and history education lecturers are currently navigating the issue of AI integration in their modules. It is not enough to make assumptions in this regard based on UCT's more comprehensive Digital and Online Policy that includes AI (UCT, 2024), or UFS's lack of any kind of document beyond a library guide. Understanding the impact of each of these environments could help motivate the development of more comprehensive policies that could help create a more hospitable environment for the ethical use of AI in such teacher training programmes.

Tool theory, according to Vygotsky (1978), should be considered in relation to the relationship between the environment and the child. However, it is extended to the student and staff member in this case. Perhaps such research could assist policymakers at the universities lagging behind UCT. Certainly, the risk of no AI policy seems quite clear. It could lead to the collapse of the integrity and professional purpose of social sciences and history teacher training programmes. That said, when policy is devolved to heads of schools, heads of departments, module co-ordinators and lecturers, this can lead to significant variations in how AI is integrated within a group of social sciences and history modules and across universities. A policy structure that encourages students to use AI as tools, applied to their actual ZPD when pursuing academic assessment and studies, would be ideal. A policy would support the development of academic literacy and professional teaching skills as intended by the social sciences and history didactic modules.

Social sciences and history staff and student context, perception and use of AI

Context presents serious challenges to AI integration and shapes the perception and use of AI. Intervention research can hardly take place unless the context of staff and students is mapped out sufficiently in relation to their perception and use of AI. South African universities are called to rectify structural inequality in South Africa in the shadow of Apartheid. Therefore, the context of social sciences and history students must be investigated and include an assessment of their basic literacy, academic literacy, digital literacy and AI literacy. How students perceive AI is crucial to understanding how they use it. Perhaps the perceived rampant misuse of AI by students is due to the perception that AI can replace the human student in assessment. Without solid data, this line of argument is mere conjecture. Though with conclusions based on data, they would guide an AI integration strategy by social sciences and history educators. The risk is evident; should students not perceive AI as a tool and apply it to shortcut the academic process, Vygotsky (1978) is quite evident in terms of the consequences; students will not develop as the academic tasks have all been brought into the easier sector of the ZPD, which requires no effort.

AI optimists in AI research often neglect to consider the context of the student body. COVID-19 has demonstrated the glaring inequalities within South African society and HEIs (Hlatshwayo, 2022). Research that investigates the complexities of the South African teaching and learning context and its impact on AI integration will be a crucial initial stage. Within a lecture group, there could be varying degrees of academic, digital and AI literacy. Research that investigates the digital context of students would assist in the appropriate differentiation of learning. The digital literacy of academic staff must be mapped so that professional development can be conducted and differentiated according to the individual needs of lecturers. Specific training for HODs could also be considered so that they could guide attempts by social sciences and history education lecturers in their attempts to integrate AI in their modules.

While research has outlined the generational gap between academic staff and students, and also implied a homogenous staff body of baby boomers (Wessels & Van Wyk, 2022), this is hardly the case. Academic cohorts have a mix of baby boomers and Generation X, as well as a growing number of millennials joining academia. These comparatively younger staff could form the backbone of initiatives to reform teacher training programmes and assist in developing the AI (and digital) literacy of their more senior colleagues. "Preparing Pre-Service Teachers for Teaching in the Digital Age" constitutes one of the few studies to focus on teacher training in South African research (Arek-Bawa & Reddy, 2024).

However, it also makes use of surveys as research instruments. Nonetheless, it makes a valuable contribution to illuminating the student experience of AI and digital integration at South African universities. It also demonstrates that Technological Pedagogical Content Knowledge can be readily transferred from ICT integration studies to those that focus more on AI integration (Arek-Bawa & Reddy, 2024). Assessment analysis could be used with other data instruments to provide rich data and allow for triangulation.

Research pathways that aim at making an ecosystem that supports authentic and ethical AI integration in social sciences and history teacher training

Investigating current assessment design in order to construct assessments that are resistant to the unethical use of AI

Without a formal AI policy, assessment management currently occupies a grey area. Although Turnitin can release a plagiarism score to students, AI scores can only be viewed by the assessor. Students regularly seek guidance on the use of AI in assessment, with concerns about plagiarism. While the AI detector presents a score, there are no guidelines or training for lecturers on how to interpret the score. Even once AI usage has been identified, there is no formal policy on what measures should be taken. Essentially, junior academic staff are in a situation where they need to invent and improvise policy haphazardly from day to day. This constitutes a high-risk environment if students opt to litigate and challenge decisions made by lecturers on assessment. As there are no directives regarding AI integration, each lecturer is left to manage the tension between policing and integrating AI in their modules. This situation will likely continue until AI policies are put in place.

Despite a growing body of international research on the application of AI in teacher training (Wu, 2023), this is comparatively understudied within the South African context. General studies on AI in higher education have primarily used interviews and surveys (Naidu & Sevnarayan, 2023; Singh, 2023; Chauke et al, 2024; Sevnarayan & Potter, 2024), and there is scope for studies that incorporate assessment analysis as a form of data analysis to provide a clearer picture of students' AI use. This would allow the experiences of social sciences and history education staff and students to be documented fully and inform research on designing assessment that encourages ethical use of AI and makes it challenging to successfully misuse AI. This would, in effect, be investigating how to create guardrails in the assessment that mandates students engage with the assessment authentically in a way that allows their academic effort to fall within their ZPD. Perhaps social science and history

education assessment should be evaluated as a 4-year program, ensuring that assessments fall within the general ZPD of each year group (Vygotsky, 1978).

Exploring the current module design for AI vulnerabilities to recommend solutions to design flaws

While recent developments in AI detection can assist lecturers in screening assessments for academic dishonesty, one study indicated that Turnitin picks up a variety of AI tools, including instances that do not constitute academic misconduct (Chauke et al., 2024). Unreliable AI detection will necessitate interviewing students if their assessments are analysed as part of a research project. As it stands, Turnitin will flag AI paraphrasing of students' own work in the same way as text that has been copied directly from GenAI. A considerable section of South African research has focused on ChatGPT, while the availability of diverse AI tools is rapidly growing. Research on AI integration in teacher training should consider a broader variety of tools that students could be trained on for use in the classroom. An essential component of a social science and history didactics module design should be strong policing elements in terms of unethical use of AI. Given the limitations of a Turnitin report, research into best practices stemming from investigations of current practices during the current AI policy climate may assist lecturers in using a set of AI misuse criteria in such cases. Effective policing, however, is only one part of effective module design. Investigating how guardrails that promote engagement with students' ZPD in coordination with similar guardrails in assessment would assist in developing a successful ecosystem.

Investigating how to promote the AI literacy of social sciences and history education students

Student literacy in AI is advocated from a position of augmentation and enhancement (Eager & Brunton, 2023), supported by Vygotsky's tool theory (Vygotsky, 1978). AI training for classroom use should take a similar approach. For example, GenAI could be used to brainstorm lesson plans rather than directly copying them verbatim (Van den Berg & Du Plessis, 2023). GenAI could also assist in writing reports, designing tests and rubrics and automating grading and feedback (Trust et al., 2023). They could provide guidance on teaching strategies and allow teacher-student and teacher-parent communication in multiple languages. Teacher training modules could be designed as a vehicle to train students to enhance their own pedagogy rather than relying on AI as a way to shortcut various pedagogical processes. Essentially, students could be trained on exactly how to employ AI

as a tool, according to Vygotsky (1978). Assessment, planning and teaching approaches are typical units in didactic social science and history modules. They would, therefore, be focal points in curriculum reform. The recommended research on the various forms of literacy referred to above would be essential if a more differentiated and personalised approach to promoting AI literacy is to be adopted in social science and history education modules.

The use of student context to design AI tutors for social sciences and history education modules

Research on AI tutors must draw from the research recommended to investigate the social sciences and history education students' context and varied literacies. A well-designed AI tutor has many potential benefits, however, it is not without risks (De Villiers-Botha, 2024). It can tutor in any of South Africa's eleven official languages, except for sign language. Therefore, by default, it could be a potent tool of decolonisation. Promoting multilingual accessibility is an important aspect of remedying the colonial and apartheid barriers that can be presented by English and Afrikaans modes of instruction (Emsely & Modiba, 2024). AI may provide an alternative to the costs of multilingual education. It can be programmed to guide and assist in assessments in line with Vygotsky's tool theory and ZPD (Vygotsky, 1978). This kind of programming could help mitigate risks from misuse and misperception. AI tutor access would be seven days a week, 24 hours a day. This is in stark contrast to the availability of live tutors and academic staff. It can also be trained on the module, as well as the social sciences and history curriculum policy statements. AI tutors generally include a name and profile picture that could be based on an inclusive historical figure from South Africa's rich, though painful, history. Realising these potentials would require design research well beyond the theorising of the current paper. The models would also need extensive field testing and continued adaptation. Such a project would suit cross-university collaboration. However, the design of AI tutors should be centred around a support role, not the replacement of human lecturers (Mhlanga, 2023).

Conclusion

It is evident from this review that South African research in social sciences and history teacher training is at a nascent stage. Given the twofold nature of AI, its potential enhancement or risk of overreliance, authentic integration of AI should be implemented with direct social sciences and history education student training in modules, guided by an AI policy. Left to their own devices, elements of the student body may make incongruent

choices. As AI integration is not currently mandatory in South African social sciences and history teacher training modules, these choices will also be reflected in their classroom practice. Instead of graduating a body of NQT social sciences and history teachers fully equipped to integrate AI and the 4IR in the classroom, there is a risk of reproducing the digital inequalities that stem from the varied contexts of the students. In turn, these graduates could reproduce those same inequalities in their classrooms. This risk should alarm theorists and proponents of decolonisation in South African HEIs. Research-led initiatives that prioritise AI integration in social sciences and history teacher training should also form part of a growing body of research that should guide the formation of AI policies at South African universities. These policies are urgently required to manage the use of AI in assessment in higher education and to assist in revising and reforming social sciences and history education modules. Authentic integration of AI in social sciences and history teacher training is dependent on support from a formal AI policy, staff professional development and further empirical research.

Limitations

This paper aimed to conduct a conceptual review of AI integration in South African higher education within social sciences and history education. Pivotal studies from 2022 to 2025 were drawn from papers that considered AI integration broadly in the South African higher education sector to develop arguments for future research paths in social sciences and history teacher training programmes. Only studies in English were included. This aspect of the inclusion criteria may have resulted in non-English studies being overlooked. The pivotal search strategy may have missed some studies that could have further enriched the findings of the conceptual review. While this paper makes recommendations for AI policy, policy was not the primary focus of this paper, and its recommendations are based on the relationship between policy and AI integration in social sciences and history education modules. The central argument of the paper focused on the integration of AI in social sciences and history education. Given its focus on social sciences and history, the findings are not necessarily generalisable to other didactics modules or other disciplines. Recommendations for future research on AI integration in modules other than social sciences and history education are beyond the scope of this paper.

Recommendations

AI will not be successfully integrated or applied in social sciences and history teacher training programmes unless a more conducive environment is fashioned. The key to transforming the academic environment is research that examines the context of AI integration in order to develop suitable interventions in teaching and learning. This context encompasses students, lecturers, administrators and the wider policy environment. social sciences and history student AI literacy cannot be improved without a nuanced awareness of students' digital cultural capital literacy and the degree to which scaffolding is required. The same is true of insisting that lecturers embrace AI without engaging the need for varying levels of professional development. The recommended research would be in a solid position to guide the development and revision of formal AI policies that could provide a suitable framework for AI integration. This paper recommends implementing mandatory professional development training for lecturers to develop their AI literacy. This could build on pre-existing programmes that develop digital literacy and proficiency in student management systems. social sciences and history education modules and degree programmes must be revised and reformed with respect to AI integration, especially regarding assessment practices. However, it is not sufficient to integrate AI with assessment and pedagogy. This paper contends that social sciences and history pre-service teacher training modules should be future-proofed and redesigned to prepare student teachers to apply AI and digital integration in the classroom. AI literacy development for education students should be translatable to school classrooms and not limited to application in higher education. Finally, this paper posits that there is an urgent need for umbrella research projects within South African Education Faculties and through joint university research partnerships. This paper recommends that future research on AI integration in social sciences and history education should consider decolonial theory as a potential theoretical framework, given the possible benefits and risks AI presents to the decolonisation of education in HEIs.

References

Ajani, OA & Gamede, BT 2021. Decolonising teacher education curriculum in South African higher education. *International Journal of Higher Education,* 10(5):121-131.

Ajani, O, Morakinyo, A, Sunday, O, A 2024. The emergence of artificial intelligence in the higher education: Prospects and challenges of AI. *International Journal of Research in Business and Social Science (2147- 4478)*, 13(8): 157–165.

Arek-Bawa, O & Reddy, S 2024. Preparing pre-service teachers for teaching in the digital age. *Athens Journal of Education,* 12(1):77-98.

Ayandibu, EO 2024. Artificial intelligence and ethical implications in South African higher education: A policy framework perspective. *International Journal of Innovative Technologies in Social Science,* 4(44):1-9.

Bosch, T, Jordaan, M, Mwaura, J, Nkoala, S, Schoon, A, Smit, A, and U, Chikezie E, and Mare, A 2023. South African University Students' Use of AI-Powered Tools for Engaged Learning, *SSRN Electronic Journal.*

Brand, D 2022. Responsible artificial intelligence in government: Development of a legal framework for South Africa. *JeDEM - eJournal of eDemocracy and Open Government,* 14(1):130-150.

Chauke, T A, Mkhize, T R, Methi, L & Dlamini, N 2024. Postgraduate students' perceptions on the benefits associated with artificial intelligence tools for academic success: The use of the ChatGPT AI tool. *Journal of Curriculum Studies Research,* 6(1):44-59.

Cox, G, Willmers, M, Brown, R & Held, M 2024. Learning along the way: A case study on a pedagogically innovative approach to engage medical students in the creation of open educational resources using ChatGPT. *Mousaion: South African Journal of Information Studies,* 42(1):1-21.

De Villiers-Botha, T 2024. Artificial intelligence in higher education in South Africa: Some ethical considerations. *Kagisano,* 15:165-188.

Department of Communications and Digital Technologies 2024. South African National Artificial Intelligence Policy Framework. DCDT, Pretoria, South Africa.

Doroudi, S 2023. The intertwined histories of artificial intelligence and education. *International Journal of Artificial Intelligence in Education,* 33:885-928.

Du Plessis, P 2021. Decolonisation of education in South Africa: Challenges to decolonise the university curriculum. *South African Journal of Higher Education.* 35(1):54-69.

Eager, B & Brunton, R 2023. Prompting higher education towards AI-augmented teaching and learning practice. *Journal of University Teaching & Learning Practice,* 20(5):1-19.

Emsley, MR & Modiba, MA 2024. Multilingualism in South African universities is a fallacy: A critical realist perspective. *African Perspectives of Research in Teaching and Learning,* 8(3):150-167.

Faloye, ST & Ajayi, N 2022. Understanding the impact of the digital divide on South African students in higher educational institutions. *African Journal of Science, Technology, Innovation and Development,* 14(7).

Fataar, A 2018. Decolonising education in South Africa: Perspectives and debates. *Educational Research for Social Change (ERSC),* 7(SPE):vi-ix.

Funda, V & Mbangeleli, N 2024. Artificial intelligence (AI) as a tool to address academic challenges in South African higher education. *International Journal of Learning, Teaching and Educational Research*, 23(11):520-537.

Funda, V & Piderit, R 2024. "A review of the application of artificial intelligence in South African Higher Education," *2024 Conference on Information Communications Technology and Society (ICTAS)*, 44-50. Durban, South Africa, 2024.

Goffi, ER 2023. "Teaching ethics applied to AI from a cultural standpoint: What African "AI Ethics" for Africa?" In CC Corrigan, SA Asakipaam, JJ Kponyo & C Luetge (eds.). *AI ethics in higher education: Insights from Africa and beyond*, pp. 13-26. SpringerBriefs in Ethics.

Hlatshwayo, M 2022. Online learning during the South African Covid-19 lockdown: University students left to their own devices. *Education As Change,* 26(1):1-23.

Holmes, W & Tuomi, I 2022. State of the art and practice in AI in education. *European Journal of Education,* 57(4):542-570.

Hutson, J, Jeevanjee, T, Graaf, V, Lively, J, Weber, J, Weir, G, Arnone, K, Carnes, G, Vosevich, K, Plate, D, Leary, M & Edele, S 2022. Artificial intelligence and the disruption of higher education: Strategies for integrations across disciplines. *Creative Education,* 13(12):3953-3980.

Khoalenyane, NB & Ajani, OA 2024. A systematic review of artificial intelligence in higher education-South Africa. *Social Sciences and Education Research Review*, 11(1):17-26. Leont'ev, AN 1978. *Activity, consciousness, and personality*. Englewood Cliffs, NJ: Prentice-Hall.

Lubinga, S, Maramura, TC & Masiya, T 2023. The Fourth Industrial Revolution adoption: Challenges in South African higher education institutions. *Journal of Culture and Values in Education,* 6(2):1-17.

Makeleni,, S, Mutongoza, B, and Linake M. 2023. Language Education and Artificial Intelligence: An Exploration of Challenges Confronting Academics in Global South Universities. *Journal of Culture and Values in Education*, 6(2):158-171.

Mhlanga, D 2023. Open AI in education, the responsible and ethical use of ChatGPT towards lifelong learning. *SSRN Electronic Journal.*

Mhlanga, D, Denhere, V & Moloi, T 2022. COVID-19 and the key digital transformation lessons for higher education institutions in South Africa. *Education Sciences,* 12(7).

Mlambo, VH & Mpanza, S 2024. Exploring the challenges of higher education in South Africa: A comprehensive literature review. *Alustath Journal for Human and Social Sciences,* 63(3):22-40.

Mogoale, PD, Pretorius, A, Mogase, RC & Segooa, MA 2025. Integrating artificial intelligence within South African higher learning institutions. *South African Journal of Information Management,* 27(1):1-9.

Moloi, T & Salawu, M 2022. Institutionalizing Technologies in South African Universities towards the Fourth Industrial Revolution. *International Journal of Emerging Technologies in Learning (iJET),* 17(3):204-227.

Mtuze, SSK & Morige, M 2024. Towards drafting artificial intelligence (AI) legislation in South Africa. *Obiter*, 45(1):161-179.

Naidu, K & Sevnarayan, K 2023. ChatGPT: An ever-increasing encroachment of artificial intelligence in online assessment in distance education. *Online Journal of Communication and Media Technologies,* 13(3), e202336.

Nhleko, Y, & Westhuizen, T, V 2022. The role of higher education institutions in introducing entrepreneurship education to meet the demands of industry 4.0. *Academy of Entrepreneurship Journal*, 28(S1), 1-23.

North-West University, 2024. *NWU-AI Framework Policy – DRAFT V2.0 23/02/2024.* North-West University, Potchefstroom, Information Technology.

Roe, J, Furze, L & Perkins, M 2025. Digital plastic: a metaphorical framework for Critical AI Literacy in the multiliteracies era. *Pedagogies: An International Journal*, 1-15.

Rudolph, J, Tan, Samson & Tan, Shannon 2023. ChatGPT: Bullshit spewer or the end of traditional assessments in higher education? *Journal of Applied Learning and Teaching*, 6(1):342-363.

Rudolph, J Tan, Shannon & Tan, Samson 2023. War of the chatbots: Bard, Bing Chat, ChatGPT, Ernie and beyond. The new AI gold rush and its impact on higher education. *Journal of Applied Learning and Teaching*, 6(1):364-389.

Senekal, B & Brokensha, S 2023. The potential of artificial intelligence (AI) for decolonising education in South Africa through the development of indigenous languages, *South African Journal of African Languages,* 4(3):208-215.

Sevnarayan, K 2024. Exploring the dynamics of ChatGPT: Students and lecturers' perspectives at an open distance e-learning university. *Journal of Pedagogical Research, 8*(2):212-226.

Sevnarayan, K & Potter, M 2024. Generative artificial intelligence in distance education: Transformations, challenges, and impact on academic integrity and student voice. *Journal of Applied Learning & Teaching*, 7:1-11.

Singh, M 2023. Maintaining the integrity of the South African university: The impact of ChatGPT on plagiarism and scholarly writing. *South African Journal of Higher Education,* 37(5):203-220.

Stellenbosch University, 2024 (November). *Ethical use of artificial intelligence in research and teaching-learning-assessment.* Stellenbosch University's Position Statement.

Tarisayt, KS 2024. ChatGPT use in universities in South Africa through a socio-technical lens. *Cogent Education,* 11(1):1-10.

Tarisayi, K S 2025. Lustre and shadows: Unveiling the gaps in South African university plagiarism policies amidst the emergence of AI-generated content. *AI and Ethics,* 5:245-251.

Trust, T, Whalen, J & Mouza, C 2023. Editorial: ChatGPT: Challenges, opportunities, and implications for teacher education. *Contemporary Issues in Technology and Teacher Education,* 23(1):1-23.

University of Cape Town, 2024. *Digital and online education policy for UCT 2024*. Cape Town.

University of Johannesburg, 2023. *UJ quick guide for students: Using generative artificial intelligence as a learning tool.* University of Johannesburg, Johannesburg.

Van Den Berg, G & Du Plessis, E 2023. ChatGPT and generative AI: Possibilities for its contribution to lesson planning, critical thinking and openness in teacher education. *Education Sciences,* 13(10):998.

Vygotsky, LS 1978. *Mind in society: The development of higher psychological processes*. Harvard University Press.

Wessels, L & Van Wyk, JA 2022. University 4.0: A conceptual model for South African universities and the fourth industrial revolution. In: E Benyera (eds.). *Africa and the Fourth Industrial Revolution. Advances in African Economic, Social and Political Development*, pp. 33-66. Springer, Cham.

Wu, Y 2023. Integrating generative AI in education: How ChatGPT brings challenges for future learning and teaching. *Journal of Advanced Research in Education,* 2(4):6-10.

Xiao, P, Chen, Y & Bao, W. 2023. Waiting, banning, and embracing: An empirical analysis of adapting policies for generative AI in higher education.

Prompting change: Reflections on third-year archaeology students use of generative AI at a distance university

DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a3

Jane Adigun
University of South Africa (UNISA)
Pretoria, South Africa
Orcid: https://orcid.org/0000-0002-6855-008X
adigujs@unisa.ac.za
DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a3

Abstract

Generative AI (GenAI) has undeniably become part of a continuum of everyday use with apps, chatbots and curated content to optimise online experiences. In higher education, AI is reshaping teaching pedagogies and holds the potential to augment learning and provide personalised learning experiences. However, an ongoing challenge is getting students to make the connection that GenAI is a tool to support learning, rather than a crutch to replace thinking processes. This paper draws on Kolb's experiential learning theory to assess personal experiences of teaching undergraduate archaeology to students in the era of GenAI. Using reflection as a method with Driscoll's three-step reflection cycle, this reflection provides insight into the pedagogical implications of over-reliance on GenAI tools. Reflection further serves as an (introspective) didactic tool for assessing teaching strategies for scaffolding responsible use of GenAI. Based on the nuanced insights, the reflection suggests that a prompt, copy and paste approach characterises student use of these tools. The pedagogical challenges for fostering the suite of critical thinking skills pertinent in archaeology and history education are also highlighted.

Keywords: Archaeology; distance learning; generative AI; over reliance on AI; structured reflection; student use of AI

Introduction

In the context of Education 4.0 and Education 5.0 frameworks, there is increasing demand for educators to harness technology to enhance teaching and learning (*Rane et al., 2024)*. Developing a suite of twenty-first century skills is a part of this and encompasses *"c*omputational thinking, technology and big data, communication and humanities, life-long learning, and creativity" (*Kuka et al., 2022:569)*. Integrated into this skillset is the AI ecosystem comprising generative artificial intelligence (GenAI), which is trained to generate content in response to a user prompt (Zewe, 2023).

Within higher education, the growing body of literature on GenAI and augmented learning highlights the potential for personalised learning (Mulaudzi & Hamilton, 2024), student feedback (Holdcroft, 2024), assessment design and practices (Khlaif et al., 2025), instructional strategies (Conrad & Hall, 2024), language learning (Creely, 2024), and curriculum design (Owoseni et al., 2024a). There are also prospects for automatic grading in African languages (Agyemang & Schlippe, 2024).

Integrating AI into higher education also shows promise for innovative student support, particularly for streamlining administrative processes for students with special education needs and disabilities (Coughlan & Iniesto, 2025). In addition, GenAI might also have potential for reducing loneliness by fulfilling social support roles (Crawford et al., 2024). Furthermore, the growth in Digital Humanities has provided new opportunities for humanistic disciplines to leverage AI to automate data extraction and enhance analysis and interpretation (Luhmann & Burghardt, 2022).

History-specific AI applications include Cor*Deep,* a web-based deep-learning model trained for extracting visual elements from corpora (Büttner et al., 2022) and *Ithaca*, which augments epigraphic analysis of texts pertinent to ancient Greek history (Assael et al., 2022). Recently, *Aeneas,* described as a generative neural network, was introduced for contextualising Latin inscriptions (Assael et al., 2025). Together, these tools serve as historical research aids for restoring damaged or missing texts to enhance interpretability (Assael et al., 2022). In addition, educational applications such as *Fabricus,* integrate gamification activities to teach learners about encoding and annotating ancient Egyptian hieroglyphics (Kelly, 2021). Furthermore, Character.ai and Hello History, allow users to interact with deceased historical figures from Charles Darwin to René Descartes and Nelson Mandela, and hold potential for fostering student engagement that brings history to life (DaCosta, 2025, cf. Hutson & Ratican, 2023). P*odcasts have additionally demonstrated*

positive outcomes for enhancing student learning beyond traditional history classrooms (Alegi, 2012).

From an archaeological perspective, engagement with digital technologies dates to the development of the earliest computers in the 1950s (Adigun et al., 2021; Bickler, 2021). Scholars at the intersection of computational archaeology began exploring the domains of artificial intelligence before the global proliferation of GenAI (Bickler, 2021; Tenzer et al., 2024). Some of the key areas of application include integrating machine learning and deep learning (including convolutional neural networks) to enhance archaeological prospecting, field research methods and remote sensing. To illustrate, *ArchAIDE* is an image recognition tool for optimising pottery analysis (Anichini, et al., 2021). *Archaeoscape* has also shown practical utility for site surveying in densely vegetated and inaccessible locations (Perron et al., 2024, cf. Gattiglia, 2025). In addition, the application of machine learning to remote sensing imaging data holds promise for optimising the detection of new sites, such as mound signatures in Pakistan's Cholistan Desert (Orengo et al., 2020). In a proof-of-concept application using early twentieth-century colonial maps, deep learning approaches demonstrate potential for automatically identifying and extracting geo-referenced data of archaeological features (Garcia-Molsosa et al., 2021). Furthermore, image recognition models trained on optical satellite data were used to identify early Iron Age Saka burial mounds of pre-Silk Road cultures in present-day Kazakhstan (Caspari & Crespo, 2019). In maritime archaeology, machine learning algorithms demonstrate utility for automating the detection and mapping of shipwrecks (Character et al., 2021). Additional applications include 3D modelling of underwater archaeological surveys and object detection (Drap et al., 2019). *Digitisation of collections has also enhanced accessibility and preservation, with suggestions that leveraging digital tools in this way promotes democratisation of access (Taylor & Gibson, 2017).*

Since OpenAI's official release of ChatGPT in 2022, the gaps in respect of what GenAI tools can do are rapidly closing. The evolving ecosystem of GenAI has spawned a host of other tools that can humanise text and automate academic literature review searches. These tools can also create a diverse range of new content across different formats including images, videos and audio (Ferrara, 2024).

However, the proliferation of GenAI is not just a higher education problem. Educators working in South Africa's basic education system are grappling with similar issues around the possibilities and risks. Key amongst this is how these tools might impact writing skills development in history classrooms (Brookbanks, 2023) and potentially erode

computational knowledge of coding and robotics teachers (Tshidi & Dewa, 2024). While some educators have shared insights for classroom strategies to mitigate excessive use (Netshiungani, 2023), others have lamented the role of AI for the expanding digital divide (Mekhoe, 2023).

Generative AI, therefore, represents challenges across the education spectrum. The expanding corpus shows that while GenAI holds promise, it represents a proverbial double-edged sword. Some scholars have called for a balanced approach to the widespread integration of AI in higher education and closer scrutiny of the challenges (Al-Zahrani, 2024). Growing ethical concerns are emerging around the role of GenAI in disseminating deepfakes (Kietzmann et al., 2020; Ferrara, 2024) and the implications for academic integrity (Cotton et al., 2023). In addition, the role of AI as a tool of "digital neocolonialism" (Zembylas, 2023: 29) that reinforces Eurocentric epistemologies is also being underscored. Furthermore, concerns have been expressed about algorithmic bias (Fui-Hoon Nah et al., 2023) and the pedagogical outcomes linked to excessive use (Zhao et al., 2024; Pitts et al., 2025).

It is within this milieu that nuanced insights from undergraduate archaeology teaching are used to reflect on the pedagogical implications of GenAI for archaeology and history education.

Positionality and reflective approach

I am a lecturer at a South African distance learning university, and since 2016, I have been teaching third-year archaeology modules at exit-level 7 on the National Qualifications Framework (NQF). In approaching this topic, my perspective on student use of GenAI is informed by the proliferation of the technology in higher education, the pervasiveness of AI in society more broadly, and institutional drivers for leveraging AI. It also includes personal observations gleaned from teaching notes on student use in third-year archaeology assessments.

Using reflection as a method, this paper explores micro-level, nuanced insights into teaching practice in the context of student use of generative AI. This methodological approach is underpinned by Kolb's experiential learning theory (Kolb, 1984). Here, learning is conceptualised as a continuous process where: "…ideas are not fixed and immutable elements of thought but are formed and re-formed through experience" (Kolb, 1984:26). My position also aligns with Moon's (2004:6) view that: "… all learning is experiential in one sense… and reflection is itself a form of learning".

The concept of reflection is widely attributed to the work of Dewey who first defined it as the: "active, persistent and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it" (Dewey, 1910:6). Since Dewey's seminal work, other scholars have expanded on the notion of reflection, however, there is no consensus definition, since it is understood and applied differently across professional contexts (Rogers, 2001; Clarà, 2015; De la Croix & Veen, 2018; Marshall, 2019). In higher education, reflective practice refers to an active, cyclical process where tacit knowledge is articulated explicitly (Mohamed et al., 2022) to demonstrate new ways of thinking and doing (Ryan, 2012). Given these variations, this paper uses a working definition proposed by Rodgers and LaBoskey (2016). Here, reflection is conceptualised as being concerned with "transforming what we are already doing, first and foremost by becoming more aware of ourselves, others, and the world within which we live" (Rodgers & LaBoskey, 2016:101). This definition is preferred, because it provides a useful lens for exploring the permutations of teaching (archaeology) in the age of GenAI.

In this paper, the reflection is guided by Driscoll's three-step reflection cycle (Driscoll, 1994, 2007), originally conceptualised by Borton (1970). The rationale for utilising Driscoll's framework is based on its simplicity and ease of use. It is commonly used as a foundational threshold for novice reflective practitioners to develop reflection skills. A strength of Driscoll's also lies in its broad application across various disciplinary and professional contexts, including higher education. Driscoll's reflective cycle was also integrated in a case study published in November 2024, which evaluated Master's students use of GenAI in an essay assessment with a reflection component (Fisher et al., 2024).

However, the versatility of Driscoll's reflection has been criticised as a potential caveat that may produce superficial reflection (Edwards, 2017). To mitigate this, the described experience will be evaluated at a deeper level by interrogating each of Driscoll's guiding questions. Still, others have cautioned against adopting an overly prescriptive approach to reflection. Notably, De la Croix and Venn (2018:395) claim that preoccupation with rigidly following steps may produce "reflective zombies" with insights that lack depth.

In this paper, a reflective approach has several perceived strengths. Firstly, it provides an opportunity to explore the discipline and context-specific pedagogical implications of AI use. It further serves as an (introspective) didactic tool for assessing teaching strategies for scaffolding responsible use, which may inform teaching praxis around AI use. The insights from the reflection could potentially contribute towards fostering communities of practice around GenAI use in archaeology and history education.

Within this ambit, the core objectives of the reflection are to:

Describe and draw on module/course-level insights of student use of AI from teaching notes and personal observations of past marked assessments.

- Reflect on current teaching practice in terms of scaffolding responsible use of AI.
- Interpret personal observations and teaching experience within broader academic conversations of AI in higher education.

Each objective is aligned with one of the steps in Driscoll's reflective cycle which asks three basic questions from a personal experience: '*What?, 'So what?*' and '*What next*?'. This is illustrated in Figure 1.

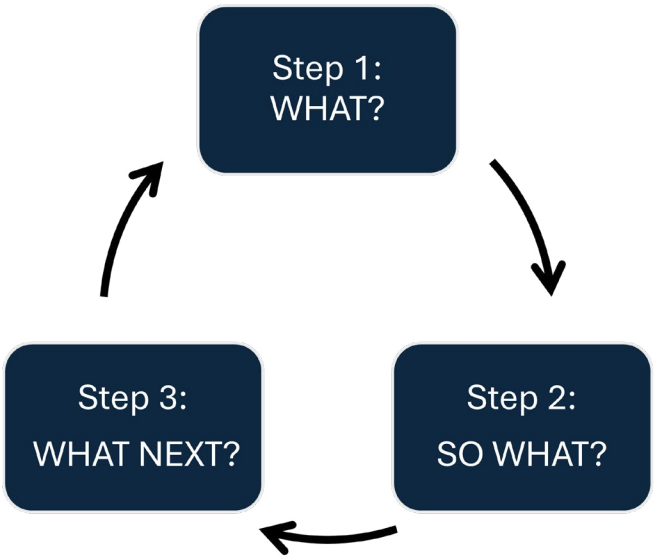


Figure 1: Three steps of Driscoll's reflection cycle
Source: Adapted from Driscoll (1994, 2007)

In this paper, the discussion is structured thematically. The first question contextualises the experience with a focus on the pervasiveness of AI in routine activities. It also prompts for a detailed description of an event, which is addressed by situating the experience within a distance learning context. By describing institutional professional development initiatives and policy gaps, context-specific personal observations of student use of GenAI

are introduced. Together, this is mapped onto the first objective and is presented as Theme 1. Question two, '*So what?*', requires analysis and interpretation. Here, the observations are framed around the pedagogical issue of over-reliance. This responds to the second objective presented under Theme 2. The final element in Driscoll's reflective cycle, '*What next?*', aligns with the third objective. In this step, the broader implications of the experience are assessed along with potential action plans, which are presented under Theme 3.

Theme 1: What?

Artificial intelligence in everyday life

Artificial intelligence is pervasive and already integrated into everyday routines and interactions. There are AI-powered gadgets to monitor fitness, including music and video streaming platforms that provide personalised recommendations. On social media, content monitoring algorithms can also track preferences and actively target users to optimise their online experience. In essence, AI is in everything from household appliances to smart devices. Although it is ubiquitous, the technology is much broader than just chatbots and apps. The use of GenAI has evolved rapidly, arguably due to the combined influence of its ubiquity in mainstream society (Elliott, 2019), national priorities (Department of Communications and Digital Technologies, 2023) and integration into higher education (Zawacki-Richter et al., 2019).

The context specific factors that have shaped the observations and experience that form the basis for this reflection are presented in the following section.

Generative AI in the distance learning context: Lecturer readiness, institutional policy gaps and individual teaching strategies

In nearly ten years at the university, the institution has progressively moved away from a "paper-behind glass model" (Marais, 2022:64). With this approach, study material is provided in a downloadable PDF format with generally limited (real-time) online interaction between students and lecturers. At the university, the drive towards fully online delivery has taken place against a post-pandemic learning context, institutional targets, international best practices, and national imperatives. Online teaching toolkits have consequently evolved, and many lecturers have developed course sites into an interactive, collaborative learning space that includes:

- virtual classes (e.g., on MS Teams or integrated in a learning management system like Moodle's Big Blue Button or Blackboard's Collaborate),
- automated assessment marking and feedback,
- interactive H5P lesson content, infused with game-based learning (gamification) elements in course design,
- engaging videos created with tools such as Camtasia and
- analytics visualised on platforms such as PowerBI, to track student submissions and assist with early identification of at-risk students who may require targeted support.
- Increasingly, at this institution, professional development training initiatives on GenAI focus on developing effective prompting skills with 'AI Skillsfests', 'AI prompting Masterclasses' and 'Generative AI in Education Bootcamps' and more recently, 'Create your own AI agent '. These workshops often include show-and-tell elements for using GenAI to craft course outcomes, design assessments, develop draft lesson plans and produce chapter summaries. For larger courses, where enrolment may exceed 30 000 students, lecturers are also being trained on how to utilise chatbots to automate responses to common student queries.

The use of chatbots trained on course-specific knowledge has a two-fold goal: to reduce the administrative burden of responding to a high volume of e-mails and enhance student support (Popenici & Kerr, 2017). In addition, lecturers are also being equipped with basic 'AI detection skills'.

Building a level of AI literacy through training to boost readiness is at the core of these initiatives. In the literature on GenAI in higher education, the role of lecturer readiness and proficiency with AI tools is recognised as an important implementation strategy (Owoseni et al., 2024b). Furthermore, with redefined roles as "learning environment designers", Kuka et al., (2022:569) assert that developing familiarity with using different technologies is integral to providing an enhanced learning experience for students. This is premised on the notion that we can't teach what we don't know. As Kirschner et al., (2022) maintain, effective teaching extends beyond content knowledge, because educators "don't just need to understand … but they should understand in several ways" (Kirschner et al., 2022:184).

The crux of this view is that educators can only guide students in using AI tools to support their learning once they are adept at using the technology themselves. While I (Jane Adigun) support this perspective, Maimela and Mbonde (2025) raise an important

consideration around the uneven adoption of AI in South African higher education institutions. At an institutional level, the authors identified resource limitations, a lack of uniform AI policy frameworks, technological scepticism and the digital divide as key structural barriers to AI adoption across South African universities (Maimela & Mbonde, 2025).

However, beyond targeted AI training for academic staff, institutional policy and explicit guidelines around AI use are still required to provide a cohesive implementation framework (Owoseni et al., 2024b; Maimela & Mbonde, 2025).

Although the university in question is in the final stages of adopting an overarching AI policy framework, there are currently no guidelines on acceptable use. Consequently, approaches vary because student guidelines around GenAI use are set by individual lecturers. As a result, some colleagues may have a zero-tolerance approach, while others may allow it for specific purposes.

Informal conversations with colleagues also reveal contextual insights around GenAI, which further emphasise the crucial role of institutional guidelines. This includes some scepticism around the technology, ethical concerns, fears of being replaced by AI teacher bots (Popenici & Kerr, 2017) and the implications of GenAI for graduateness. These concerns capture, albeit in very broad-brush strokes, some of the tensions around GenAI. The challenges are, however, not unique to the university. Similar concerns surrounding ethical implications and academic integrity have emerged from a systematic review undertaken from 2017 to 2023 of forty other institutions worldwide (Zhao et al., 2024).

In addition, just less than a year after ChatGPT's diffusion, slightly less than half of the top fifty-ranked universities globally had provided GenAI guidelines (Moorehouse et al., 2023); granted, institutions might have been caught on the back foot. In the existing literature, however, the absence of institutional policy and a lack of targeted educator training in AI are consistently identified as major barriers (Zhao et al., 2024).

A more recent study examining the global adoption of institutional AI policies and guidelines found that only six African institutions, including two from South Africa, published AI policy-related documents on their websites (Jin et al., 2025). Most importantly, these findings emphasise that challenges with AI policy development and implementation are ubiquitous across the global higher education landscape.

Returning to the university in question, with AI guidelines and a policy framework still being developed, one college set up an AI work group to engage on departmental issues

pertinent to AI use. From these engagements, an informal AI self-disclosure instrument was created and freely circulated for dissemination at an internal tuition committee meeting in April 2024.

For context, "self-disclosure" as defined by Jourard (1971:19), refers to "…the act of making yourself manifest, showing yourself so others can perceive you". In an education context, it has been hypothesised as a useful pedagogical tool for creating learning environments that facilitate student engagement (Qin, 2022). While there are important ethical considerations when disclosing deeply personal information (Esjing, 2007), evidence suggests that self-disclosure may foster positive student-teacher interactions (Mazer et al., 2007).

In the case of the AI self-disclosure instrument referred to in this paper, it was originally conceptualised to assist lecturers in reviewing student work for potential breaches of academic integrity. The instrument was, therefore, considered to be multi-purpose because it:

- serves as a basic tool to encourage students to be open about their use of generative AI tools;
- provides lecturers with general insights into how students are using tools like ChatGPT and
- assists in avoiding punitive marking in instances where students self-disclose using Grammarly or Quillbot.

In terms of the archaeology case study under discussion, an adapted version of the AI self-disclosure has been used since June 2024 across both third-year courses. In the almost 18 months of its use, student uptake has been persistently low. It was observed that, for the most part, students tend to complete the form as a compliance exercise, possibly to satisfy lecturer expectations (Fisher et al., 2024). Oftentimes, it is signed by students who did not indicate any of the available options for GenAI use. Another subset of students also tends to under report actual use. This was inferred from self-disclosure forms where AI grammar assistance was ticked, however, the AI report scores substantially exceeded Turnitin's 20 per cent false positive threshold. In these instances, a student's self-reported use of GenAI tools contradicted the Turnitin AI report. This phenomenon has also been reported in the literature (Fisher et al., 2024; Combrinck & Loubser, 2025). From the observations, it was inferred that the AI self-disclosure instrument, on its own, has limited utility for fostering self-disclosure and scaffolding responsible use.

An empirical study on the relationship between student self-reflection on AI use, lecturer grading decisions, and AI writing report scores provides useful insights for understanding the failure to self-disclose (Combrinck & Loubser, 2025). Based on their findings, Combrinck and Loubser (2025) suggest that transparent student disclosure may help lecturers make informed marking decisions and potentially scaffold responsible use. However, they also noted that not all students are forthcoming about exactly how they utilise GenAI. Interestingly, AI writing detection scores above 20 per cent and Turnitin's false positive threshold, were associated with an increased risk of over reliance and failure to disclose and self-reflect (Combrinck & Loubser, 2025).

The personal observations from the archaeology case study, to some extent, align with Combrinck and Loubser's (2025) empirical findings. This prompts bigger questions about how a failure to self-disclose reflects a growing pedagogical issue around AI over-reliance.

Prompt, copy and paste: Personal observations on student interactions with GenAI

Since the widespread use of GenAI tools, I (Jane Adigun) have observed that the third-year cohort I teach was primarily adopting what could be described as a 'prompt, copy and paste' approach. There is a general lack of critical evaluation of the generated output: it is simply copied and reproduced in its entirety. Students also frequently include meta-statements, generated by these tools, when completing written assessments. This is a glaringly obvious indicator that the information was taken verbatim from a GenAI source. To illustrate, some examples of these statements generated directly from ChatGPT are listed below:

"My knowledge is current up to June 2024, and I may not have information on developments after that date."

- *"I don't have access to real-time data or updates. You may want to consult a current source."*
- *"I couldn't find a specific reference to that. You may want to consult your study guide or course materials for clarification."*
- *"I don't have access to the specific dataset mentioned, but I can provide general assistance based on the information you share."*
- *"CCP is not widely recognised as a standard acronym in mainstream archaeological literature."*

Instances were also observed where students used AI tools to write their assignments along with fabricated sources. These references either include a URL link to an unrelated source or have a credible author linked to a fabricated article! In the literature, this phenomenon is AI confabulation or AI hallucinations (Zhai et al., 2024). Of concern is that some students seemingly regard GenAI as an authoritative voice, which scholars refer to as anthropomorphising AI (Owoseni et al., 2024b). It occurs when users start to view AI as real human beings, which might lead to reliance on GenAI tools as a primary source of information and answers.

The observations for a prompt, copy and paste approach broadly align with findings from an empirical study conducted by Stojanov et al. (2024). The authors investigated the dynamics of student interactions with ChatGPT and identified five different user profiles. These were categorised as "versatile low reliers", "all-rounders", "knowledge seekers", "pro-active learners" and "assignment delegators" (Stojanov et al., 2024: 4) The group designated assignment delegators routinely outsourced work to ChatGPT, tended to over rely on GenAI tools and were not critical of the output.

Stojanov et al. (2024) also highlighted that student reliance on GenAI tools is not uniform. It varies depending on individual levels of AI literacy and overall attitudes towards the technologies. Combrinck and Loubser (2025) share congruent views, noting that students struggling to grasp content knowledge might have academic challenges and lack the skills to use AI tools effectively or responsibly.

Nevertheless, for archaeology students using GenAI tools to complete entire assignments without verifying content authenticity, might well be symptomatic of an issue with over reliance.

Theme 2: So what?

A chatbot ate my brain: The negative consequences of an over-reliance on AI tools

Recently, Visser et al. (2025) presented a conceptual framework for understanding 'trust, distrust and reliance', in the context of AI. They define reliance as "a human decision or action that takes into consideration the decision or recommendation of an AI" (Visser et al., 2025:4). In other words, for the user, relying on AI outputs also involves the cognitive tasks of evaluating and reviewing for accuracy. Visser et al. (2025) further differentiate between the concepts of disuse and overtrust—terms widely used in automation and AI contexts.

Disuse refers to situations where a user does not rely on an AI output even when it may be potentially helpful to do so; it is simply not used. By contrast, over trust describes instances in which a user relies on AI in a situation where it is potentially wrong to do (Visser et al., 2025). The authors do not refer explicitly to the notion of 'over reliance', however, for the purpose of this paper, it is reasonable to think about over reliance on AI as a product of overtrust (Buçinca et al., 2021).

Over reliance refers to the disproportionate use of AI tools to the extent where AI generated content and recommendations are accepted without question (Pitts et al., 2025). The term is increasingly discussed in higher education scholarship, where excessive use of AI tools is linked to negative consequences for intellectual skills development (Chan & Hu, 2023).

In the literature on AI over reliance, evidence from several systematic reviews of empirical studies from 2017 to 2023 has consistently linked these tools to diminished problem solving, reasoning and decision-making capacities (Zhai et al., 2024; Zhao et al., 2024: 126;). In extreme cases, over reliance may also lead to detachment from cognitive tasks requiring higher-order thinking (Zhai et al., 2024). Scholars are increasingly expressing concerns about excessive dependency on pre-formulated GenAI answers (Al-Zahrani, 2024; Zhai et al., 2024). The recurring themes are that over reliance may inhibit creativity and unique perspectives (Chan & Hu, 2023; Zhai et al., 2024), foster uncritical consumption of generated content (Owoseni et al., 2024b) and ultimately erode intellectual skills over time (Chan & Hu, 2023; Tshidi & Dewa, 2024). Furthermore, insights from other empirical studies support these assertions. For example, a mixed methods study by Gerlich (2025) showed a significant negative correlation ($r = -0.68$) between GenAI tool use and critical thinking abilities. This was attributed to cognitive offloading, which reportedly occurs when tasks are routinely assigned to AI tools. As Gerlich (2025) explains, over time, this may lead to diminished or poorly developed cognitive abilities related to memory retention, critical analysis and analytical skills.

While Buçinca et al. (2021) also acknowledge the negative consequences of over reliance, they provide an alternative perspective for understanding the gross stressors and motivators associated with over reliance. The authors draw on Cacioppo and Petty's (1982) psychological concept of the *need for cognition*, which simply refers to an individual's disposition to engage in and enjoy thinking. Buçinca et al. (2021) reported that individuals with a low need for cognition are more likely to over rely on AI suggestions and recommendations compared to those with a high need for cognition. By contrast, results

from a meta-analysis of published research between November 2022 and February 2025, suggest that GenAI tools like ChatGPT *can* have an overall *positive* impact on learning and higher-order thinking (Wang & Fan, 2025). Putting it all together, the picture that emerges on over reliance and GenAI use more broadly, is multifaceted and complex. While it is evident that intensive use of GenAI tools has negative consequences, the intersection of this with individual cognitive and behavioural drivers is still poorly understood.

Theme 3: What next?

Unpacking archaeological insights for history education

As indicated in earlier sections, GenAI tools have the potential to enhance archaeology and history through various applications and AI driven solutions. Both disciplines share core areas of overlap to scaffold competencies in diverse perspectives, contextual analysis, primary source evaluation and archival interpretation. However, as inferred from personal observations, it is becoming increasingly difficult to identify student use of GenAI in written work and oral tasks. This may be compounded in instances where students have developed effective prompting skills. By contrast, when students use a prompt, copy and paste approach, there are obvious indicators that the response was AI generated.

As Combrinck and Loubser (2025) have pointed out, students will find workarounds to avoid detection. It is, therefore, becoming increasingly important to help students make the connection that GenAI is a tool to support learning, not a crutch to replace thinking processes.

For educators in archaeology and history, teaching in the age of GenAI requires a pedagogical shift (Popenici & Kerr, 2017). In these disciplines where written and oral tasks are foundational teaching instruments, it is becoming important to reconceptualise traditional assessment practices (Fisher et al., 2024). In addition, scholars have highlighted the importance of communicating expectations around permissible AI in courses (Combrinck & Loubser, 2025), while adopting a more holistic approach that foregrounds responsible and ethical use (Owoseni et al., 2024b).

An outright ban on usage is punitive and not a feasible long-term solution (Moorehouse et al., 2023) due to the demand for twenty-first century skills (Kuka et al., 2022). There is also the simple fact that AI is not going anywhere (Elliot, 2019) and students may already be interacting with GenAI at different points in their learning journey (Stojanov et al., 2024).

In my (Jane Adigun) view, GenAI presents a flashpoint for teaching praxis in archaeology and history. On one end, AI should be leveraged to scaffold skills for new jobs in an AI-driven future (UNESCO, 2021). However, the risk of cognitive offloading that accompanies AI over reliance, may have consequences for developing the very skills that archaeology and history foster, namely, critical thinking skills for source analysis and evaluation, artefact interpretation, narrative construction and evidence-based reasoning.

Together, history and archaeology provide complementary insights about human societies across spatial and temporal boundaries, although methodological approaches and pedagogical strategies may vary. In this context, over reliance on AI might inhibit the nuance and contextual depth that emerge from analysing historical sources and archaeological records and artefacts (Wineburg, 2001; Reisman & Wineburg, 2008; Gattiglia, 2025). Overtime, this might diminish historical thinking skills. In addition, relying on GenAI solutions to address questions in history and archaeology could potentially produce confabulations or misinterpretations, as there may be challenges generalising when algorithms are trained on specific archaeological and historical data (Gattiglia, 2025). Students of history and archaeology who tend to over rely on GenAI might also risk curtailing their unique insights and interpretations (Chan & Hu, 2023; Zhai et al., 2024; Tenzer et al., 2024). Another risk for historical disciplines relates to the potential of perpetuating algorithmic bias through homogenised perspectives and privileging dominant (colonial) narratives (Tenzer et al., 2024). This is in part because obtaining the Big Data required for algorithmic training could potentially involve reusing legacy data (Gattiglia, 2025). With that comes the risk of repeating ideas, rhetoric and interpretations that were normalised in colonial taxonomies (Tenzer et al., 2024). As Gattiglia (2025) notes, to facilitate computational processing, Big Data is predisposed to over simplify the complexity inherent in historical and archaeological data. As a result, it currently lacks the capabilities to capture the fluidity of human experience and agency (Gattiglia, 2025). This is contrary to the skill of contextualisation, which is central to archaeology and history education, which places facts, events, artefacts and sources within a temporal context shaped by nuanced social-cultural and political dimensions (Reisman & Wineburg, 2008). This, in turn, guides historical thinking to consider the plurality of voices (Wineburg, 2001) and challenge long-standing conceptual and theoretical frameworks (Reisman & Wineburg, 2008).

To mitigate this, Wineburg and Reisman (2015) suggest affirming *disciplinary literacy*. For students in historical disciplines, this comprises tools and strategies for

sourcing, contextualisation, corroboration, and critical evaluation (Wineburg, 2001). With the burgeoning adoption of GenAI, concomitant issues around over reliance, and ethical/academic integrity concerns, scaffolding disciplinary literacy, may well present an opportunity for tempering these challenges.

While there is a growing body of literature on the benefits of AI, the rush to adopt and integrate GenAI into teaching strategies should still be underpinned by pedagogy. As Zawacki-Richter et al. (2019:21) reminds us: "We should not strive for what is technically possible, but always ask ourselves what makes pedagogical sense". With that in mind, perhaps it might be time for educators in archaeology and history to consider going back to basics to recentre fundamental disciplinary literacies. By balancing twenty-first century skills development with pedagogically relevant technology-focused teaching modalities, we might nurture a mindset around utilising AI tools collaboratively to support learning. To echo Popenici and Kerr (2017: 3), "education is eminently a human-centric endeavor, not a technology centric solution". Therefore, supporting students to maintain a level of oversight through scepticism and critical awareness of AI confabulations is crucial.

Conclusion

GenAI and the tools that comprise the AI ecosystem have become pervasive since ChatGPT's mainstream diffusion and are increasingly being harnessed in higher education contexts. Despite the promise of this technology for teaching and learning, there are institutional policy gaps for guiding usage, and growing ethical/academic integrity concerns. This includes issues with algorithmic bias and AI confabulations/hallucinations, along with over reliance challenges. This paper drew on experiential insights from an archaeological case study, self-reflected on approaches to scaffold responsible use, and focused on the pedagogical implications of AI over reliance. Based on the observations, it was found that a subset of third-year archaeology students is mostly using a prompt, copy and paste approach when utilising GenAI. Consequently, written work and possibly oral tasks are being offloaded to GenAI tools and reproduced without any critical evaluation. With the growing demand for twenty-first century skills that build AI competencies for the future world of work, educating students on responsible use plays an important role in mitigating the negative consequences of over reliance. By refocusing on disciplinary literacies that scaffold source analysis, contextualisation and evaluation, students might reconfigure a mindset to use GenAI collaboratively, while maintaining human oversight on the generated content. For educators, this may require evaluating traditional forms of

assessment to leverage AI and other technologies where it is pedagogically relevant and effective.

Acknowledgements

Ethical clearance was granted by the College of Human Sciences Research Ethics Committee (Ref #: 9321). The use of GPT40-mini, Version 18 July 2024, is acknowledged to generate additional examples of meta-statements using zero-shot prompting.

References

Adigun, J, Wurz, S & Antonites, A 2021. Archaeology and the Fourth Industrial Revolution (4IR): Reflecting on the role of the Association of Southern African Professional Archaeologists (ASAPA) in stimulating public interest and enhancing access to archaeological education and training. *SAQA Bulletin,* 20(1):181-198.

Agyemang, A & Schlippe, T 2024. AI in education: An analysis of large language models for Twi automatic short answer grading. In: A Gerber, J Maritz & AW Pillays (eds.). *Southern African Conference for Artificial Intelligence Research.* Cham: Springer Nature Switzerland.

Alegi, P 2012. Podcasting the past: Africa past and present and (South) African history in the digital age. *South African Historical Journal,* 64(2):206-220.

Al-Zahrani, AM 2024. Unveiling the shadows: Beyond the hype of AI in education. *Heliyon,* 10(9):e30696.

Anichini, F, Dershowitz, N, Dubbini, N, Gattiglia, G, Itkin, B & Wolf, L 2021. The automatic recognition of ceramics from only one photo: The ArchAIDE app. *Journal of Archaeological Science Reports,* 36:102788.

Assael, Y, Sommerschield, T, Cooley, A, Shillingford, B, Pavlopoulos, J, Suresh, P, Herms, B, Grayston, J, Maynard, B, Dietrich, N, Wulgaert, R, Prag, J, Mullen, A & Mohamed, S 2025. Contextualizing ancient texts with generative neural networks. *Nature,* 645:141-147.

Assael, Y, Sommerschield, T, Shillingford, B, Bordbar, M, Pavlopoulos, J, Chatzipanagiotou, M, Androutsopoulos, I, Prag, J & De Freitas, N 2022. Restoring and attributing ancient texts using deep neural networks. *Nature*, 603:280-283.

Bickler, SH 2021. Machine learning arrives in archaeology. *Advances in Archaeological Practice*, 9(2):186-191.

Borton, T 1970. *Reach, touch and teach*. London: Hutchinson.

Brookbanks, G 2023. Teaching and learning of history at a high school level- the reality of AI/ChatGPT and the process of assessing understanding. *Yesterday & Today*, 29(1):120-123.

Buçinca, Z, Malaya, MB & Gajos, KZ 2021. To trust or to think: Cognitive forcing functions

can reduce overreliance on AI in AI-assisted decision-making. *Proceedings of the ACM on Human-computer Interaction*, 5(CSCW1):1-21.

Büttner, J, Martinetz, J, El-Hajj, H & Valleriani, M 2022. CorDeep and the Sacrobosco dataset: Detection of visual elements in historical documents. *Journal of Imaging*, 8(10):285.

Cacioppo, JT & Petty, RE 1982. The need for cognition. *Journal of Personality and Social Psychology,* 42(1): 116–131.

Caspari, G & Crespo, P 2019. Convolutional neural networks for archaeological site detection - finding "princely" tombs. *Journal of Archaeological Science,* 110:104998.

Chan, CKY & Hu, W 2023. Students' voices on generative AI: perceptions, benefits, and challenges in higher education. *International Journal of Educational Technology in Higher Education*, 20(43): 1-18.

Character, L, Ortiz Jr, A, Beach, T & Luzzadder-Beach, S 2021. Archaeologic machine learning for shipwreck detection using Lidar and Sonar. *Remote Sensing*, 13(9): 1759.

Clarà, M 2015. What is reflection? looking for clarity in an ambiguous notion. *Journal of Teacher Education,* 66(3): 261 - 271.

Combrinck, C & Loubser, N 2025. Student self-reflection as a tool for managing GenAI use in large class assessment. *Discover Education*, 4(1):72.

Conrad, EJ & Hall, KC 2024. Leveraging generative AI to elevate curriculum design and pedagogy in public health and health promotion. Pedagogy in Health Promotion 10(3).

Cotton, DR, Cotton, PA & Shipway, JR 2023. Chatting and cheating: Ensuring academic integrity in the era of ChatGPT. *Innovations in Education and Teaching International,* 61(2):228-239.

Coughlan, T & Iniesto, F 2025. What should I know? Analysing behaviour and feedback from student use of a virtual assistant to share information about disabilities. *The Internet and Higher Education,* 66:101002.

Crawford, J, Allen, KA, Pani, B & Cowling, M 2024. When artificial intelligence substitutes humans in higher education: The cost of loneliness, student success, and retention. *Studies in Higher Education*, 49(5):883-897.

Creely, E 2024. Exploring the role of generative AI in enhancing language learning:

Opportunities and challenges. International Journal of Changes in Education, 1(3):158-167.

DaCosta, B 2025. Speaking with the past: Constructing AI-generated historical characters for cultural heritage and learning. Heritage, 8(9):387.

De la Croix, A & Veen, M 2018. The reflective zombie: problematizing the conceptual framework of reflection in medical education. Perspectives on Medical Education, 7(6): 394-400.

Department of Communications & Digital Technology. October, 2023. South Africa's artificial intelligence (AI) planning. Available at https://www.dcdt.gov.za/images/phocadownload/AI_Government_Summit/National_AI_Government_Summit_Discussion_Document.pdf Accessed on 4 April 2025.

Dewey, J 1910. How we think. New York: DC Heath & Co Publishers.

Drap, P, Papini, O, Merad, D, Pasquet, J, Royer, J, Nawaf, MM, Saccone, M, Ellefi, MB, Chemisky, B, Seinturier, J, Sourisseau, J, Gambin, T & Castro, F 2019. Deepwater archaeological survey: an interdisciplinary and complex process. In: J McCarthy, J Benjamin, T Winton, & W van Duivenvoorde (eds.). *3D Recording and Interpretation for maritime archaeology,* pp. 135-153. Cham, Switzerland: Springer.

Driscoll, J 1994. Reflective practice for practise – A framework of structured reflection for clinical areas. *Senior Nurse,* 14(1):47-50.

Driscoll, J 2007. Supported reflective learning: The essence of clinical supervision. In: *Practising clinical supervision: a reflective approach for healthcare professionals,* pp. 27-50. London: Bailièrre Tindall ElsevierHealth.

Edwards, S 2017. Reflecting differently: new dimensions reflection before action and reflection beyond action. *International Practice Development Journal*, 7(1):1-17.

Ejsing, A 2007. Power and caution: The ethics of self-disclosure. *Teaching Theology & Religion*, 10(4):235-243.

Elliott, A 2019. *The culture of AI: Everyday life and the digital revolution*. New York: Routledge.

Ferrara, E 2024. GenAI against humanity: Nefarious applications of generative artificial intelligence and large language models. *Journal of Computational Social Science,* 7:549-569.

Fischer, I, Sweeney, S, Lucas, M & Gupta, N 2024. Making sense of generative AI for assessments: Contrasting student claims and assessor evaluations. *The International Journal of Management Education*, 22(3):101081.

Fui-Hoon Nah, F, Zheng, R, Cai, J, Siau, K & Chen, L 2023. Generative AI and ChatGPT: Applications, challenges, and AI-human collaboration. *Journal of Information Technology Case and Application Research*, 25(3):277-304.

Garcia-Molsosa, A, Orengo, HA, Lawrence, D, Philip, G, Hopper, K & Petrie, CA. 2021. Potential of deep learning segmentation for the extraction of archaeological features from historical map series. *Archaeological Prospection*, 28(2):187-199.

Gattiglia, G 2025. Managing artificial intelligence in archeology: An overview. *Journal of Cultural Heritage*, 71:225-233.

Gerlich, M 2025. AI tools in society: Impacts on cognitive offloading and the future of critical thinking. Societies, 15(1):6.

Holdcroft, C 2024. Can generative AI improve the standardisation of student feedback across a business school faculty? In: L Uden & D Liberona (eds.). *Learning technology for education challenges,* pp. 364-376. Cham, Switzerland: Springer.

Hutson, J & Ratican, J 2023. Life, death, and AI: Exploring digital necromancy in popular culture—Ethical considerations, technological limitations, and the pet cemetery conundrum. *Metaverse*, 4(1): 1-12.

Jin, Y, Yan, L, Echeverria, V, Gašević, D & Martinez-Maldonado, R 2025. Generative AI in higher education: A global perspective of institutional adoption policies and guidelines. *Computers and Education: Artificial Intelligence*, 8:100348.

Jourard, SM 1971. *The transparent self*. Van Nostrand Reinhold: New York.

Kelly, B 2021. *Innovations in machine learning: a case study of the Fabricius Workbench*. Unpublished Master's dissertation. Australia: Macquarie University.

Khlaif, ZN, Alkouk, WA, Salama, N & Abu Eideh, B 2025. Redesigning assessments for AI-enhanced learning: A framework for educators in the Generative AI era. Education Sciences, 15(2):174.

Kietzmann, J, Lee, LW., McCarthy, IP & Kietzmann, TC 2020. Deepfakes: Trick or treat? *Business Horizons*, 63(2):135-146.

Kirschner, PA, Hendrick, C & Heal, J 2022. Why you can't teach what you don't know: Lee Schulman on teacher knowledge. In: How teaching happens: Seminal works in teaching and teacher effectiveness and what they mean in practice. London: Routledge.

Kolb, DA 1984. *Experiential learning: experience as the source of learning and development*. Prentice Hall: New Jersey.

Kuka, L, Hörmann, C & Sabitzer, B 2022. Teaching and learning with AI in higher education: A scoping review. In: ME Auer, A Pester & D May (eds.). Learning with technologies and technologies in learning: Experience, trends and challenges in higher education, pp. 551-571. Switzerland: Springer-Nature.

Luhmann, J & Burghardt, M 2022. Digital humanities—A discipline in its own right? An analysis of the role and position of digital humanities in the academic landscape. *Journal of the Association for Information Science and Technology*, 73(2): 148-171.

Maimela, C & Mbonde, P 2025. Artificial intelligence (AI) in South African universities: Curriculum transformation and decolonisation–aid or obstacle? *Frontiers in Sociology*, 10:1543471.

Marais, IE 2022. Institutionalisation of academic integrity: experiences at a distance education university in South Africa during COVID-19. Critical Studies in Teaching and Learning, 10(2):57-79.

Marshall, T 2019. The concept of reflection: A systematic review and thematic synthesis across professional contexts. *Reflective Practice* 20(3):396-415.

Mazer, JP, Murphy, RE & Simonds, CJ 2007. I'll see you on "Facebook": The effects of computer-mediated teacher self-disclosure on student motivation, affective learning, and classroom climate. *Communication Education*, 56(1): 1-17.

Mekhoe, C 2023. ChatGPT in the history classroom - A position paper of township school teacher. Yesterday & Today, 29(1):117-118.

Mohamed, M, Ab Rashid, R & Alqaryouti, MH 2022. Conceptualizing the complexity of reflective practice in education. Frontiers in Psychology, 13.

Moon, JA 2004. A handbook of reflective and experiential learning: Theory and practice. London: Routledge Falmer.

Moorehouse, BL, Yeo, MA & Wan, Y 2023. Generative AI tools and assessment: guidelines of the world's top-ranking universities. *Computers and Education Open,* 5(15): 100151.

Mulaudzi, L & Hamilton, J 2024. Student perspectives on optimising AI tools to enhance personalised learning in higher education. Interdisciplinary Journal of Education Research, 6(s1):1-15.

Netshiungani, MP 2023. Thinking about ChatGPT and assessment in my history classroom. Yesterday & Today, 29(1):119.

Orengo, HA, Conesa, FC, Garcia-Molsosa, A, Lobo, A, Green, AS, Madella, M & Petrie, CA. 2020. Automated detection of archaeological mounds using machine-learning classification of multisensor and multitemporal satellite data. *Proceedings of the National Academy of Sciences,* 117(31):18240-18250.

Owoseni, A, Kolade, O & Egbetokun, A 2024a. Applications of Generative AI in lesson preparation and content development. In: Generative AI in higher education: innovation strategies for teaching and learning, pp. 27-62. Cham, Switzerland: Palgrave Macmillan/Springer Nature.

Owoseni, A, Kolade, O & Egbetokun, A 2024b. Responsible use of Generative AI for educators and students in higher education institutions. In: Generative AI in higher education: innovation strategies for teaching and learning, pp. 151-172. Cham, Switzerland: Palgrave Macmillan/Springer Nature.

Perron, Y, Sydorov, V, Wijker, AP, Evans, D, Pottier, C & Landrieu, L 2024. Archaeoscape: Bringing aerial laser scanning archaeology to the deep learning era. Available at: https://doi.org/10.48550/arXiv.2412.05203 Accessed on 11 October 2025.

Pitts, G, Rani, N, Mildort, W & Cook, E-M 2025. Students' reliance on AI in higher education: Identifying contributing factors. University of Warwick. Available at: https://www.arxiv.org/pdf/2506.13845 Accessed on 10 October, 2025.

Popenici, SA & Kerr, S 2017. Exploring the impact of artificial intelligence on teaching and learning in higher education. Research and Practice in Technology Enhanced Learning, 12(22).

Qin, J 2022. A theoretical review on the role of English as a foreign language teachers' self-disclosure in shaping classroom climate and immediacy. *Frontiers in Psychology*, 13:945046.

Rane, NL, Choudhary, SP & Rane, J 2024. Education 4.0 and 5.0: Integrating artificial intelligence (AI) for personalized and adaptive learning. Journal of Artificial Intelligence and Robotics¸ 1(1):29-4 3.

Reisman, A & Wineburg, S 2008. Teaching the skill of contextualizing in history. *The Social Studies*, 99(5):202-207.

Rodgers, C & LaBoskey, VK 2016. Reflective practice. In: J Loughran & M Hamilton (eds.). *International Handbook of Teacher Education*. Singapore: Springer.

Rogers, RR 2001. Reflection in higher education: a concept analysis. I*nnovative Higher Education*, 26: 37-57.

Ryan, M 2013. The pedagogical balancing act: teaching reflection in higher education. *Teaching in Higher Education*, 18(2):144-155. https://doi.org/10.1080/13562517.2012.694104

Stojanov, A, Liu, Q & Koh, JHL 2024. University students' self-reported reliance on ChatGPT for learning: a latent profile analysis. *Computers and Education: Artificial Intelligence*, 6(4): p.100243.

Taylor, J & Gibson, LK 2017. Digitisation, digital interaction and social media: Embedded barriers to democratic heritage. *International Journal of Heritage Studies*, 23(5):408-420.

Tenzer, M, Pistilli, G, Bransden, A & Shenfield, A 2024. Debating AI in archaeology: Applications, implications, and ethical considerations. *Internet Archaeology*, 67.

Tshidi, M & Dewa, A 2024. The promise and peril of coding & robotics education in South Africa: A scoping review of teacher preparation and generative artificial intelligence's potential for delivering equity. *Journal of Education* 96:140-164.

UNESCO 2021. AI and education: Guidance for policy-makers. Paris: UNESCO. Available at: https://doi.org/10.54675/PCSP7350 Accessed on 12 October 2025.

Visser, R, Peters, TM, Scharlau, I & Hammer, B 2025. Trust, distrust, appropriate reliance in (X)AI: A conceptual clarification of user trust and survey of its empirical evaluation. *Cognitive Systems Research,* 91:101357.

Wang, J & Fan, W 2025. The effect of ChatGPT on students' learning performance, learning perception, and higher-order thinking: Insights from a meta-analysis. *Humanities and Social Sciences Communications*, 12(621):1-21.

Wineburg, S 2001. *Historical thinking and other unnatural acts: Charting the future of teaching the past*. Temple University Press.

Wineburg, S & Reisman, A 2015. Disciplinary literacy in history: A toolkit for digital citizenship. *Journal of Adolescent & Adult Literacy*, 58(8):636-639.

Zawacki-Richter, O, Marín, VI, Bond, M & Gouverneur, F 2019. Systematic review of research on artificial intelligence applications in higher education–Where are the educators? *International Journal of Educational Technology in Higher Education*, 16(39):1-27.

Zembylas, M 2023. A decolonial approach to AI in higher education teaching and learning: Strategies for undoing the ethics of digital neocolonialism. *Learning, Media and Technology*, 48(1):25-37.

Zewe, A 2023. Explained: Generative AI. November, 2023. *Massachusetts Institute of Technology News*. Available at https://news.mit.edu/2023/explained-generative-ai-1109. Accessed on 16 May 2025.

Zhai, C, Wibowo, S & Li, LD 2024. The effects of over-reliance on AI dialogue systems on students' cognitive abilities: A systematic review. Smart Learning Environments, 11(28).

Zhao, J, Chapman, E & Sabet, PG 2024. Generative AI and educational assessments: A systematic review. Education Research and Perspectives, 51:124-155.

The pedagogical potential of virtual reality head-mounted displays in the training of pre-service history teachers to promote self-directed learning

DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a4

Juan-Carlo Homan
North-West University
Potchefstroom, South-Africa
Orcid: https://orcid.org/0000-0003-0008-6185
homancarlo@gmail.com
DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a4

Pieter Warnich
North-West University
Potchefstroom, South-Africa
Orcid: https://orcid.org/0000-0003-0008-6185
pieter.warnich@nwu.ac.za
DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a4

Christo P. van der Westhuizen
North-West University
Potchefstroom, South-Africa
Orcid: https://orcid.org/0000-0002-4762-8538
christovdw@uj.ac.za
DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a4

Abstract

The arrival of the Fourth Industrial Revolution (4IR) as well as the required and accompanying twenty-first century skills has led the educational system towards a position wherein significant methodological and pedagogical intervention is required in order to modernise the system to better accommodate the needs of the twenty-first century learner. Information and Communication Technologies (ICTs), such as Virtual Reality (VR) and

its associated technologies, like Head-Mounted Displays (HMDs), have the potential to enhance the teaching and learning experiences of pre-service history teachers in virtual learning environments (VLEs). This article seeks to explore the pedagogical potential of VR-HMDs as ICT tools in the training of pre-service history teachers by affording them opportunities to engage with subject matter in VLEs such as a virtual Holocaust Museum, a WW II battle re-enactment and the Pearl Harbour attack. Concurrently, the paper sought to determine if VLEs could promote pre-service history teachers' self-directed learning (SDL) skills through the allowance of these experience-based learning opportunities. The research for this study was conducted at a tertiary education institution within a classroom environment where pre-service history teachers made use of VR-HMDs to achieve specific history lesson objectives. Grounded in constructive and interpretive paradigms, the research further employed a single exploratory qualitative case study design with non-probability purposive sampling and discourse analysis. To a lesser extent, quantitative data was also used, complementary to the qualitative data, in order to better understand the phenomena under investigation. Various data collection instruments, including questionnaires, worksheets, focus group interviews, and field notes, were used to gather data from the 15 pre-service history teachers as participants. The findings indicated that VR-HMDs and VLEs hold a significant positive potential for the teaching and learning of pre-service history teachers, as the advantages of this emerging technology far outweigh its disadvantages. Furthermore, the use of VR-HMDs in teaching fostered SDL skills such as goal setting, self-regulation, motivation, and critical thinking.

Keywords: Virtual reality (VR); virtual reality head mounted displays (VR-HMDs); virtual learning environments (VLEs); self-directed learning (SDL); pre-service history teachers; history teaching and learning

Introduction and background

Post 1994, the South African educational system has been undergoing continuous pedagogical and methodological changes (Crouch & Hoadley, 2018). This transition includes, among other things, to integrate Information and Communication Technologies (ICTs) on a larger scale to not only teach subject content, but to also by and large, equip students with the skills to enhance their knowledge and gather information effectively (Mashile, 2017; Graham et al., 2024). The subject content used for this article consisted of a virtual Holocaust Museum, a WWII battle re-enactment and the attack on Pearl Harbour. These topics were used to explore the pedagogical potential of virtual reality head-mounted

displays (VR-HMDs) in shaping memory retention, enhancing historical understanding and developing self-directed learning (SDL) skills among pre-service history teachers through immersive experiences. The training of pre-service history teachers must also adapt to these changes, ensuring that the teaching and learning of history meet the needs of twenty-first century students (Battaglia & McDonald, 2015; Arek-Bawa & Reddy, 2024). VR-HMDs could theoretically enhance the educational process, thus providing higher quality learning experiences, as pre-service history teachers will have more opportunities to be engaged with the subject matter (Hu-Au & Lee, 2018).

The Fourth Industrial Revolution (4IR)—a twenty-first century movement—has integrated technology into various societal levels, and particularly so in modern classrooms. The problem faced by some educators, however, is that not all subjects have had an equitable and fair shared level of exposure to ICTs in classrooms (Dlamini, 2022). In the twenty-first century, students should take ownership of their learning, cultivate lifelong SDL skills, explore subject content with autonomy, stay responsible and remain adaptive in a rapidly changing world (Dahal & Bhat, 2023). Students should be capable of showcasing SDL skills like collaborating and communicating effectively with others, thinking creatively and critically to tackle new challenges, and continually adjusting to evolving technologies (Mentz & Bailey, 2019). It is these and other twenty-first century SDL skills accompanied by emerging pedagogical tools such as the use of ICTs like VR-HMDs and virtual learning environment (VLEs) that is aimed at the cultivation of lifelong, collaborative and communication driven (Marougkas et al., 2024) experiences to the benefit of pre-service history teachers.

The use of emerging ICTs such as, but not limited to, VR-HMDs and VLEs have become integral to innovative pedagogical approaches (Mnisi et al., 2024). Before understanding the inclusion of mentioned ICTs, it is required to first consider societal changes that further cemented ICTs role in education (Karki, 2019). These changes did not happen overnight, but through continuous experimentation. Ratheeswari (2018) reported that there are numerous approaches when attempting to integrate educational technologies. Studies, as far back as those by Wong and Hsu (2008), show ICT's positive impact on teaching and learning and the advantageous possibilities thereof. Over time, the findings of these earlier studies were further corroborated by subsequent research (Chouthaiwale & Al-Kamel, 2018; Saprikis et al., 2019; Meladi & Awolusi, 2020; Anastasopoulou et al., 2024) to name a few. VR-HMDs, as an emerging ICT tool, can be effectively incorporated into the dynamic educational landscape due to their learner-centred and self-directed learning potential (Jensen & Konradsen, 2018; Lege & Bonner, 2020).

The rapid development of commercially used technologies has coincided with the advancement of instructional technologies, and it is this development that shows the dynamism of modern education, especially post-Covid19, emphasising that ICTs require ongoing evolution and adaption (Hamzah et al., 2024). This ongoing innovation has led educational systems to recognise the benefits of technology in the classroom while minimising its drawbacks (Burns & Graafland, 2018). Educational institutions, after establishing feasible ICT policies, began modernising teaching and learning through the addition of computer laboratories, which remain in use today for their hands-on learning experiences and ability to accommodate diverse student needs (Gunter et al., 2012; Sharma, 2019; Munje & Jita, 2020; Alam, 2021; Anastasopoulou et al., 2024).

The use of ICT as a teaching and learning tool in classrooms varies based on lesson objectives, classroom context and student motivation (Groff et al., 2009; Gómez-Poyato et al., 2022). Due to these factors, careful planning is essential to ensure ICT's effectiveness and to establish the pedagogical and content foundation of lessons (Elmqaddem, 2019; Koenig et al., 2024). As society evolves, so do the students that educators are confronted with, making it crucial for subjects like history to adapt their methodologies to remain relevant (Bloom, Dole & Kowalske 2016; Cytrin, 2018). VR-HMDs, in particular, should be used to support interdisciplinary teaching and learning, preventing educational stagnation (Muller & Young, 2010; Leung et al., 2018).

This article is aimed to explore the pedagogical potential of VR-HMDs as ICT tools in the training of pre-service history teachers by affording them opportunities to engage with subject matter in VLEs. Secondly, to explore the extent to which VLEs foster the SDL skills (communication, critical thinking and metacognition) of pre-service history teachers.

In conclusion, it also requires mentioning that while this article explores the possible potential of the inclusion of VR-HMDs as a pedagogical tool in the training of pre-service history teachers, it does not argue to discard traditional methodologies. This inclusion is done not to discard the old, but rather to find a way in which history education as a whole can be modernised while still drawing the full benefit of traditional methods as Thotse (2021) and Hasan et al. (2023) argue that traditional methods still have immense value and are widely used. Thus, this article seeks to find a balance between traditional and contemporary pedagogies.

Literature review

Modern society is rapidly evolving and can now be described as a digital age due to the extensive exposure to various technologies (Levin & Mamlok, 2021; Lendzhova et al., 2022; Rajput & Sharma, 2025). In this digital era, finding effective ways to entice student engagement is an ever-increasing challenge that could potentially be overcome using ICTs (Levin & Mamlok, 2021; ClassVr, 2022; Anastasopoulou et al., 2024). While technologies such as cell phones and gaming consoles have become more accessible and popular, their integration into education remains limited, while other technologies such as AI, for example, ChatGPT, has taken education by storm, post Covid-19 (ClassVr, 2022; Haleem et al., 2022; Guardiola, 2025). The 4IR with its focus on technological advancement and innovative applications, has led to the development of a distinct process of methodological and pedagogical reform within the educational system. This educational transformation depends on the degree to which ICTs are integrated in fostering twenty-first century SDL skills, for example, critical and creative thinking (Burns & Graafland, 2018). It is these aforementioned and other self-regulatory skills that promote metacognitive processes that will empower students to not only take responsibility for their own learning, but also allow them to formulate strategic plans regarding how they aim to achieve their academic objectives through the promotion of self-motivation.

The methodological and pedagogical reforms during the 4IR, when applied to the study of history, could potentially enhance both teaching and learning experiences for pre-service history teachers by promoting the use of ICTs, such as VR-HMDs (Mannak et al., 2024). Effective reform involves a purposeful and goal-oriented application of ICTs to enrich educational practices. This ICT driven approach is intended to move beyond one-dimensional teaching and learning methods, which are considered inadequate for modern educational needs (Mashiyi & Baleni, 2023). Despite advancements in history education, which have shifted from simplistic to more advanced approaches, some educators still rely on traditional methodologies that offer limited opportunities for developing critical skills (Hasan et al., 2023). Modern history educators face significant challenges due to the complexities of teaching the subject. With reference to the Holocaust, for instance, Gouws (2019:2) is of the opinion that history school teachers find it "complex" to navigate between the controversies and challenges surrounding the Holocaust topic, while keeping personal, professional, historical, educational and societal perceptions in mind. These challenges arise from information overload through various media platforms resulting in history educators' struggling to keep up with advancements in ICT. Such issues impact both pre-

service and in-service teachers' ability to effectively use technology in their teaching and learning repertoire (Köse, 2017; Ciriza-Mendívil et al., 2022).

The Partnership for 21st Century Skills (2009) (P21) Framework offers a clear guide to the SDL skills essential for evaluating the effectiveness of teaching and learning in various subjects, such as history within the 4IR and its move to technology driven classrooms. This framework helps in identifying and fostering critical twenty-first century skills, including those necessary for SDL. By using this overlapping framework, educators can better understand and implement the skills required to enhance students' ability to learn independently and thrive in a rapidly evolving educational landscape.

The P21 Framework (2009) illustrates the twenty-first century learning by outlining essential skills and supporting structures required for a successful modernised classroom. At its core, the framework has three critical skill areas: Life and Career Skills, Learning and Innovation Skills (such as creativity, critical thinking, communication and collaboration), and Information, Media and Technology Skills. It is these three skill areas which are then subjected to and supported by the following educational elements: standards and assessments curriculum and instruction; professional development and learning environment. These educational elements, when combined with the three critical skill areas, show the importance of a modernised ICT educational process to which this paper also prescribes.

The P21 Framework also reveals how its components are essential for preparing students to thrive in modern society. It denotes the fundamental knowledge, skills and abilities that students need to master in order to succeed in their work and lives in the twenty-first century. The P21 Framework emphasises that assessments, curriculum and instruction, professional development, learning environments and twenty-first century standards must be aligned to achieve the desired outcomes and determine the effectiveness of teaching and learning in the twenty-first century (Partnership for 21st Century Skills, 2009). Thus, the P21 Framework offers a comprehensive guide for understanding the essentials of effective teaching and learning in the modern era. It is, therefore, important that history educators tailor these guidelines to find the most effective methods for implementation.

In history education, applying the P21 Framework involves engaging students with real-life scenarios and enabling them to analyse the causes, effects and relationships between historical events. The framework supports this by emphasising the importance of critical thinking and problem-solving skills. Students should use their acquired knowledge

to address contemporary issues, applying historical context to devise innovative solutions. Furthermore, the P21 Framework aligns with the goal of developing students' ability to interpret and analyse multiple perspectives. This capability is essential for SDL and is supported by policy documents such as the National Curriculum Statement in the Curriculum Assessment Policy Statements (NCS-CAPS) (Department of Basic Education [DoBE], 2011). The P21 Framework also underscores the importance of historical thinking and reasoning skills, which are central to history education (Akhan, 2021).

In recent decades, the use of ICTs, have emerged as a significant focus in educational discussions, reflecting their growing role as pedagogical tools in the teaching and learning process (Koehler et al., 2022). The P21 Framework supports this by emphasising the integration of advanced technologies, such as VR-HMDs, to enhance educational outcomes and prepare students for the demands of the twenty-first century (Partnership for 21st Century Skills, 2009). As an emerging technology within the ICT sector, VR-HMDs have garnered significant attention for their potential benefits as pedagogical tools (Han et al., 2021). This attention is garnered due to VR's immersive environments that foster a sense of realism which could in theory, enhance student motivation and support the development of critical thinking skills in the context of SDL. It is this sense of realism that affords students the opportunity to learn through immersive experiences. This notion is further supported through a study by Grewe and Gie (2023) where it was determined that the use of immersive ICTs, especially VR-HMDs resulted in a 23 per cent higher pass rate and a 180 per cent higher student engagement rate due to increased motivation, when compared to those students that make use of conventional online or distance learning approaches.

Thus, VR-HMDs are emerging pedagogical tools within the ICT sector that can be used beneficially within SDL and history education, especially now when South African higher educational institutions have started to take an interest in VR-HMDs as a pedagogical tool (Grewe & Gie, 2023). It is this development and growing interest, coupled with the principles of the Technological Pedagogical Content Knowledge (TPACK) framework that an outline to ICT and as a result VR-HMDs is developed (Mishra & Koehler, 2006). VR-HMDs fit into the TPACK framework through the creation of teaching and learning settings that simulate realistic, immersive environments (often environments not easily accessible to students due to time and distance). Students in a South African history classroom are now, for example, afforded the opportunity to virtually visit German concentration camps such as Auschwitz. It is then that these environments could potentially boost student motivation and help in developing critical thinking skills (Fragkaki et al., 2020).

The integration of ICTs in education through frameworks like P21 and TPACK is ongoing, however, the implementation thereof, especially within South Africa education, is rather lagging (Munje & Jita, 2020). Often the assumption is made that pre-service (history) teachers are well-versed in ICTs, due to modern society being tech-driven. This unfounded assumption stems from the fact that their exposure is often limited to using tools like PowerPoint for aesthetics rather than innovative teaching methods (Fan & Tan, 2019). The effective use of ICTs should first and foremost enhance lessons beyond the effects of traditional stimuli to activate teaching and learning. By activating additional ICT stimuli (visual and auditory), student-centred approaches will be better supported and the development of twenty-first century SDL skills will become evident as students make use of more senses, all of which are paramount to learning (Zyad, 2016). The success regarding the use of ICTs is also determined on the pre-service teachers' disposition to adopt a positive mind-set toward ICT and familiarise themselves with designing blended learning tasks and assessments (Bosch et al., 2022).

In an attempt to discern the extent to which the use of ICTs are used or recommended to be used in South African education, particularly in the history curriculum, it is imperative to examine key policy documents such as the NCS-CAPS (DoBE, 2011) and the White Paper on e-Education (DoE, 2003). Both documents address the integration of ICTs in South African education to a broader sense. However, they do not focus on how specific subject disciplines (that are not technological disciplines by nature) could provide unique benefits to the various subjects that students are expected to master (Padayache, 2017). The White Paper on e-Education (DoE, 2003), at a foundational level, outlines the basic use of e-learning tools like the Internet, CD-ROMs, software and telecommunications for teaching and learning (DoE, 2003). However, it does not specify the categories of technologies that can be effectively used in the classroom (Padayache, 2017). Since the drafting of the document, new technologies with pedagogical potential such as VR-HMDs have come to the forefront. According to Tshimanika et al. (2022), the White Paper failed to meet its goals set for 2013 and as a result, did not fulfil its vision of transforming teaching and learning through ICT.

Although the White Paper serves as an introductory policy, it is not the only document guiding South African educators. The NCS-CAPS, for example, emphasises the importance of using technology responsibly, encouraging the development of critical thinking skills, and promoting the use of ICT to support students' understanding of different sources of information (DoE, 2011). Specifically, the Further Education and Training History

NCS-CAPS encourages history teachers to use visual tools such as videos and films to enhance students' understanding of the past (DoE, 2011). While the NCS-CAPS history curriculum acknowledges the importance of visual stimuli and encourages the use of ICT in the classroom (DoE, 2011), the policy does not provide educators with clear guidelines or resources on how to effectively incorporate these technologies into their teaching and learning methods. Therefore, while both documents provide a foundational indication for ICT integration, they are found lacking in terms of subject-specific guidance and practical implementation strategies.

An additional concern is the lack of subject-specific guidance on the practical application of ICT in South African schools by mentor teachers that adopt the responsibilities as teacher trainers. This presents the schooling system with a significant barrier, particularly for the more disadvantaged schools (Mkuzo & Govender, 2025). These schools and the financially stable schools face challenges in acquiring both the necessary ICT tools as well as the expertise and skills to effectively incorporate them into their classrooms. This deficiency in ICT-related guidance underscores a broader issue of inadequate support and training for ICT integration into the education system, which supports the views of Van Greunen et al. (2021). The inclusion of ICTs in South African schools is often undermined by traditional teacher-centred methods, such as the chalk-and-talk approach and has thus, mostly remained small-scale (Blignaut et al., 2010; Yu & Dlamini, 2025). This is apparent in the South African history classroom, where most history educators continue to rely on conventional teaching methods, which limits the effective use of ICT and impedes the quality of education (Odendaal-Kroon & Poole, 2018). In the same vein, Motumi (2020:57) points out that one of the primary challenges in teaching history in South Africa is the "inability and/or lack of competence" among educators to present the subject in an engaging and meaningful way that meets the needs of all twenty-first century students irrespective of their rural or urban backgrounds (Mkuzo & Govender, 2025). This continued reliance on outdated methods not only hinders the effective use of ICT, it also compromises the ability to deliver relevant and dynamic history education to modern students.

An additional challenge identified by Adukaite et al. (2016) and Pakdaman-Savoji et al. (2019) is that some South African educators, including history educators, primarily use ICTs for aesthetic purposes, rather than to apply it for pedagogical purposes. While this attempted use of ICTs can be applauded, it does not necessarily develop twenty-first century skills when used in this manner (Aslan & Zhu, 2016; Padayachee, 2017).

Padayachee (2017) underscores that simply providing technology is insufficient without proper training on its effective integration into the teaching and learning process. Adukaite et al. (2016) further argue that an educator's knowledge and understanding of ICTs as pedagogical tools directly impacts their effective use, resulting in varied implementation across history classrooms, with some educators being more familiar with ICTs in educational settings than others.

While a lot of the challenges and advantages with regards to the use of ICTs and by implication, VR-HMDs have been alluded to within a South African context, it requires mentioning that pre-service history teachers at tertiary institutions in South Africa do receive some ICT training, however, is often not as comprehensive as programmes in other countries (Maphalala, 2021; Ramnarain et al., 2021). In addition, Banda et al. (2020) point out that due to insufficient ICT training, history teachers at high school level feel less confident when required to incorporate ICTs when starting their teaching careers at schools.

The educators at tertiary institutions attitudes are major predictors of the use of new technologies in instructional settings, and can therefore, not be underestimated (Ogegbo et al., 2024). Bansa (2020) cautions that the relationship between educators' perceptions and beliefs about ICT and its practices is complex. Factors outside educators' control were identified by Jošanov (2008) which affect the adoption and incorporation of ICTs. These factors, to name a few, are: institutional culture; leadership; curriculum; assessment programmes and financial constraints (MacDowell et al., 2025). While these external factors are influential, educators at tertiary institutions still have significant control over how technology is practically used within the training of pre-service history teachers.

The concept of VR can be traced back to the 1960s (Renganayagalu et al., 2021), however, earlier attempts at creating realism in non-physical realms date back to the nineteenth century. Artists created panoramic 360° murals to immerse viewers in the scenes they depicted. Additionally, Charles Wheatstone's 1838 research showed that the brain merges two-dimensional images from each eye (Cavaco et al., 2025), leading to the use of stereoscopic images. The View-Master stereoscope, patented in 1939, became popular in virtual tourism and is considered a precursor to modern VR-HMDs like Google Cardboard (Virtual Reality Society, 2022). As technology advanced in the twentieth century, improvements in computer and electronics further developed the ability to stimulate human senses (ABC News, 2015; Virtual Reality Society, 2022).

Over the course of the last decade VR has experienced an increase in popularity as an entertainment tool due to competition in affordability and varied hardware, with VR-HMDs becoming the main device (Renganayagalu et al., 2021). These headsets cover the user's field of vision and use head-tracking technology for navigation (Specht et al., 2021). VR-HMDs create stereoscopic vision by showing offset images to each eye, often using a single screen with a divider (Ogegbo et al., 2024). These screens simulate the natural field of vision using special lenses and tracking technology (Virtual Reality Society, 2022). With built-in audio and real-time visual updates, VR-HMDs enhance immersion and simulate real-world experiences (Baker et al., 2023). The Oculus Rift, introduced in 2012, boosted VR-HMD use with its affordability and quality (Concannon et al., 2019), leading to many administrators and private companies seeing the advantageous applications thereof in education and training (Renganayagalu et al., 2021).

VR-HMDs have as a result, grown significantly in various fields, including education, health, and engineering (Checa & Bustillo, 2020). The benefits are vast, particularly in providing visualisations not possible in traditional classrooms that stimulate deeper understanding through immersive experiences (Hicks, 2016; Villena Taranilla et al., 2022; Ghosh & Ravichandran, 2024). VR-HMDs, popular in gaming, have proven effective in the field of education in aviation and medicine, with research showing higher performance in students using VR-HMDs in engineering (Alhalabi, 2016). In history education, VR-HMDs can also be beneficial as shown by the research of Yildirim et al. (2018) and Victor (2023). One, if not the most important, benefit of VR-HMDs is that it affords the user the opportunity to regard themselves as part of the environment which then increases their interest and as a result, their motivation to engage with the content. Additionally, the use of VR-HMDs visualises historical events, for example Pearl Harbour, and places such as the Holocaust Museum, which would otherwise be extremely difficult to impossible for some to see. Moreover, studies showed that parents believe VR helps students develop empathy and gain new learning opportunities (Aubrey et al., 2018). Moreover, VR offers various benefits such as immersion, improved perspective-taking and enhanced engagement with the content being experienced (Wang, 2018; Villena Taranilla et al., 2022). It promotes self-regulated learning, critical thinking and motivation, while also helping students develop cognitive, affective and psychomotor skills. Additionally, VR-HMDs can aid teacher professional development by providing engaging simulations in a risk-free setting (Advanced Micro Devices [AMD], 2017; Capatina et al., 2017; Ghosh & Ravichandran, 2024). The immersive nature of VR makes it particularly effective for experiential and constructivist learning, due to it significantly impacting cognitive perceptions of reality

(Makransky & Petersen, 2021). This makes VR-HMDs a valuable tool in education, potentially improving outcomes, motivation and student engagement, especially in subjects like history where it fosters relatable learning experiences (Lege & Bonner, 2020; Horváth et al., 2024).

While VR and HMDs offer numerous benefits in education, they also present certain challenges and limitations as ICT teaching tools (Fernandez, 2017). The Oculus Rift, for example, has been discontinued which serves as an indication that constant upgrades are required to prevent the technology from becoming outdated. The excessive use of VR could desensitise students and reduce its progressive impact on learning (AMD, 2017) and academic development (Fiani et al., 2024). Research by Aubrey et al. (2018) on the commonsense organisation into VR, found initial parental scepticism about VR fostering empathy, though opinions shifted positively for those whose children used VR. Health concerns have also been established when using VR-HMDs, with Aubrey et al. (2018) and Milanesi (2016) and Mon-Williams (2017) highlighting the unknown long-term effects on children, advocating for moderation and supervision. VR-HMDs' proximity to the eyes could lead to eyestrain and headaches due to visual disparity (Mon-Williams, 2017; Renganayagalu et al., 2021). Additional potential health issues include dizziness, anxiety, nausea and blurred vision (Kaleci, 2017).

When exploring VR-HMDs in history education, numerous VR resources like Avantis World, ClassVR and various VR history apps are available on Google Playstore that can be utilised, each with its own cost involved. When specifically looking at Avantis World, used in this research, as an example, we find that it is an online platform divided into different zones, or 'lands', offering immersive VLEs for students to explore independently. These VLEs allow students to discover, investigate and conduct research as though they were physically present at the location. In addition to the immersive experience, Avantis World provides VR lesson plans for their different zones, which include teaching strategies and assessment methods. Specifically, for history education, the platform features the "Trip Through Time Land", covering various NCS-CAPS related topics such early civilisations (The Ottoman Empire, the Middle Ages and the Taj Mahal), the age of exploration (Christopher Columbus, Colonialism and the Black Death), the age of revolution (Europe in the Napoleonic Era, the Industrial Revolution and the Gold Rush) and the modern world (a Jewish Ghetto, Civil Rights Movement, D-Day Landing, Life in Concentration Camp, Pearl Harbour and the virtual Holocaust Museum (accessed through ClassVr specific software). These resources enhance learning by creating interactive and engaging

experiences for students. These experiences are supported by MacDowell et al. (2025), where the author highlights the transformative potential of VR-HMDs in teaching history.

Research design and methodology

A predominately qualitative research design was applied with a minor incorporation of quantitative data to support the qualitative findings. The method of investigation used was that of a single exploratory case study. The focus was on exploring the potential of VR and its application through VR-HMDs in the training of pre-service history teachers and the development of their SDL skills. In informing and guiding the research design a mixed paradigmatic framework combining both the constructivist and interpretivists paradigms were used. The constructivist paradigm, as outlined by Jagtap (2017), allows participants to actively engage in constructing and acquiring knowledge, encouraging life-long learning. This approach was particularly useful for the current study, as it allowed the participants to derive meaning from their hands-on experiences with VR-HMDs in history education (Waring, 2012). The constructivist approach is enriched by the interpretivist paradigm, which emphasises understanding the individuality of participants, acknowledging their backgrounds, experiences and opinions (Maree & Pieterson, 2016). Interpretivism helps provide a deeper understanding of how participants' subjectivity shapes their experiences and perceptions, offering a more comprehensive view of their reality within the broader social context (Maree & Pieterson, 2016).

Population and sample

From a population of 30 second-year pre-service history teachers at a tertiary education institution, a purposive sample of fifteen participants were drawn, who were from diverse cultural backgrounds and represented different gender identities. These second-year pre-service history teachers were specifically chosen because their stage of teacher training makes them more receptive to innovative teaching approaches. It is noted by Darling-Hammond et al. (2020) that students in their mid-stage of teacher training are often more adaptable and willing to engage in pedagogical innovation. This is because they are still forming their professional identities and are encouraged to explore diverse teaching and learning approaches. In adhering to ethical practices, all participants were provided with voluntary consent forms and could withdraw from the research process at any stage. Moreover, all elicit responses were also provided voluntarily. Thus, the final group of participants were fully informed of the research process; the manner in which research would be conducted and their roles within the process.

Data collection and analysis

In the data collection and analysis process, the sample of fifteen participants shared their opinions, attitudes, knowledge and experiences regarding VR-HMDs within pre-service history teacher training.

Tools for data collection

The data was collected using data collection tools such as open-ended questionnaires, Kahoot quiz online questionnaire application, worksheets and semi-structured focus group interviews. Additionally, observational field notes were used to gauge participants' attitudes toward the study. Participants were placed within multiple VLEs and accessed these VLEs using VR-HMDs. Both the hardware (two headsets and controller) and software (Avantis World and additional VLEs) used was provided by ClassVR. Two participants entered different VLEs at the same time (they were at different stages of the researching process). Within these VLEs they had to walk through a virtual Holocaust Museum, engage with exhibits, provide feedback on their experience and eventually answer open-ended questionnaires and participate in semi-structured focus group interviews. To minimise any potential physical harm, an open-space was created for the participants to safely move around with most movements within the VLE being managed using a controller that they themselves had control over. These activities that the pre-service history teachers participated in were intended to show how VR-HMDs can be introduced to history education and how it can be used as an explorative activity aiming to develop content knowledge and SDL skills.

Method of analysis

According to Flick (2014) and Creswell (2014), qualitative data analysis revolves around the interpretation of linguistic and visual information (data) to answer the study's research questions. Furthermore, Flick (2014) emphasises the importance of analysing both explicit content as well as the underlying meaning of responses. Thus, this qualitative method of analysis relies on interpretation skills as a central feature to understanding qualitative data within a thematic categorisation where responses where transcribed verbatim to accurately categorise recurring themes (Hill et al., 2022).

While qualitative data was used as the primary source of data, limited amounts of quantitative data was also collected and analysed. As suggested by Grosser (2016), this

quantitative approach was utilised to determine patterns, means and a standard deviation from the participant responses.

Qualitative data

Qualitative data was collected through an open-ended questionnaire, paper-based worksheet, focus group interviews and field notes—all of this took place after participants entered the VLEs using VR-HMDs. The open-ended questionnaire explored participants' baseline knowledge, backgrounds and attitudes towards ICTs and especially VR. Most participants had a common experience in the use of ICT tools like laptops, tablets and cell phones and academic platforms such as Efundi, however, few had ever used VR-HMDs and none engaged with VR as an educational tool. Despite this, participants showed enthusiasm and curiosity about VR in education, and not just as a tool for commercial gaming. This lack of VR experience through participating in this study also encouraged participants to reflect critically on ICTs they have been exposed to and the way these ICTs have been used to align and promote SDL skills.

Following this initial researching phase, participants completed a paper-based worksheet centred around the VR experiences from immersive VLEs that they have been exposed to. These VLEs included a virtual Holocaust Museum, a WWII battlefield and Pearl Harbour. This paper-based worksheet focused on how content was experienced and understood and if the experience of VR contributed (in their opinion) to a deeper understanding. Most of the participants believed that the visual, immersive nature of this VR experience deepened their understanding, while also eliciting an emotional response that improved their empathy towards those involved and the topic as a whole, while it also enhanced information retention This is proven by the following opinions:

> *"Definitely change people's perspectives of what they think… and I think that would be very, very important for them to the learning process as well".*

> *"It made me realise that war is not the answer to any problem and that we should avoid it at all costs".*

> *"…they linked together and helped me learned better about history" and ""Yes…It was like an experiance (sic) in their shoes".*

Some participants described a sense of being present in the VLE as if it replaced reality, which contributed to developing historical consciousness and more meaningful learning. It is these opinions expressed as follows:

"It's the fact that we got the feel of what it was like…" and "It added to my knowledge by actually taking me to the event…", that adds to the value of VR-HMDs within history education.

In the final phase of gathering qualitative data, semi-structured focus group interviews revealed that most participants found their first VR-HMD experience enjoyable and believed it could benefit the emotional engagement that students could have with historical content. Approximately half of the participants were also of the opinion that VR-HMDs could play a pivotal role in connecting pedagogy and content knowledge while developing SDL skills. While the responses were mostly positive, participants did not shy away from the concerns and limitations they could foresee using VR within education. These concerns and limitations include cost, technical issues, unfamiliarity with VR and logistical challenges like load-shedding. Nevertheless, most participants agreed VR was more feasible for tertiary education as many expressed a strong desire to use it in their future classrooms. They also believed that consistent exposure to VR could improve motivation, goal-setting, critical thinking, and overall engagement in teacher training.

Quantitative data

Quantitative data was collected through pre- and post-test VLE questionnaires, with additional input from a Kahoot quiz after the exposure to the VLEs. The Kahoot quiz tested the participants content knowledge after being exposed to the virtual Holocaust Museum, WWII battle re-enactment and Pearl Harbour VLEs and provided the researcher with numerical data regarding their results. These data collection instruments aimed to substantiate the qualitative findings by capturing participants' knowledge and perceptions around ICT, VR-HMDs and SDL through mean scores. To condense the data gathered, the questions used have been clustered for this paper. The first cluster of questions focused on ICT-related competencies, it is here where most participants indicated that they do have a solid understanding of ICT (mean score 4.3), however, they also have a slightly lower grasp of VR-specific concepts (mean score 3.5). This lower score, when focusing on VR, is likely due to limited prior exposure to the technology as an ICT. Nonetheless, most participants still showed positive attitudes. The following cluster of questions looked at SDL skills, and it is here where participants reported confidence in critically questioning, problem-solving, and open-mindedness (mean scores of 4.0–4.4), thus indicating a strong understanding of what is meant when SDL principles are in question.

The post-test VLE responses revealed a clear willingness to adopt ICTs—especially VR-HMDs—in history education and especially within their own teaching and learning experiences, with the highest mean score of 4.6. This willingness suggests that exposure to immersive technologies positively influenced participants' beliefs and attitudes regarding their educational merit. Participants further highlighted the interactivity and immersive nature of VR as a key beneficial educational tool, while also promoting better information recall and conceptual understanding (mean score of 4.5) and the development of SDL skills (mean score of 4.2). Moreover, 66.6 per cent of participants believed that VR technologies could extend beyond tertiary education into school settings, this further reinforced the broader applicability of VR-HMDs in enhancing historical understanding and fostering SDL skills.

Findings and discussion

This study, which is part of a larger study, explores the pedagogical potential of VR-HMDs when incorporated in the teaching and learning of pre-service history teachers. The empirical research conducted revealed an overwhelmingly positive attitude from the participants towards VR-HMDs as a potential educational ICT in history teaching and learning. This result is confirmed by Yildirim et al. (2018) and Victor (2023) who found that history students welcomed VR technologies as a tool to improve their learning experiences. The participants emphasised that they believe the inclusion of VR-HMDs could potentially lead to heightened student engagement, improved student motivation, deeper historical understanding and the promotion of SDL skills. These potential advantages identified by the participants of this study are supported by the findings of Wang (2018), Villena Taranilla et al. (2022), Horváth et al. (2024), Lampropoulos & Kinshuk (2024), Ogegbo et al. (2024) and MacDowell et al. (2025), who conclude that students that are engaged with VR experience increased motivation, foster a positive attitude to learning and enhanced understanding. A key factor as to why these studies delivered similar findings, with a special focus on positive attitude and improved motivation, is due to the fact that the participants found the simulations enjoyable, immersive and transformative.

The findings of the study also determined that VR-HMDs offer experience-based immersive learning environments in which learning can take place—a conviction that is supported by the research of Ghosh and Ravichandran (2024). It is these learning environments that cater to a diverse range of learning preferences. Furthermore, the participants opined that the VLEs used facilitated deeper connections between historical

subject content knowledge and pedagogical strategies. It is then that these beliefs of the participants that VLEs have the potential of enhancing memory retention and fostering historical insight. Moreover, these VLEs provided a unique first-person perspective that encouraged critical thinking and supported a more student-centred approach to learning. It is these advantages that underscore the necessity of transformative educational ICTs such as VR within the teaching and learning process. It is within the use of these transformative ICTs such as VR where SDL skills such as independent goal-setting, reflective thinking and self-regulation are better developed.

Furthermore, it is these advantages and the added emotional engagement that students may have with subject content through VR that allows for a teaching and learning experience that aligns with constructivist learning principles (Aubrey et al. 2018), where learners actively construct meaning through authentic experiences. The immersive nature of VR allowed students to explore historical environments and narratives in ways that traditional methods cannot easily replicate, supporting both cognitive and affective dimensions of learning. Thus, the use of VR in history classrooms, while not providing tactile interactions, still afford students a broadened access to the way in which content can be engaged with. This finding is confirmed by Stephan et al. (2025). While tactile interactions are not yet readily available in the use of VR-HMDs, the technology does still provide a sense of realism through auditory and visual stimuli.

However, this article also acknowledges several limitations that must be addressed for effective implementation. The high costs associated with acquiring and maintaining VR technology, coupled with technical difficulties and infrastructure issues such as load shedding, create real barriers within the South African context. While these limitations alone are worrisome, it is also found that the scarcity of South African curriculum-aligned historical VR content also plays a role in limiting VR as an educational tool. These limitations mentioned above were also identified Ghosh & Ravichandran (2024) and Mnisi et al. (2024). Additionally, some participants identified that they experienced some eye-strain and motion sickness, two unfortunate qualities that do pose health concerns. These health-related limitations did, however, also appear in other similar studies, especially those of Mon-Williams (2017), Renganayagalu et al. (2021) and Voinescu et al. (2025). Nevertheless, while these limitations truly require consideration, they did not significantly detract from the overall positive reception and enthusiastic attitude towards VR in history education expressed by participants.

Despite these limitations, most participants expressed a strong interest in the continued use of VR-HMDs in their teacher training programmes. They recognised its value not only for academic development, but also for enhancing professional preparedness when it comes to the use of modern ICTs and the development of their SDL skills. Thus, the potential of VR (VR- HMDs) as an ICT with its SDL advantages, improved attitude and motivation, deeper understanding and global accessibility outweigh any financial fears that institutions may have regarding VR.

The findings further supported by Lege and Bonner (2020) that VR-HMDs hold considerable potential as a powerful educational tool in history teacher training. Institutions with the capacity to invest in VR-HMDs are encouraged to explore its integration, as it offers innovative, learner-centred experiences that align with contemporary educational goals and foster deeper, more meaningful engagement with the past. It is also by actively engaging with this technology and the companies that produce the VR apps, that more curriculum related content will be created and thus, eliminating another limitation thereof.

Conclusion and recommendations

This study explored the pedagogical potential of VR-HMDs in the training of pre-service history teachers and the development of SDL skills, emphasising both the promising benefits and the challenges associated with its implementation. The findings revealed that VR-HMDs significantly enhanced cognitive processes such as memory retention and reflective and critical thinking. By immersing participants in historically themed VLEs, the technology deepened their understanding of historical events, fostered empathy and contributed to the development of historical consciousness. Moreover, the immersive nature of VR-HMDs supported a more engaging and enjoyable learning experience promoting active participation and strengthening the SDL skills of the pre-service history teachers.

Furthermore, the study emphasised and recommends the importance of ensuring equitable access to VR technology, particularly for underprivileged schools, to allow all learners to benefit from this innovative educational tool. Based on the findings of this study, it is necessary to foster collaboration between key academic stakeholders in developing more historical VR content and providing appropriate training and resources for educators. This collaboration is important in seeking answers and solutions to the high cost of VR equipment, technical issues related to hardware and software, the scarcity of high-quality

historical VR content and the potential health concerns. It is further recommended—within history education studies—that the use and effect of VR gamification as a pedagogical tool should be researched in future. By addressing these challenges and taking proactive steps, VR-HMDs can be successfully integrated into history education, providing a modern and impactful approach to teaching and learning. By continuing to introduce and advance technology in education, the learning potential will be maximised, especially for the twenty-first-century history student. This maximisation of pedagogical potential will take place even more so if ICT introduction is coupled with immersive learning opportunities, such as those provided and showcased by VR-HMDs and VLEs.

In conclusion, the integration of emerging technologies such as VR-HMDs within the professional training of pre-service history teachers has the potential to revolutionise the teaching and learning of history by experiencing immersive and interactive learning environments that provide personalised learning experiences. A key point that requires emphasising as a final thought is that of Stephan et al. (2025), wherein the opinion is expressed that should VR be introduced to teaching and learning consistently, it has the potential to democratise education and provide supplementary experiences to students that would otherwise not have access to the information and / or locations being studied. Thus, the use of VR-HMDs provides a sense of enrichment to history education by presenting a modern world perception for a historical past.

References

ABC News 2015 2 October. Mattel gives classic view-master toy a modern VR makeover. ABC News. Available at https://abcnews.go.com/Business/mattel-classic-view-master-toy-modern-vr-makeover/story?id=34203285 Accessed on 22 October 2024.

Advanced Micro Devices Inc. (AMD) 2017. *Cultivating new levels of student engagement through virtual reality.* Available at https://www.amd.com/Documents/vr-in-the-classroom-case-study.pdf Accessed on 13 July 2024.

Adukaite, A, Van Zyl, I & Cantoni, L 2016. The role of digital technology in tourism education: a case study of South African secondary schools. *Journal of Hospitality, Leisure, Sport & Tourism Education,* 19:54-65.

Akhan, O 2021. History teaching approaches preferred by Turkish and Russian history teachers. *World Journal of Education*, 11(1):62-74.

Alam, A 2021. National education policy-2020 and integration of information and communications technology (ICT) with education. In: A Arya, Y Ashraf, S Chavhan, P Jotania, R Nanaware, N Peblication & U Singh (eds.). *Digital education post COVID era*. Surat, Gujarat, Bhärata: Nexus Publications.

Alhalabi, W 2016. Virtual reality systems enhance students' achievements in engineering education. *Behaviour & Information Technology*, 35(11):919-925.

Anastasopoulou, E, Tsagri, A, Avramidi, E, Lourida, K, Mitroyanni, E, Tsogka, D & Katsikis, I 2024. The impact of ICT on education. *Technium Social Sciences Journal,* 58:48-55.

Arek-Bawa, O & Reddy, S 2024. Conceptualising a framework for digitally transforming teacher education in the South African context. *Journal of Education*, 97:4-28.

Aslan, A & Zhu, C 2016. Influencing factors and integration of ICT into teaching practices of pre-service and starting teachers. *International Journal of Research in Education and Science*, 2(2):359-370.

Aubrey, JS, Robb, MB, Bailey, J & Bailenson J 2018. *Virtual reality 101: What you need to know about kids and VR*. San Francisco, CA: Common Sense.

Baker, J, Nam, K & Dutt, CS 2023. A user experience perspective on heritage tourism in the metaverse: Empirical evidence and design dilemmas for VR. *Information Technology & Tourism*, 25:265-306.

Banda, M, Hamaundu, M & Mwansa, BM 2020. Views of teachers towards ICT integration in history. *International Journal of Humanities Social Sciences and Education*, 7(6):116-122.

Bansa, Y 2020. The use of ICT in teaching: Lecturers' perceptions, obstacles, and expectations. *Journal of Physics: Conference Series*, 1464(1):1-9.

Blignaut, AS, Hinostroza, JE, Els, CJ & Brun, M 2010. ICT in education policy and practice in developing countries: South Africa and Chile compared through SITES 2006. *Computers & Education*, (55)4:1552-1563.

Bosch, C, Van der Westhuizen, C & Mihai, M 2022. Blended learning and assessment. In: PG Warnich (ed.). *Meaningful assessment for 21st century learning*. Pretoria: Van Schaik Publishers.

Burns, T & Graafland, JH 2018. *New technologies and 21st century children: Recent trends and outcomes*. OECD Education Working Paper, 179. Available at https://www.infocop.es/wp-content/uploads/2023/12/New-technologies-and-21st-century-children-OECD.pdf Accessed on 18 July 2024.

Capatina, A, Schin, C & Rusu, D 2017. Increasing academic brand awareness through virtual reality. *Review of International Comparative Management*, 18(2):171-182.

Cavaco, R, Lopes, T, Capela, D, Guimarães, D, Jorge, PA & Silva, NA 2025. Beyond human vision: Unlocking the potential of augmented reality for spectral imaging. *Applied Sciences*, 15(12):1-14.

Checa, D & Bustillo, A 2020. A review of immersive virtual reality serious games to enhance learning and training. *Multimedia Tools and Applications*, 79(9):5501-5527.

Chouthaiwale, SS & Alkamel, MAA 2018. The positive effect of ICT on the English language learning and teaching. In *Dialoguing borders: vital issues in humanities, commerce, IT and management. Veda's Journal of English Language and Literature (JOELL)*, 29-33. Available at https://www.scirp.org/reference/referencespapers?referenceid=3263787 Accessed on 13 November 2024.

Ciriza-Mendívil, CD, Lacambra, AM & Hernández de la Cruz, JM 2022. Technological pedagogical content knowledge: Implementation of a didactic proposal for preservice History teachers. *Frontiers in Education*, 7:1-10.

ClassVr 2022. *A guide to VR & AR in education*. Avantis sytems Ltd. Available at https://www.classvr.com/school-curriculum-vr-ar-content/ar-content/ Accessed on 17 February 2025.

Concannon, BJ, Esmail, S & Roduta Roberts, M 2019. Head-mounted display virtual reality in post-secondary education and skill training. *Frontiers in Education*, 4(80):1-23.

Creswell, JW 2014. *Research design: Qualitative, quantitative and mixed methods approaches*, 4th ed. University of Nebraska: SAGE Publications Inc.

Crouch, L & Hoadley, U 2018. The transformation of South Africa's system of basic education. In: B Levy, R Cameron, U Hoadley & V Naidoo (eds.). *The politics and governance of basic education: a tale of two South African provinces.* Oxford University Press: United Kingdom.

Cytrin, Y 2018. Trends and changes in training history teachers in academia, and its interface with the Israeli education system. *Journal of Education and Training Studies*, 6(5):92-100.

Dahal, A & Bhat, N 2023. Self-directed learning, its implementation, and challenges: A review. *Nepal Journal of Health Sciences*. 3(1):102-115.

Darling-Hammond, L, Flook, L, Cook-Harvey, C, Barron, B & Osher D 2020. Implications for educational practice of the science of learning and development. *Applied Developmental Science*, 24(2):97-140.

Department of Basic Education (DoE) 2011. *Curriculum and assessment policy statement grades 10 – 12 History*. Pretoria: Department of Basic Education.

Department of Education (DoE) 2003. *Draft white paper on e-Education: Transforming learning and teaching through ICT*. Pretoria: Government Printer.

Dlamini, RS 2022. Complex inequalities and inequities in education: Expanding socially just teaching and learning through digitalisation in South Africa. *Alternation*, 39:193-213.

Dole, S, Bloom, L & Kowalske, K 2016. Transforming pedagogy: Changing perspectives from teacher-centered to learner-centered. *Interdisciplinary Journal of Problem-Based Learning*, 10(1):1-14.

Elmqaddem, N 2019. Augmented reality and virtual reality in education. Myth or reality? *International Journal of Emerging Technologies in Learning*, 14(3):234-242.

Fan, RJD & Tan, PJB 2019. Application of information technology in preschool aesthetic teaching from the perspective of sustainable management. *Sustainability*, 11(7):2179.

Fernandez, M 2017. Augmented virtual reality: How to improve education systems. *Higher Learning Research Communications*, 7(1):1–15.

Fiani, C, Saeghe, P, McGill, M & Khamis, M 2024. Exploring the perspectives of social VR-aware non-parent adults and parents on children's use of social virtual reality. In *Proceedings of the ACM on Human-Computer Interaction,* 8(CSCW1), pp.1-25. Flick, U 2014. *An introduction to qualitative research*, 5th ed. London: SAGE Publications.

Fragkaki, M, Mystakidis, S, Hatzilygeroudis, I, Kovas, K, Palkova, Z, Salah, Z, Hamed, G, Khalilia, WM & Ewais, A 2020. Tpack instructional design model in virtual reality for deeper learning in science and higher education: From "apathy" to "empathy". Available at https://www.academia.edu/download/63493197/TESLA-EDULEARN20-Submitted_.pdf Accessed on 03 February 2025.

Ghosh, L & Ravichandran, R 2024. Emerging technologies in vocational education and training. *Journal of Digital Learning and Education*, 4(1):41-49.

Gómez-Poyato, MJ, Eito-Mateo, A, Mira-Tamayo, DC & Matías-Solanilla, A., 2022. Digital skills, ICTs and students' needs: A case study in social work degree. *Education Sciences*, 12(7): 443-461.

Gouws, B 2019. Emotions in Holocaust education - The narrative of a history teacher. *Yesterday & Today*, 21:47-79.

Graham, MA, Kruger, GM & Van Ryneveld, L 2024. Developing a novel model for ICT integration in South African education: Insights from TIMSS. *Education Sciences*, 14(8):1-20.

Grewe, MH & Gie, L 2023. Can virtual reality have a positive influence on student engagement? *South African Journal of Higher Education*, 37(5):124-141.

Groff, J, Haas, J, Klopfer E & Osterweil, S 2009. Simulations. In: J Groff, J Haas, E Klopfer & S Osterweil (eds.). *Using the technology of today in the classroom of today: The instructional power of digital games, social networking, simulations and how teachers can leverage them*. Boston, MA: Massachusetts Institute of Technology.

Grosser, M 2016. *Kwantitatiewe data-insamelingsmetodes/-instrumente* (Qualitative data collection methods/instruments). In: I Joubert, C Hartell & K Lombard (eds.). *Navorsing vir die beginnernavorser (Research for the novice researcher.* Pretoria: Van Schaik Publishers.

Guardiola, MA 2025. Educational leadership and AI in the post-COVID-19 era: Ethical challenges and opportunities in Catalonia. In: M Hawamdeh (ed.). *Digital citizenship and the future of AI engagement, ethics, and privacy*. United States of America: IGI Global Publishing.

Gunter, GA, Gunter, RE & Shelly, GB 2012. *Teachers discovering computers: Integrating technology in a connected world*, 7th ed. Boston: Engage Learning.

Haleem, A, Javaid, M, Qadri, MA & Suman R 2022. Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, 3:275-285.

Hamzah, F, Abdullah, AH, & Ma, W 2024. Advancing education through technology integration, innovative pedagogies and emerging trends: A systematic literature review. *Journal of Advanced Research in Applied Sciences and Engineering Technology*, 41(1):44-63.

Han, I, Shi, HS, Ko, YK, Byun, JH & Yu, J 2021. Educational transformation through VR-based learning systems. *Educational Technology & Society*, 24(2):23-36.

Hasan, H, Kuswandi, D & Thaariq, Z 2023. What should history learning in practice look like? A meta-analysis review. *Jurnal Pendidikan Progresif (Journal of Progressive Education)*, 13(3):1251-1266.

Hill, Z, Tawiah-Agyemang, C, Kirkwood, B & Kendall, C 2022. Are verbatim transcripts necessary in applied qualitative research: experiences from two community-based intervention trials in Ghana. *Emerging Themes in Epidemiology*, 19(5):1-10.

Horváth, CS, Lampert, B & Pongrácz, A 2024. Opportunities of VR for teaching history. *Acta Polytechnica Hungarica (Proceedings in the Hungarian Polytechnic)*, 21(3):143-162.

Hicks, P 2016. The pros and cons of using virtual reality in the classroom. *eLearning Industry*. Available at https://elearningindustry.com/pros-cons-using-virtual-reality-in-the-classroom Accessed on 20 December 2024.

Hu-Au, E & Lee, JJ 2018. Virtual reality in education: A tool for learning in the experience age. Columbia, SC: University of South Carolina, Centre for Teaching Excellence.

Jagtap, A 2017. Paradigms of constructivism: Constructivist teaching and constructivist content organization. *Scholarly Research Journal for Humanity Science & English Language*, 4:4325-4333.

Jensen, LX & Konradsen, F 2018. A review of the use of virtual reality head-mounted displays in education and training. *Education and Information Technologies*, 23:1515-1529.

Jošanov, I 2009. Human resource management and digital companies: Approach and success stories from Serbia. *Management Information Systems*, 4(2):3-10.

Kaleci, D, Tepe, T & Tüzün, H 2017. Üç boyutlu sanal gerçeklik ortamlarindaki deneyimlere ilişkin kullanici görüşleri [User opinions on experiences in three dimensional virtual reality environments], *Turkey Social Studies Journal*, 21(3):669-689.

Karki, H 2019. A brief history of public education, Information & Communication Technology (ICT) and ICT in public education in Nepal. *Deerwalk Journal of Computer Science and Information Technology*, 1:78-103.

Koehler, AA, Cheng, Z, Fiock, H, Wang, H, Janakiraman, S & Chartier, K 2022. Examining students' use of online case-based discussions to support problem solving: Considering individual and collaborative experiences. *Computers & Education*, 179: Article 104407.

Koenig J, Heine, S, Jaeger-Biela, D & Rothland, M 2024. ICT integration in teachers' lesson plans: A scoping review of empirical studies. *European Journal of Teacher Education*, 47(4):821-849.

Köse, M 2017. The role of high school history teachers on university students' attitudes toward history classes. *Theory & Practice*, 17(4):1291-1316.

Lampropoulos, G & Kinshuk, 2024. Virtual reality and gamification in education: A systematic review. *Educational Technology Research and Development*, 72(3):1691-1785.

Lege, R & Bonner, E 2020. Virtual reality in education: The promise, progress, and challenge. *The JALT CALL Journal,* 16(3):167-180.

Lendzhova, V, Milenkova, V & Manov, B 2022. Digitalization of modern society: The Bulgarian case. *International Journal of Emerging Technology and Advanced Engineering*, 12(4):16-23.

Leung, T, Zulkernine, F & Isah, H 2018. *The use of virtual reality in enhancing interdisciplinary research and education*. Available at https://arxiv.org/pdf/1809.08585 Accessed on 18 February 2025.

Levin, I & Mamlok, D 2021. Culture and society in the digital age. *Information*, 12(2):68-81.

MacDowell, P, Jaunzems-Fernuk, J, Clifford, J, Ghani, A & Hoy, B 2025. Virtual reality in history education: Instructional design considerations for designing authentic, deep, and meaningful learning. *The Journal of Applied Instructional Design*, 14(1):6-48.

Makransky, G & Petersen, GB 2021. The cognitive affective model of immersive learning (CAMIL): A theoretical research-based model of learning in immersive virtual reality. *Educational Psychology Review*, 33(3):1-22.

Mannak, P, Huijgen, T & Tuithof, H 2024. Using virtual reality to promote historical contextualisation in classrooms. *Teaching History*, 197:62-69.

Maphalala, C 2021. South African teachers'perspectives on using the computer as a tool for teaching and learning. *International Journal of Education*, 9(1): 93-104.

Maree, K & Pieterson, J 2016. Sampling. In: K Maree (ed.). *First steps in research*. 2nd ed. Pretoria: Van Schaik Publishers.

Marougkas, A, Troussas, C, Krouska, A & Sgouropoulou, C 2024. How personalized and effective is immersive virtual reality in education? A systematic literature review for the last decade. *Multimedia Tools and Applications*, 83(6):18185-18233.

Mashile, T 2017. Technology integration and the digital divide: understanding factors that impact on educator's ability to integrate technology in South African classrooms. Unpublished MBA mini-dissertation. Pretoria: University of Pretoria.

Mashiyi, N & Baleni, L 2023. The implementation of 4IR technologies in higher education teaching and learning: a qualitative systematic review. In *Proceedings of the 10th Focus Conference (TFC 2023)*, pp. 412-425. Atlantis Press.

McDonald, ME & Battaglia, D 2015. 21st Century classroom resources. In: S McPherson and EV Blue (eds.). *Student, environment, task, and technology tools for the 21st century learner.* Hauppauge, NY: Nova Science Publishers.

Meladi, OM & Awolusi, OD 2020. The influence of Information Communication Technology (ICT) integration on teaching and learning in South African schools. *Journal of Education and Vocational Research*, 10(2): 47–64.

Mentz, E & Bailey, R 2019. A systematic review of research on the use of technology-supported cooperative learning to enhance self-directed learning. In: E Mentz, J De Beer & R Bailey (eds.). *Self-directed learning for the 21st century: Implications for higher education* (NWU self-directed learning series volume 1), Cape Town: AOSIS.

Milanesi, C 2016. Will immersive virtual reality be too much for kids and their parents? Available at https://www.recode.net/2016/8/18/12537956/virtual-reality--kids-parents-psychological-emotional-immersive Accessed on 02 January 2025.

Mishra, P & Koehler, MJ 2006. Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6):1017-1054.

Mkuzo, L & Govender, I 2025. The quest for social justice through ICT access and inclusion for rural schools and communities: The South African case of Urglobal. *African Journal of Science, Technology, Innovation and Development*, 17(1):19-31.

Mnisi, BR, Mtshali, TI & Moses, M 2024. Moving beyond the challenges of learning through technologies: The current status of ICT integration in South African schools. *Journal of Education and e-Learning Research*, 11(1):128-134.

Mon-Williams, M 2017. Virtual reality headsets could put children's health at risk. *The Guardian*, 28 October 2017. Available at https://www.theguardian.com/technology/2017/oct/28/virtual-reality-headset-children-cognitive-problems Accessed on 14 February 2025.

Motumi, KT 2021. Practicalising the significance of the "history-is-all-around-us" approach in and outside the classroom. PhD thesis. Vanderbijlpark: North-West University.

Muller, J & Young, M 2010. Three educational scenarios for the future: Lessons from the sociology of knowledge. *European Journal of Education*, 45(1):11–27.

Munje, P & Jita, T 2020. The impact of the lack of ICT resources on teaching and learning in selected South African primary schools. *International Journal of Learning, Teaching and Educational Research,* 19(7): 263 - 279.

Odendaal-Kroon, R & Poole, I 2018. Teaching and learning History & Geography: Enhancing History teaching through the integration of technological devices and online teaching. In: E Van Eeden & P Warnich (eds.). *Teaching and learning history and geography in the South African classroom*. Potchefstroom: Van Schaik.

Ogegbo, AA, Penn, M, Ramnarain U, Pila, O, Van Der Westhuizen, C, Mdlalose, N, Moser, I, Hlosta, M & Bergamin P 2024. Exploring pre-service teachers' intentions of adopting and using virtual reality classrooms in science education. *Education and Information Technologies*, 29(15):20299-20316.

Padayachee, K 2017. A snapshot survey of ICT integration in South African schools. *South African Computer Journal*, 29(2):36–65.

Pakdaman-Savoji, A, Nesbit, J & Gajdamaschko, N 2019. The conceptualisation of cognitive tools in learning and technology: A review. *Australasian Journal of Educational Technology*, 35(2):1-24.

Partnership for 21st Century Skills 2009. *P21 Framework Definitions*. Washington, DC: Partnership for 21st Century Skills. Available at https://files.eric.ed.gov/fulltext/ED519462.pdf Accessed on 14 January 2025.

Ramnarain, U, Pieters, A & Wu, HK 2021. Assessing the technological pedagogical content knowledge of pre-service science teachers at a South African university. *International Journal of Information and Communication Technology Education (IJICTE)*, 17(3):123-136.

Ratheeswari, K 2018. Information communication technology in education. *Journal of Applied and Advanced Research*, 3(1):45-47.

Rajput, R & Sharma, P 2025. Teacher professional development in the digital age. In: A Sorayyaei Azar, SK Gupta, KB Al Bataineh, N Maurya & P Somani (eds.). *Smart education and sustainable learning environments in smart cities*. Cham: IGI Global.

Renganayagalu, SK, Mallam, SC & Nazir, S 2021. Effectiveness of VR head mounted displays in professional training: A systematic review. *Technology, Knowledge and Learning*, 26:999-1041.

Saprikis, V, Anastasia, K & Charitoudi, G 2019. *The impact of ICT training on teachers' perceptions and use of the technology in education: A case of Greece*. Paper delivered at the 34th IBIMA Conference, Madrid, Spain. Available at https://www.researchgate.

net/publication/337306900_The_Impact_of_ICT_Training_on_Teachers'_Perceptions_and_Use_of_the_Technology_in_Education_A_case_o_Greece Accessed on 18 April 2025.

Sharma, VK 2019. *Importance of computer laboratory in school*. Klient Solutech. Available at https://www.klientsolutech.com/importance-of-computer-laboratory-in-school/ Accessed on 13 February 2025.

Specht, J, Schroeder, H, Krakow, K, Meinhardt, G, Stegmann, B & Meinhardt-Injac, B 2021. Acceptance of immersive head-mounted display virtual reality in stroke patients. *Computers in Human Behavior Reports*, 4:1-9.

Stephan, R, Doery, AR & Simmons, C 2025. Virtual reality tours as an immersive approach to archaeology in higher education. *Journal of Computer Applications in Archaeology*, 8(1):1-9.

Tshimanika, K, Chigona, A & Sadeck, O 2022. The influence of policy formulation contextual factors on implementation: South African White Paper 7 as a case in point. *The Electronic Journal of e-Learning*, 20(4):386–399.

Thotse, M 2021. People, space and time strategy: Teaching history through image analysis at a rural secondary school in Limpopo Province. *Yesterday & Today,* 26:88-110.

Van Greunen, D, Kativu, K, Veldsman, A & Botha, J 2021. Enhancing ICT readiness of schools in South Africa. Available at https://www.dsti.gov.za/images/Policy_Brief_June_2021.pdf Accessed on 12 February 2025.

Victor, M 2023. The impact of virtual reality on historical education: An investigation into the effectiveness and efficacy of immersive learning experiences. *International Journal of History Research*, 3(2):27-38.

Villena Taranilla, R, Cózar-Gutiérrez, R, González-Calero, JA & López Cirugeda, I 2022. Strolling through a city of the Roman Empire: an analysis of the potential of virtual reality to teach history in primary education. *Interactive Learning Environments*, 30(4):608-618.

Virtual Reality Society, 2022. *History of virtual reality*. Available at https://www.vrs.org.uk/virtual-reality/history.html Accessed on 03 March 2025.

Voinescu, C, Sepich, S, Kourtesis, P & MacPherson, SE, 2025. To VR or not to VR: assessing cybersickness in navigational tasks at school. *Frontiers in Virtual Reality*, 6:1-13.

Wang, F 2018. Computer distance virtual experiment teaching application based on virtual reality technology. *International Journal of Emerging Technologies in Learning (iJET)*, 13(4): 83–94.

Waring, M 2012. Finding your theoretical position. In: R Coe, M Waring, LV Hedges, & J Arthur (eds.). *Research methods and methodologies in education*. London: SAGE Publications.

Wong, YK & Hsu, CJ 2008. Online trust in mobile commerce. In: P Cartelli, & M Palma. *Encyclopedia of information communication technology*. New York: Information Science Reference.

Yildirim, G, Elban, M & Yildirim, S 2018. Analysis of use of virtual reality technologies in history education: A case study. *Asian Journal of Education and Training*, 4(2):62-69.

Yu, K & Dlamini, R (eds.) 2025. *Higher education ICT integration in Africa: Readiness, implementation and trajectory*. London & New York: Routledge.

Zyad, H 2016. Pre-service training and ICT implementation in the classroom: ELT teachers' perceptions. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 12(3):4-18.

Representations of colonial ideologies in textbooks for history: A case of Northern Rhodesia from 1925-1963

DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a5

Yvonne Malambo Kabombwe
University of the Witwatersrand
Johannesburg, South Africa
Orcid: https://orcid.org/0000-0002-1844-7797
2429888@student.wits.acz.za
DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a5

Alfred Masinire
University of the Witwatersrand
Johannesburg, South Africa
Orcid: https://orcid.org/0000-0002-1329-8569
Alfred.Masinire@wits.ac.za
DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a5

Abstract

The continent of Africa began to experience colonialism by European countries such as Britain, France, Portugal and Germany after the 'Scramble for Africa' that took place in Europe in 1885. Notably, these colonial governments had different administrative policies in their colonies. For instance, the policies of the British were different from those of the French, Portuguese and German. This study explored the representations of colonialism in textbooks for history that were used in Northern Rhodesia (modern day Zambia) at primary and secondary school level from 1940-1963. Postcolonial theory was used as a lens to understand the representations of colonial ideologies in textbooks that were used in the colonial period. The study used a qualitative approach and textbooks were used for document analysis. Eight history textbooks were conveniently selected and analysed using content analysis. The findings of the study revealed that the content taught in the colonial period was Eurocentric and mainly focused on the British Empire, European history, and the achievements of the Empire. This paper could contribute to debates on the decolonisation of education in Zambia.

e-ISSN 2309-9003

Keywords: Colonialism; history; ideology; Northern Rhodesia; representations; textbooks.

Introduction

Textbooks are inherently biased because they are a product of what has been selected and legitimatised by the government for official use in schools and are, therefore, recognised to be factual and truthful (Foster & Crawford, 2006). The ideological nature of textbooks could pose a danger to learners as it provides a limited perspective on historical events, biases and stereotypes due to lack of other perspectives (Apple & Christian-Smith, 1991). Thus, there is a need to examine the biases in textbooks. This paper explores the colonial ideologies that were in the history textbooks of Northern Rhodesia, present day Zambia, which were under control of the British Colonial government. Kallaway (2022) argues that the starting point for the process of decolonisation of the school curriculum in Africa should consider an examination of the colonial curriculum. This would help identify the aspects of the curriculum that would need to be worked on.

History textbook research developed as a response to abuses in the subject of history such as extreme nationalism after the First World War in Europe (Ferro, 1984). It was noted that, after the war, the teaching of history was used as a means of achieving "aggressive nationalism, to reignite rivalry, mistrust and xenophobia among European nations" (Benini, 2023:22). Textbooks provide a means to analyse the values that a nation is promoting in the education system (Bentrovato, 2015). History textbooks may promote ideologies such as Eurocentric, Capitalist, Communist, Democratic, Africanist, Islamic or Socialist values and as such, textbooks should never be treated as a neutral entity (Bertram & Wassermann, 2015). Research shows that history as a subject is inclined to propagandist and ideological tendencies that could serve as a potential vehicle for promoting hegemonic values and practices (Ferro, 1984; Engelbrecht, 2008; Benini, 2023). Ideology in this paper is defined as representations of the interests of a dominant group or the ruling group as valid and universal (Mannheim, 1954). Textbooks are conceptualised as one of the ways a curriculum can be presented in public forms for use in school classrooms for learners (Crawford, 2004). This paper argues for cognisance of colonial ideologies in textbooks to inform decolonisation debates and processes in Zambia, formerly Northern Rhodesia.

Review of literature

The literature review in this section discusses the teaching of history in the colonial period, history textbooks in the colonial period and the ideological nature of textbooks.

Teaching and learning of history in the colonial period in Northern Rhodesia 1925-1963

Formal education was introduced in Northern Rhodesia by missionaries in the nineteenth century (Chita, 2011). There seems to be no official history curriculum during the era of the missionaries and the British South Africa Company (BSAC) as missionaries had a different focus for education (Chita, 2011). In 1924, the British government took over the administration of Northern Rhodesia from the BSAC after the joining of Eastern and Northwest territories and became a British Protectorate (Snelson, 1974). The British Colonial government then decided to take control of the education system and set up a sub-department of Native Education in 1925 (Mukoboto, 1978, Snelson, 1974). Education was to be planned by the recommendations given by the Phelps Stock Commission and to be based on the Adaptation policy that was an education meant to prepare the African learners for their new environment, convert them to Christianity and create a labour force that could work with the colonial government (Mukoboto,1978; Masinire, 2020). The policy was anchored on Jesse Jones's four essentials of education, health, hygiene, agriculture and character development (Jones, 1925). In essence, it meant that the education system provided for the Africans was expected to be basic. Thus, the teaching of history was not a priority. Even though the British took over the education system in 1925, the curriculum was not uniform in all schools.

A new syllabus was then introduced in 1928 and was based on the Ugandan syllabus in schools that were introduced by the colonial government (Mutumba, 1984). The curriculum of the Baroste National School provided insight into what was taught in history during this period. Mutumba (1984:44) shows that the teaching and learning of history was done in a subject called 'Discussion' which was offered at lower and middle primary school. The pupils were taught general knowledge, history and geography (National Archives of Zambia (NAZ), Sec1/507 1930). The history taught was based on the districts of origin of the learners as well as where they lived, their tribal history and the geographical formations of the districts and rivers. For instance, the Baroste National School was in Barotseland, thus, the pupils learnt about the history of the Lozi people. The subject of history was then removed from the syllabus because there were no textbooks for local history in the 1930s (NAZ EDU Sec1/507, 1930).

At secondary school level Seri-Hersch (2014) noted that English and European history were predominant in the history curricula that was prescribed and taught in secondary schools across British Africa after the Second World War. For example, Seri-Hersch (2014) argued that the history curriculum in Northern Rhodesia that was used for teaching and learning in African secondary schools in the late 1940s and early 1950s, was mainly based on a British imperial history. For instance, until 1954, the history curriculum taught at Munali Secondary School (Lusaka) had the main topics taught apart from African ancient history and these were "British imperial history (the industrial and agrarian revolutions in Britain, the historical development of self-governing countries and dependencies in the Commonwealth with case studies of South Africa and Northern Rhodesia" (Seri-Hersch, 2014:188).

It should be noted that during colonial period, teachers had freedom to choose what to teach in Form I and II. However, what was prominent is that British history and European history took centre stage in the teaching and learning of history (NAZ EDU 1/8/33, 1956). Though the focus was British history, it should be noted that the curriculum varied from one school to another, for instance, the syllabi for junior secondary school education at Malole in Kasama and at St Canisius secondary school in Chikuni, Southern province differed from each other (NAZ EDU 1/8/43, 1957c).

A clear delineated syllabus for history is seen after the post-war period in Northern Rhodesia in the 1950s. The examination pupils wrote was set in England and a candidate had to compete for the Cambridge Overseas School Certificate or the General Certificate of London University. External candidates were also allowed to sit for the final examinations. The local examinations were prepared by teachers from other regions and marked by the wives of civil servants using a marking key, irrespective of their qualification (Bullington, 1964).

By the 1960s the syllabus for history was uniform for all schools, unlike in the 1950s when teachers had the freedom to choose what to teach from one school to another (Correspondence, by Little, NAZ EDU 1/8/43, 1961a). This syllabus was made from the 1950s curriculum review that was called upon by the British Colonial government (NAZ EDU 1/8/43, 1961b). The content for history at secondary school level included the Voyages of the Portuguese, the Coming of the Dutch, English and Portuguese, Explorations into the interior of Africa, Islam in Africa, Slave trade by Arabs and Europeans,

Abolition of the Slave trade, Partition of Africa, Stories of Egypt, Greece and Rome, Rise of Christianity, Islam and Crusades, the Middle Ages, the Discoveries and the Renaissance period, Agriculture and Industrial Revolution, Growth of the British Commonwealth and European History up to 1920 (NAZ EDU 1/8/43, 1961b). The next section discusses the nature of history textbooks in the colonial period.

The nature of history textbooks in the colonial period

Research on history textbooks in Europe, Latin America and Asia from the colonial period concentrates on the identity of European sailors, explorers, the coloniser and the indigenous people they found in Africa, Latin America or Asia (Grindel, 2017; Van Nieuwenhuyse, 2022; Choque Apaza & Robinson 2024). For example, Choque Apaza and Robinson (2024) have argued that textbooks for history from the colonial period focus on the European sailors, such as Christopher Columbus, Vasco Dagama, Ferdinand Magellan, Bartholomew Diaz and many others. Similarly, Van Nieuwenhuyse (2022) argued that textbooks for history in Belgium represent King Leopold as a hero who brought civilisation to the Congo. This study sought to find out the content for textbooks for history that were used in the colonial period in Northern Rhodesia.

Studies conducted on history textbooks also focus on the legacy of the colonisers. For example, the history textbooks in Germany represented colonies as possessions and symbols of national strength (Grindel, 2017). In contrast, textbooks from the British Empire were also used to reconcile the integrity of the empire as an institution that provided self-determination as a result of the growing number of colonies that were gaining independent (Kusabs, 2023). This study, however, sought to find out how the colonisers and the colonised were represented in the textbooks written for the history in Northern Rhodesia.

There are several studies in Southern Africa on the nature of history textbooks from the colonial period in countries such as South Africa, Zimbabwe and Congo (Engelbrecht, 2008; Nishino, 2008; Seroto 2015; Plescia, Wassermann & Bentrovato, 2020; Van Nieuwenhuyse, 2022). For example, Seroto (2015) noted that the main focus in the textbooks in the colonial period in South Africa was the representation of the white settlers and the Dutch India East Company (DIEC) while indigenous people in South Africa were not represented all. In Southern Rhodesia, the history textbooks during the colonial period did not prioritise the learning of local history in the early days of colonialism, the history concentrated on European history and how it fit in the imperial history of Rhodesia

(Plescia, Wassermann & Bentrovato, 2020). However, later, the Rhodesian 2160 syllabus which was based on European history and Central African history, was prepared according to the United Kingdom system of Ordinary Level and marked by Cambridge University Syndicate (Pwiti, 1994; Moyo & Modiba, 2013). This study intended to find out the nature of textbooks for history in Northern Rhodesia.

Apart from focusing on European history, the textbooks that were used in the colonial period in Africa were loaded with colonial ideologies (Engelbrecht, 2008; Nishino, 2008; Van Nieuwenhuyse, 2022). For instance, the textbooks that were used in South Africa were loaded with Afrikaner ideology (Engelbrecht, 2008; Nishino, 2008). Afrikaners carried notions of European superiority over the indigenous people, because the colonial masters believed that they had the right to settle in South Africa and spread Christianity to the local people who were seen to be inferior and barbaric, while the Europeans were superior and civilised (Nishino, 2008). The study also sought to investigate the colonial ideologies in textbooks that were used in Northern Rhodesia. In the next segment the ideological nature of textbooks is explained.

The ideological nature of textbooks

Textbooks are a useful tool to analyse colonial narratives and ideologies in the field of education (Grindel, 2017), since the prevalent political and social discourses are etched in them (Hellmuth, 2021). For instance, Apple and Christian-Smith (1991:1) argued that, apart from being educational materials, textbooks are "the results of political, economic and cultural activities, battles and compromises". The production process of textbooks is so complex, in that it involves the process of considering the interests of different parties on what should be included and excluded (Foster & Crawford, 2006). The selection of content for the textbooks is as a result of complex power relations and what is selected is the knowledge of the powerful (Apple & Christian-Smith, 1991). Textbooks reveal the purpose and ideology of that time (Chiponda, 2014; Fru, 2017; Halsall 2023; Kim & Lee, 2023) Thus, textbooks are legitimatised politically (Brait, 2024). It could be argued that textbooks conveyed the ideologies of the dominant or powerful people in society.

Textbooks aim to push the agenda of the dominant groups in society (Foster & Crawford, 2006). For instance, textbooks produced during the apartheid era in South Africa were based on Afrikaner ideology and white supremacy. The history textbooks at that time celebrated the Afrikaner's achievements and excluded the accounts of African people (Engelbrecht, 2008). After independence in 1994, there was an ideological shift

to an African nationalist ideology (Engelbrecht, 2008). Recent works in Africa on history textbooks show that ideology is embedded in history textbooks. For instance, Fru's (2017) work on history textbooks in Cameroon shows that there is an ideological bias on the representation of the unification of Cameroon between Anglo and Francophone at the expense of the local people in Cameroon. The biases are presented using a single master narrative. Halsall (2023) noted that the representation of Brazil, Russia, India and China (BRICS) in South African history textbooks was due to South Africa's ideological position in the geopolitics. Educators must pay attention to ideologies in textbooks. The next section discusses the theoretical framework of the study.

Theoretical framework

This study used the postcolonial theory as a lens to understand the colonial ideologies in textbooks that were used in the colonial period in Northern Rhodesia. This paper used Edward Said's (1978) theoretical framing of Orientalism specifically. Orientalism is a systematic discourse on how Europe or the West produced the Orient or the colonised "politically, sociologically, militarily, ideologically, scientifically, and imaginatively" after enlightenment period (Said, 1987:11). Postcolonial theory contends that colonial ideologies were used to dominate the colonised people in the colonial period (Said, 1978). The colonisers used the ideologies in colonial administration and other institutions such as schools, universities, churches and legal systems ((Ndlovu-Gatsheni, 2013). This theory is important in that it shows how colonial ideologies were passed on in schools through textbooks during the colonial and postcolonial period.

The Orient defined Western Europe's position in history and the representations of the other (Said, 1987). Thus, "colonial texts have depicted the Indians, the Egyptians, the Palestinians, the Latin Americans, and many others as almost the same, the Orient, the 'Other', in juxtaposition with 'Us', the Occidental" (Hamadi, 2014:40). This theory is essential as it provides insights on how the colonisers viewed the colonised people. The Orient and Occident are man made; they did not exist before. Thus, this study sought to find out the colonial ideologies that were entrenched in history textbooks in Northern Rhodesia.

Orientalism was strengthened by Western Hegemonic ideas that Europeans were superior over the oriental and the oriental were backward (Said, 1978). In Western Hegemony the representation of the Occident is portrayed as "highly biased, depicting the Orient as the irrational, strange, and weak, feminized 'Other', contrasted with the rational,

familiar, strong, masculine 'West' (Hamadi, 2014:40-41). In terms of the representation of women, Said (1978), noted that they could not speak for themselves and were misrepresented, while Islam was seen as a religion against Christianity. This theory is useful in that it has highlighted the colonial ideologies in how the coloniser viewed the colonised and the representations used a lens to find out the representations of colonial ideologies in the textbooks for history that were used during the colonial period. In the next section the research design and methodology of the study is discussed.

Research design and methodology

A qualitative approach and document analysis was adopted for the current study. The study used a case study design. Aware that other studies have been done on history textbooks in Africa on the colonial period, this study sought to find out the representation of the colonial ideologies in Northern Rhodesia only. Hence, the study is a case of Northern Rhodesia. The study adopted qualitative research, since it is inductive in nature and the researcher is expected to explore meanings and insights in a given context. Qualitative research involves an interpretive and naturalistic approach to its subject matter (Denzin & Lincoln, 2005). It also focuses on in-depth understanding of the phenomenon under study (Creswell & Creswell, 2018). In qualitative research, reality is a social construction that can be understood through interpretation of meaning from a given culture or society (Denzin & Lincoln, 2018). Thus, the construction of reality is done through the understanding of a historical or cultural context. In this study, history textbooks were viewed as a social construction and the colonial period is a social and cultural context the textbooks were created from. A qualitative approach was chosen for this study, because it focuses on a specific phenomenon and context, which suited the study as it would help to understand representations of colonial ideologies in textbooks for history in the colonial period. Thus, in this study, history textbooks were the phenomenon under study and the colonial period was the context.

The study was underpinned by the interpretivist paradigm, as it sought to understand the phenomenon (textbooks for history) and interpretation of the context (Yilmaz, 2013). In the interpretivist paradigm, knowledge and truth are subjective, because people have different experiences and come from different cultures (Ryan, 2018). Interpretivist argue that knowledge is a social construction through language and culture is a means to invent facts (Berryman, 2019). In the interpretive paradigm, researchers must see themselves as social participants and understand the world their going to explore.

The researchers incorporate their subjective notions and beliefs into research, as they believe that meaning can be found through language and culture in society (Pervin & Mokhtar, 2022). Hence, the interpretivist paradigm is very subjective. Thus, it can be noted that interpretivist emphasis is on understanding how individuals construct and interpret social reality. Therefore, it can be noted that regarding this study, textbooks are a social construction and the constructions can be interpreted to find out what they mean.

In the interpretivist paradigm, researchers must be aware of their biases (Creswell & Creswell, 2018). In the context of this study, triangulation was used by using other sources to counter the bias and provide detail on how the data will be collected and analysed. Given that textbooks from the colonial period were difficult to find, eight textbooks were conveniently selected, thus, convenience sampling was used to sample the textbooks used for this study. Convenience sampling involves choosing samples that are easily accessible (Teddlie & Yu, 2007). Table 1 below, provides details on the textbooks that were sampled.

Table 1: Textbooks sampled

S/N	Book	Code	Level
1	Richards, D (1938). *An Illustrated History of Modern Europe 1987-1945*. London: Longmans.	NR1	Secondary
2	Richards, I, Morris, J , Taylor, G (1940). 1688-1914. *A Sketch Map of the History of Britain*. London: Morrison & Gibb Ltd	NR2	Secondary
3	Southgate. GW (1947). *An Introduction to English History*. London: Dent and Sons Ltd.	NR3	Secondary
4	Woodall, RD (1954). *British History Examination Notebook (1783-1953)*. London: A Wheaton and CO. Ltd, Exeter	NR4	Secondary
5	Denis, R & Hunt, J (1963). *W Modern Britain*. London: Longmans.	NR5	Secondary
6	Miller, WT (1960). *A history of Rhodesia*. London: Longmans.	NR6	Secondary
7	Temple, JM (1962). *Social Studies for Northern Rhodesia Book 1: This is my Home*. London: Lutterworth Press.	NR7	Primary
8	Temple, JM (1962). *Social Studies for Northern Rhodesia Book 1: This is my Country.* London: Lutterworth Press.	NR8	Primary

The research methodology adopted for this study is content analysis. Textbooks were used to investigate the representations of colonial ideologies and content that was taught in the colonial period in Northern Rhodesia. Content analysis was used to analyse the textbooks and ascertain the representation of the colonial ideologies in the textbooks. Content refers to the words, pictures, meanings, symbols or any other communicated messages found in the textbooks (Kohlbacher, 2006). This study focused on words only. Content analysis is an inductive and iterative process where similarities and differences are identified in the text that would corroborate or disconfirm theory (Nieuwenhuis, 2007). In this regard, texts indicating Western or Eurocentric ways of thinking were selected. Open coding was used to analyse the textbooks. Open coding is a process that enables the researcher to retrieve and collect data they have associated with some theme so that the sorted bits can be examined together, and different cases are compared (Nieuwenhuis, 2007). A priori code was also used to analyse data. Nieuwenhuis (2007:109) concludes by stating that "you identify the themes before you categorise the data, and you search the data for text that matches the themes". In the current study, the researcher looked for data that was aligned to Eurocentric or Western perspectives in the textbooks.

Since qualitative research is subjective, this study ensured that the study is trustworthy by following a criteria of credibility, transferability, dependability and confirmability. Credibility was ensured through confirming with secondary sources. Transferability and dependability were provided by giving an account of the context in which the study was carried out through a proper research design and methodology. Confirmability was ensured by providing a detailed account of the study from data collection to data analysis through audit trail. In the next segment the results of the study are presented.

Result of the study

Representation of colonial ideologies in textbooks for history in Northern Rhodesia

The following themes emerged from the data after a content analysis of the textbooks selected and used in Northern Rhodesia for the school history curriculum from 1925 to 1963. The themes include the use of Western periodisation, focus on Western rulers, the agricultural, industrial and scientific revolutions, imperial expansion, great men and negative portrayal of Muslims[1] and Africans.

[1] Muslims are followers of Islam

Eurocentric or Western periodisation

All the textbooks sampled used the Gregorian Calendar to date historical events (NR1; NR2; NR3; NR4; NR5; NR6; NR7; NR8). For instance, in one of the textbooks by George W. Southgate, *An Introduction to English History* , shows a time chart depicting the history of the English presented using timelines before the Birth of Christ (BC) and after the death of Christ (AD), that is from the time of Caesar (Roman period), The Anglo-Saxon period, Norman period, Plantagenet period, Tudor period, Stuart period and Hanoverian period (NR3).

All eight textbooks use Eurocentric periodisation of events from classic period, mediaeval period, early modern and modern times. The events are presented in periods related heavily to the Eurocentric ideology. For instance, in one of the textbooks the Middle Ages is presented as a period when the English people did not know much about the world (NR3). The English people were farmers and owned animals, however, they did not use scientific methods of farming (NR1).

The rulers in England

The textbooks focus on the rulers of England and Europe (NR1; NR2; NR3; NR4 NR5). For instance, one of the textbooks states who the rulers were in England from the Tudor's line of kings and queens. The Tudors ruled for more than a century in England, and they were Henry VII, 1485-1509, Henry VIII, 1509-1547, Edward VI 1547-1553, Mary I, 1553-1558 and Elizabeth 1558-1603. Other rulers were kings of the House of Stuart that reigned in Scotland for more than two hundred years before James of VI became king of England (NR3). Only noble women and women of stature are represented in the history books: Elizabeth I, Elizabeth II, Catherine of Aragon, Queen Anne, Mary I, Mary II. Sophia Dorothea German Princess and Queen Caroline, Lady Masham, Sarah Churchill and Maria Theresa (NR3).

Great focus on the age of discovery in Europe

The study revealed that the textbooks largely concentrated on the Age of Discovery in Europe around the fifteenth to eighteenth century (Paine, 2020). The textbooks that were analysed celebrate the Age of Discovery by Europeans (NR1; NR2; NR3; NR4; NR5). The textbooks devoted a large section of content on the discoveries by the Portuguese, Spanish and English in other continents (NR3). Most of the textbooks focus on the prominent

sailors being Bartholomew Diaz, Vasco da Gama and Cabral that led to discoveries. The textbooks highlighted the voyages of several sailors. For example, one textbook indicated that "in 1486, Bartholomew Diaz reached the southern point of Africa and sailed around it" (NR3:5). Therefore, it can be argued that the focus of teaching history in the colonial period concentrated on the achievements of Europe.

Emphasis on the agricultural revolution

Some of the textbooks focused on the achievements of the agricultural revolution in England (NR2; NR3; NR5). For example, textbooks concentrated on the leaders of the Agriculture Revolution such as Jethro Tull, Viscount Townshend, Robert Bakewell, Thomas Coke of Holkham and Arthur Young (NR2; NR3; NR5). Jethro Tull introduced the drilling machine and deep ploughing that brought significant development in the field of agriculture. Most of the people in England lived in the country and worked on land before it became known as "the workshop of the world" (NR3:79). Viscount introduced crop rotation and Thomas William Coke of Holkham was the patron of new farming methods (NR5).

Great focus on the Industrial Revolution in Europe

The textbooks devoted a great space to the earliest inventors and inventions in the clothing industry (NR1; NR2; NR3; NR4). For example, a large space is provided for inventors, such as John Kay, James Hargreaves, Richard Arkwright, Samuel Compton and Edward Cartwright for inventing the flying shuttle, spinning jenny, water frame, mule and power loom for weaving (NR4). The textbooks also focused on inventions in the field of communication, such as the telephone, telegraph, wireless and newspaper. Additional to communication and transport, the textbooks highlighted the innovations in the field of health, education and general welfare of the people in society.

Emphasis on the Scientific Revolution

The textbooks that were used in Northern Rhodesia concentrated on the scientific discoveries (NR1; NR2; NR3, NR4; NR 5). The textbooks concentrate on inventions such as the atomic theory, chlorine, iodine, elector-magnet and Darwinism by inventors such as Dalton, Thomson, Rutherford, Bohr, Humphrey Davy, Micheal Faraday, James Prescott Joule and Charles Darwin (NR4). Focus is also placed on the discovery of vaccines, inoculation, radiation, penicillin, X-rays, anti-septic surgeries and anti-malaria drugs by Jennes Vaccine, Pasteur, Amroth Wright, Lister, Curie, Fleming and Manchester scientists (NR4).

Strong focus on imperial expansion

The textbooks devoted much space to the imperial expansion of Britain and other European countries (NR1; NR2; NR3, NR4; NR5). Colonies were represented as symbols for national greatness. In the textbooks it is demonstrated that Britain had colonies in North America, Canada, Australia, New Zealand, India and Africa. For example, after 1815, Britain gained thirteen colonies in North America (NR2), while in Canada, the creation of the Dominion of Canada was made up of provinces such as Quebec, Ontario, New Brunswick and Nova Scotia with the help of Sir John MacDonald in 1867 (NR2; NR5). In 1768-1779 Captain Cook took possession of South Wales and New Zealand as a possession of Britain. In 1823, India was under the control of Britain, while in Africa, Britain took control of the Suez Canal, Sudan, South Africa and Kenya (NR2; NR5). Northern Rhodesia is represented as a possession in terms of being acquired as a colony by the British South African Company and the British government (NR3; NR4; NR5). This is in line with Bentrovato (2015) who argues that colonies are presented in a Eurocentric manner as they are seen as objects and symbols of prestige in most textbooks for African History on World War One.

Emphasis on great men in history

The textbooks concentrated on the accounts of great men in England such as prime ministers and other political leaders like William Pit the Earl of Chatham, Lord Castlereagh, Lord George Canning, Lord Palmerstone, Lord William Gladstone, Lord Benjamin Disraeli, Lord Robert Cecil Marques and many more (NR2; NR4). For example, Lord Castlereagh hoped to construct a political order which could preserve society from the destructive violence of revolutions and war. While Gladstone considered that "peace and isolation were more beneficial to England and to her prosperity than futile gestures of war" (NR2:109). It can be argued that colonial history did not include the contribution of women in history unless they were queens.

Islam as threat to Western Europe

The textbooks represent Islam as a threat to European countries, such that European countries had to find ways to curb the growing strength of Muslims in Eastern Europe (NR1; NR2; NR3). The Muslims are also presented as violent, barbaric and uncivilised in textbooks (NR1).

Negative portrayal of the colonised people

The African people were represented as hostile and barbaric (NR2; NR5; NR6) For instance, in textbook NR5, the people are represented as "people sunk in superstition and barbarism" (NR5:394). The people are represented as tribes; for example, in one textbook it is stated that "Here Livingstone found a number of great tribes, some small and some great almost constantly fighting each other" (NR6:140). The wars of the local people were called savagery (NR6). The native African people who were defending their land were represented as hostile cannibals during the exploration of Africa (NR2:145).

Discussion on the findings

One of the findings of this study revealed that textbooks for history that were used in the colonial period were written from a Eurocentric point of view using the world view of the colonisers. For example, the textbooks for history that were used in Northern Rhodesia showed that they used a Eurocentric construction of time and dating by using the Gregorian calendar. The findings of the current study concur with the findings of McNutt (2014), Nakip, (2014) and Xypolia (2016). For instance, Xypolia (2016) argued that Europe timed the world by standardising world to follow the Greenwich Mean Time in London. Xypolia (2016) highlighted that Greenwich Mean Time is a Eurocentric notion of time as it recognises England as a source of global time. The Gregorian calendar was adopted by Europe as a means of dating in the sixteenth century. Eurocentric thinking was seen to be superior to any other (McNutt, 2014).

Apart from time, the textbooks used a Eurocentric concept of development in describing societies in that, societies development from the Middle Ages to Modern day. Thus, Davis and Puett (2015:1) have contested that "the Middle Ages is a European historiographical category". This was a Eurocentric concept of development that all societies developed in a linear way from under developed societies to modern societies.

The findings of this study show that textbooks that were developed and used for history in the colonial period, like other colonies, mostly paid attention to European events and European people, than Indigenous people. These findings are line with the argument of scholars such as Seroto (2015), Bentrovato and Van Nieuwenhuyse (2020), Wassermann, Bentrovato, (2020); Van Nieuwenhuyse (2022) and Choque Apaza and Robinson, (2024). For instance, it can be noted that the textbooks in the colonial period provided much space on the key explorers during the Age of Discovery in Europe, such as Vasco da

Gama, Bartholomew Diaz, Christopher Columbus and many others.

The results from this study have indicated that textbooks from the colonial period concentrated on the achievement of the British Empire and the West, in that large sections of textbooks focused on the Age of Discovery, the Agricultural, Industrial and Scientific Revolution in Europe. These findings are consistent scholars such as Simukoko and Chishimba (2000), Seri-Hersch (2014) and Mambwe and Lufungulo (2022). The emphasis on Agriculture and the Industrial Revolution reinforced the notion of the 'European Miracle' or 'Great Divergence', the process whereby European countries gradually grew to become the most powerful global economies, overcoming China, is considered Eurocentric (Xypolia, 2016:3). The European Miracle notion is an idea that the European culture, political practices and institutions led to the industrial growth of Northwestern Europe (Xypolia, 2016). However, it should be noted that textbook NR7 and NR8 devoted space to the local history people in Northern Rhodesia who are teaching the history of ethnic groups.

From the findings of the current study, it can be noted that the textbooks used in the colonial period concentrated on the representations of men, other than women. These findings concur with scholars such as Said, (1978), Ndlovu-Gatsheni (2013), Chiponda (2014), Jackson-Lowman (2014), and Naidoo (2014) that women were not represented in a Western or Eurocentric discourse. The representations focused on the achievements of the great men. The only women mentioned were those from royal families and nobility. The reason why women were not represented was that the ideology that was used in the colonial period was patriarchal (Ndlovu-Gatsheni, 2013). Women could not speak for themselves and represent themselves during the colonial period (Said, 1978), thus, the contributions of ordinary women are missing in textbooks for history in the colonial period. This is because during the nineteenth and twentieth century, the study of history focused on nation-state and the history of great leaders (Ninno, 2016; Boldt, 2017). According to Von Ranke (1886), great men represented the spirit of an age. The study of history was based on the top-bottom approach. The Eurocentric worldview was grounded on the patriarchal domination of men over women (Jackson-Lowman, 2014). Thus, the focus of studying history was on rulers.

The study revealed that Islam was portrayed in a negative manner in the textbooks. Islam was seen as a threat and 'other' in that Eurocentric ideology is centred on Christianity that began in the fourteenth century with Christian civilisation followed by the Enlightenment period to the period of industrial revolution (Said, 1978; Plaatjie, 2013). Christianity was

considered an important development in Europe that needed to spread to other parts of the world by Europeans (Dussel, 2011; Plaatjie, 2013). Colonialism was built on a Eurocentric, American-centric, Christian-centric, sexist, patriarchal and hetero-normative power structure of the world system (Grosfoguel, 2011). Thus, Eurocentrism spread in the colonial period spiritually through Christianity in colonies (Ndlovu-Gastheni, 2013). In colonialist discourse, Islam is judged using the values of Enlightenment and is placed outside the civilised world (Creutz-Kömppi, 2008). Such a representation of Islam goes back to the medieval period in Europe, and Islam is viewed as unchangingly hostile (Creutz-Kömppi, 2008). Moran Cruz (1999:56) noted "that many of the most ill-informed views of Islam in the Middle Ages were precisely those that gave rise to legendary and long-lived images and prejudices that have continued to inform European attitudes".

The findings of this paper are consistent with Edward Said's (1978) post-colonial theory of Orientalism, that the West created an image and way of writing about the colonised people in that the colonised were always represented in a binary way to the West using the Eurocentric ideology. Maposa (2020) noted that Africans continued to be represented in a negative way in most history textbooks in Africa. Thus, there was a need for Africans to be represented well in African textbooks. The purpose was to instil the colonial mentality in learners and justify the spreading of the Eurocentric ideologies or Western culture as a model for a civilised culture in the colonies (Choque Apaza & Robinson, 2024).

The school history curriculum in the colonial period aimed to alienate Africans from their history, cultures, language and religion and indigenous knowledge because it was considered inferior (Masinire 2020; Dube & Moyo, 2022). Africans were to discard their indigenous knowledge and embrace modernity. Thus, it can be argued that representations of colonial ideologies in textbooks for history for Northern Rhodesia were mainly Eurocentric. For the most part, textbooks put more emphasis on the civilisations of the West such as the Agricultural, Industrial and Scientific Revolution in Europe as well as the political system in Europe, and sidelined the contribution of the indigenous societies. This was in line with Trevor-Roper's (1965:871) motto that "there is only the history of the Europeans in Africa; the rest is largely darkness-and darkness is not a subject for history". Textbooks concentrated on highlighting the perspective of the coloniser that is the Western paradigm of knowledge.

It can be noted that textbooks during the colonial period were written from a single perspective, like in other colonies in Africa (Seroto, 2015). Morgan and Henning (2011:176) argued that indigenous knowledge from within the colonies were not included

in textbooks as "a matter of fear". The publishers of the textbook did not want to upset the colonial administrators and colonialists on their superiority over the local people in the colonies. Though some textbooks used in the colonial period did try to imitate critical thinking as a way of helping pupils to develop critical thinking (Morgan & Henning, 2011).

Conclusion and implication

In conclusion, it can be argued that textbooks for history that were used in Northern Rhodesia carried much authority and colonial ideologies. The history textbooks were centred on the Western paradigm of knowledge. Although the history of ethnic groups was taught at primary school, much of the content of the textbooks was centred on Western-centric knowledge. Textbook developers must take heed not to write from a single perspective and include other perspectives in the school history curriculum. They should also include local knowledge of the people as a way of giving space to knowledge that was sidelined in the past due to colonial education policies in Africa.

References

Benini, S 2023. *The idea of the nation in post-colonial history textbooks. A comparative analysis of Senegal and Zambia.* Unpublished PhD thesis, University of Pavia.

Bentrovato, D & Van Nieuwenhuyse, K 2020. Confronting "dark" colonial pasts: A historical analysis of practices of representation in Belgian and Congolese schools, 1945–2015. *Paedagogica Historica*, 56(3):293-320.

Bentrovato, D 2015. Teaching World War I: An exploratory study of representations of the Great War in contemporary African textbooks. *Yesterday & Today*, (14), 175-207.

Berryman, DR 2019. Ontology, epistemology, methodology, and methods: Information for librarian researchers. *Medical Reference Services Quarterly*, 38(3):271-279.

Bertram, C & Wassermann, J 2015. South African history textbook research – A review of the scholarly literature. Yesterday & Today, 14:151-174.

Boldt, AD 2017. Leopold von Ranke on Irish history and the Irish nation, *Cogent Arts & Humanities,* 4(1):1314629.

Brait, A 2024. Colonialism and imperialism in Austrian history curricula and textbooks (1945–2023). *Historical Thinking, Culture, and Education*, 1(1):11-30.

Bullington, RA 1964. African education in Northern Rhodesia. *Science Education.*, 48(4):320-326.

Chiponda, AF 2014. *An analysis of the portrayal of women in junior secondary school history textbooks in Malawi*. Unpublished, PhD thesis, University of Kwa-Zulu Natal.

Chita, J 2011. *The role of missionaries in the development of the Zambian religious education curriculum.* Unpublished, Master's dissertation, University of Zambia.

Choque Apaza, J & Robinson, N 2024. Representation, responsibility and legacy: A comparative analysis of how colonial history is narrated in Bolivian social science textbooks, pre and post-070 educational reform. *History Education Research Journal,* 21(1):13.

Crawford, K 2004. *Inter-cultural education: The role of school textbooks analysis in shaping a critical discourse on nation and society*. Paper presented at the Pacific Circle Consortium, 27th Annual Conference, 21st -23rd April, 2004, Hong Kong Institute of Education.

Creswell, JW & Creswell, JD 2018. *Research design qualitative, quantitative, and mixed methods approaches.* California: Thousand Oaks Sage Publishers.

Creutz-Kömppi, K 2008.The othering of Islam in a European context: Polarising discourses in Swedish-language dailies in Finland. *Nordicom Review*, 29(2):295-308.

Davis, K & Puett, M 2015. Periodization and "the medieval globe": A conversation. *The Medieval Globe,* 2(1):1-14.

Denis, R & Hunt, J (1963). *Modern Britain*. London: Longmans.

Denzin, NK & Lincoln, YS. 2005. Introduction: The discipline and practice of qualitative research. In NK Denzin & YS Lincoln (eds.). *The Sage handbook of qualitative research* (3rd ed.), pp. 1–32. Thousand Oaks, CA: SAGE Publications.

Dube, B & Moyo, N 2022. A decolonial reading of the history curriculum: towards undoing historicide for curricular justice for the Zimbabwean learner. *Research Papers in Education*, 38(6):865-885.

Dussel, E 2011. *Politics of liberation: A critical world history: Translated by Thia Cooper.* London: SCM Press.

Engelbrecht, A 2008. The impact of role reversal in representational practices in history textbooks after Apartheid. *South African Journal of Education*, 28:519-541.

Ferro, M 1984. *The use and abuse of history or how the past is taught.* London, Routledge & Kegan Paul.

Foster, S & Crawford, K 2006. The critical importance of history textbook research. In S Foster & K Crawford (eds.). *What shall we tell the children?: International perspectives on school history textbooks,* pp. 1-23. USA: Information Age Publishing Inc.

Fru, NR 2017. *A comparative analysis of reunification discourses in selected Cameroonian history textbooks.* Unpublished PhD thesis, University of Kwa-Zulu-Natal.

Grindel, S 2017. Colonial and postcolonial contexts of history textbooks. In M Carretero, S Berger & M Grever (eds.). *Palgrave handbook of research in historical culture and education,* pp. 259-273. London: Palgrave Macmillan.

Grosfoguel, R 2011. Decolonizing post-colonial studies and paradigms of political economy: transmodernity, decolonial thinking, and global coloniality. *Journal of Peripheral Cultural Production of the Luso-Hispanic World,* 1(1):1-36.

Halsall, TC 2024. *The representation of BRICS countries in South African school history textbooks.* Unpublished PhD thesis, University of Pretoria.

Hamadi, L 2014. Edward Said: The postcolonial theory and the literature of decolonisation. *European Scientific Journal [Special Edition],* 2:39-46.

Hellmuth, T 2021. Fröhlicher eklektizismus: *Diskursanalytische schulbuchforschung als beitrag zu einer kritischen geschichtsdidaktik* (**Joyful eclecticism: discourse analytical textbook research as a contribution to a critical history didactics**). In J Breitfuß, T Hellmuth & I Svacina-Schild (eds.). *Diskursanalytische schulbuchforschung: beiträge zu einer kritischen geschichtsdidaktik (Discourse Analytical Textbook Research: Contributions to a Critical History Didactics),* 15-56. Wochenschau.

Jackson-Lowman, H 2014. An analysis of the impact of eurocentric concepts of beauty on the lives of Afrikan American women. In H Jackson-Lowman, *Afrikan American Women: Living at the crossroads of race, gender, class, and culture,* pp. 155-172. Florida: Cognella Academic Publishing.

Jones, TJ 1925. The whiteman's burden in Africa. *Current History (1916-1940),* 23(2):213-221.

Kallaway, P 2022. Knowledge for the people: Understanding the complex heritage of colonial education in South Africa. *Yesterday & Today,* 28(1):44-81.

Kim, HS & Lee, DB 2023. Japanese surveillance in colonial Korea: Analysis of Japanese language textbooks for Korean Students during the colonial era. *Cogent Education*, 10(2): Article 2286415.

Kohlbacher, F 2006. The use of qualitative content analysis in case study research. *Forum Qualitative Sozialforschung Forum: Qualitative Social Research*, 7(1):1-30. .

Kusabs, JR 2023. Education to secure empire and self-government: Civics textbooks in Australia and Aotearoa, New Zealand, from 1880 to 1920.*History of Education Review),*52(2/3):85-98.

Mambwe, R & Lufungulo, ES 2022. The evolution of social studies education in Zambia. *Multidisciplinary Journal of Language and Social Sciences Education,* 5(1): 1-18.

Mannheim, K 1954. *Ideology and Utopia: An introduction to the sociology of knowledge.* Harcourt Brace Jovanovich.

Maposa, MT 2020. The experiences of post-colonial Africa as represented in South African history textbooks. In D Bentrovato & J Wassermann (eds.). *Teaching African history in schools, experience and perspectives from Africa and beyond,* pp. 64-87. Brill.

Masinire, A 2020. The historical burden of rural education: reflections of colonial legacy on current rural education in South Africa. In AP Ndofirepi & A Masin ire. *Rurality, Social Justice and Education in Sub-Saharan Africa Volume II: Theory and Practice in Higher Education,* 27-38. Switzerland: Palgrave Macmillan.

McNutt, J 2014. What is modernization? Eurocentrism and periodisation. *Encounters in Theory and History of Education,* 15:121-136.

Miller, WT (1960). *A history of Rhodesia*. London: Longmans.Apple, MW & Christian-Smith, LK 1991. The politics of the textbook. In MW Apple & LK Christian-Smith (eds.). *The politics of the textbook,* pp. 1-21. New York: Routledge.

Moran Cruz, JAH 1999. Popular attitudes toward Islam in medieval Europe. In DR Blanks & M Frassetto (eds.). *Western views of Islam in medieval and early modern Europe, perception of other,* pp. 55-81. New York: Palgrave Macmillan.

Morgan, K & Henning, E 2011.How school history textbooks position a textual community through the topic of racism. *Historia,* 56(2):169-190.

Moyo, N & Modiba, M 2013.Who does this history curriculum want you to be? Representation, school history and curriculum in Zimbabwe. *Yesterday & Today,* 10:1-24.

Mukoboto, S (1978). *The British Adaption of Education Policy for Africans in Zambia 1925-1964. A problem in Synthesis.* Masters of Arts, Marquette University Milwaukee Wisconsin.

Mutumba, HK 1984. *The history of the Baroste National School, 1907-1934.* Unpublished Master's dissertation, The University of Zambia.

Naidoo, A 2014. *An analysis of the depiction of "big men" in Apartheid and post-Apartheid school history textbooks.* Unpublished Master's dissertation, University of Kwa Zulu-Natal.

Nakip, T 2014. Eurocentrism in world history textbooks: The case of Canada. Islam *Araştırmaları Dergisi (The Turkish Journal of Islamic Studies)*, 32:127-154.

National Archives of Zambia (NAZ) EDU 1/8/33 1956. Loc 856. *Junior secondary school syllabus: To Principles from Mr Little W.G Little Acting Director of African Education, 31st December*, Lusaka, Zambia.

National Archives of Zambia (NAZ) EDU 1/8/4 1961a. Loc 858. *Lower form six work.* Department of African Education. Lusaka. Zambia.

National Archives of Zambia (NAZ) EDU 1/8/43 1957a. Loc 858. *Canisius Secondary School: form i history syllabus.* Department of African Education. Lusaka, Zambia.

National Archives of Zambia (NAZ) EDU 1/8/43 1957b. Loc 858. *Kasama secondary school: form i history syllabus.* Department of African Education. Lusaka, Zambia.

National Archives of Zambia (NAZ) EDU 1/8/43 1957c. Loc 858. *Malole Secondary School: form i history syllabus.* Department of African Education. Lusaka, Zambia.

National Archives of Zambia (NAZ) EDU 1/8/43 1957d. Loc 858. *Mongu junior secondary school: form i history syllabus. Department of African Education.* Lusaka, Zambia.

National Archives of Zambia (NAZ) EDU 1/8/43 1957e. Loc 858. *St Marks College Mapanza: form i history syllabus.* Department of African Education. Lusaka, Zambia.

National Archives of Zambia (NAZ) EDU 1/8/43 1961b. Loc 858. *The present history syllabus in Northern Rhodesia.* Lusaka, Zambia.

National Archives of Zambia (NAZ) EDU1/8/33 1957. Loc 856. *Correspondence between Sr M Bernard O.S. F and Mr W. G. Little Acting Director African Education, 10th January.* Lusaka, Zambia

National Archives of Zambia (NAZ) Sec1/507 1930. *General introduction of the revised syllabus for elementary schools 1930.* Lusaka, Zambia.

Ndlovu-Gatsheni, SJ 2013. Eurocentrism, coloniality and the myths of decolonisation of Africa. *Politics,* 59:35-39.

Nieuwenhuis, J 2007. *Qualitative research designs and data gathering techniques*. In K Maree (ed.). *First steps in research* (First ed.) pp. 70-79. Pretoria: Van Schaik Publishers.

Ninno, M 2016. *The historiographical challenge of globalization, how the bottom up approach can suit the needs of historians.* Unpublished Master's dissertation, Aarhus Universiteit.

Nishino, R 2008. *George Mccall Theal and South African History textbooks: Enduring influence of settler historiography in descriptions of the fifth 'frontier war' 1818–19.* Monash University Express.

Paine, L 2020. Rediscovering the age of discovery. In J Clare, C Lambert, & S Mintz (eds.). *The Routledge companion to marine and maritime worlds, 1400–1800,* pp. 50-66. London: Routledge.

Pervin, N & Mokhtar, M 2022. The interpretivist research paradigm: A subjective notion of a social context. *International Journal of Academic Research in Progressive Education and Development*, 11(2):419-428.

Plaatjie, SR 2013. Beyond Western-centric and Eurocentric development: A case for decolonizing development. *Africanus*, 43(2):118-130.

Plescia, B, Wassermann, J & Bentrovato, D 2020. History lessons through archaeology in Zimbabwean school history textbooks -from independence onwards. In D Trškan & S Bezjak (eds.). *Archaeological heritage and education: An international perspective on history education,* p. 203. Slovenia: Slovenian National Commission for UNESCO.

Pwiti, G 1994. Prehistory, archaeology and education in Zimbabwe. In PG Stone & Molyneaux BL (eds.). *The presented past, heritage, museum and education*, 338-348. London: Routledge.

Richards, D (1938). *An Illustrated History of Modern Europe 1987-1945*. London: Longmans.

Richards, I Morris, J & Taylor, G (1940). 1688-1914. *A Sketch Map of the History of Britain*. London: Morrison & Gibb Ltd.

Ryan G 2018. Introduction to positivism, interpretivism and critical theory. *Nurse Researcher*, 25(4):14-20.

Said, E 1978. *Orientalism*. Pantheon Books.

Seri-Hersch, I 2014. Sudan and the British Empire in the era of colonial dismantlement (1946-1956): History teaching in comparative perspective. In T Ali Souad, et al. (eds). *The road to the two the Sudans: New Castle Upon Tyne,* pp. 177-219. London: Cambridge Scholars Publishing.

Seroto, J 2015. An analysis of the depiction of indigenous people during the early colonial conquest in South African History Textbooks, *Indilinga – African Journal of Indigenous Knowledge Systems*, 14(2):169-182.

Snelson, PD 1974. *Educational development in Northern Rhodesia 1883-1945*. Lusaka: Neczam.

Southgate. GW(1947). *An Introduction to English History*. London: Dent and Sons Ltd.

Teddlie, C & Yu, F 2007. Mixed methods sampling: A typology with examples. *Journal of Mixed Methods Research*, 1(1):77-100.

Temple, JM (1962). *Social Studies for Northern Rhodesia Book 1: This is my Country.* London: Lutterworth Press.

Temple, JM(1962). *Social Studies for Northern Rhodesia Book 1: This is my Home*. London: Lutterworth Press.

Trevor-Roper, HR 1965. *The rise of Christian Europe (History of European Civilization series)*. New York: Harcourt, Brace & World.

Van Nieuwenhuyse, K 2022. Teaching history as an interpretation, by using textbooks in a diachronic perspective: The research case of the representation of the Belgian-Congolese colonial past. *Annals of Social Studies Education Research for Teachers,* 3(2):25-36.

Von Ranke, L 1886. *Proceedings of the American academy of arts and sciences.* Volume 22, pp. 542-558.

Woodall, RD (1954). *British History Examination Notebook (1783-1953)*. London: A Wheaton and CO. Ltd, Exeter.

Xypolia, I 2016. Eurocentrism and orientalism. In S Ray, H Schwartz, J L, V Berlanga, A Moreiras & A Shemak (eds.). *The Encyclopedia of* Postcolonial Studies. Wiley-Blackwell Encyclopedia of Literature. Available at https://abdn.elsevierpure.com/en/publications/eurocentrism-and-orientalism/ Accessed on 10 November 2024.

Yilmaz, K 2013. Comparison of quantitative and qualitative research traditions: Epistemological, theoretical, and methodological differences. *European Journal of Education*, 48(2):311-325.

Leveraging historical infrastructure to teach economic geography in South Africa

DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a6

Raymond Nkwenti Fru
Faculty of Education, Sol Plaatje University,
Kimberley, South Africa
Orcid: https://orcid.org/0000-0002-0507-5269
raymond.fru@spu.ac.za
DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a6

Tolulope Ayodeji Olatoye
Faculty of Education, Sol Plaatje University,
Kimberley, South Africa
Orcid: https://orcid.org/0000-0002-2249-9258
tolulope.olatoye@spu.ac.za
DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a6

Abstract

This study investigates the enduring spatio-economic legacies of colonial infrastructure, specifically ports, railways, power grids and leveraging history approaches employed in shaping the economic geography of modern South Africa. It posits that the country's contemporary economic geography is indelibly shaped by an intentionally engineered spatial logic, designed to facilitate resource extraction and imperial trade rather than foster integrated national development. The implication of this inherited landscape remains a significant gap in secondary and tertiary education, resulting in a pedagogical shortfall that limits the development of spatial literacy and historical consciousness among students and learners. Grounded in Dependency Theory, this research employs a systematic literature review methodology, synthesising evidence from archival records, colonial maps, policy documents and curriculum frameworks. The findings systematically demonstrate that colonial infrastructure was a pivotal instrument of spatial governance. It established a durable core-periphery hierarchy, strategically concentrating economic advantage in coastal urban enclaves like Durban and Cape Town to serve settler-colonial and imperial interests,

while systematically dispossessing and excluding Black communities in the interior, thereby institutionalizing racialised spatial inequality. Hence, addressing this historical amnesia in the classroom is a scholarly and civic imperative. Thus, a transformative pedagogical framework is recommended, urging educators to integrate critical cartography, historical Geography Information System (GIS), and place-based inquiry in the teaching of economic geography. This approach aims to foster a critical spatial literacy by equipping students to deconstruct the political origins of their built environment, essential for dismantling and reimagining the persistent structures of spatial injustice in post-apartheid South Africa.

Keywords: Colonialism; history pedagogy; economic geography; geoinformation technologies; spatial inequality; transport networks.

Introduction

Colonial infrastructure as a foundational pedagogy of power

The spatial organisation of modern South Africa presents a profound historical paradox: a landscape where technological progress and systemic inequality emerged as two sides of the same colonial coin. Where traditional historiography has often framed the development of ports, railways and power grids as a narrative of modernisation and economic integration, echoing Rostow's stages of growth paradigm that champions infrastructure as a catalyst for linear development, a more critical scholarship powerfully reframes these networks as the material architecture of a racial capitalist project (Harrison & Todes, 2015; Freund, 2019). This scholarly divergence represents a fundamental rift in interpreting colonialism's material legacy. The orthodox view, exemplified by economic historians who emphasise the technocratic achievements of colonial engineering, posits these infrastructures as politically neutral conduits that inadvertently, if unevenly, spurred economic growth and state formation across the region (Jones & Muller, 2016). In stark contrast, this study aligns with a critical revisionist tradition that draws from the Dependency Theory and settler colonial studies to argue that these systems functioned as deliberate instruments of spatial subordination, what Foucault might term the 'spatialization of power', physically inscribing a logic of extraction and racial hierarchy into the very topography of the nation (Fourie & Herranz-Loncan, 2015; Vaz-Milheiro, 2021). This debate transcends academic nuance; it strikes at the heart of how one understands the genesis of contemporary South African inequality. The railways linking Kimberley and Johannesburg to coastal ports were not merely feats of engineering, as the technocratic narrative suggests, but were what historian James Scott might categorise as "thin simplifications", impositions of a narrow, extractive

order upon a complex social and economic landscape (Scott, 2020: 311). While liberal economic historians might point to the expansion of market access as an inherent good, this analysis contends that the network's design created a deeply partitioned economy, deliberately engineered to serve imperial metropoles abroad and a settler-colonial enclave at home, thereby actively manufacturing the underdevelopment of peripheral regions (Pieterse et al., 2016; Bowman, 2020). This perspective finds resonance in comparative colonial studies; just as the British Raj's railway system in India was designed to transport raw cotton to Bombay (Roy, 2019), systematically stifling local textile industries, South Africa's infrastructure was calibrated to optimise mineral export, not foster integrated industrial development, a shared logic of colonial political economy that prioritised metropolitan capital over endogenous growth (Mohamed, 2019).

It is precisely this critical deconstruction of infrastructure's political life, the move from seeing railways as mere transport to understanding them as 'corridors of power' that remains startlingly absent from the mainstream pedagogical frameworks governing South African history and geography education (Mgqwashu, 2019; Pirbhai-Illich & Fran, 2022). The dominant curricular narratives often perpetuate a depoliticised, technocratic view, presenting infrastructure as a backdrop to history, rather than as a central protagonist in the drama of spatial injustice. Consequently, this study makes a dual intervention. First, it enters the historiographical fray to argue that colonial infrastructure constituted a lasting geographical strategy of control, whose path-dependent consequences continue to shape a post-apartheid landscape resistant to policy redress (Marais et al., 2016; Baffi et al., 2018). Second, and with equal urgency, it confronts the pedagogical imperative of this debate: the failure to equip students and learners with the critical tools to read the hidden transcripts of power in their built environment (Luckett, 2019; Olatoye & Fru, 2024). Hence, this research seeks to empower a new generation to decode the landscapes of inequality they have inherited by framing infrastructure not just as a historical relic, but as an active, pedagogical force, and to participate in the re-imagination of a more spatially just future.

Research gap

While the political economy of colonial infrastructure is well-documented in scholarly literature (Fine, 2018; Bowman, 2020), its translation into educational practice remains critically underdeveloped. Current history and geography curricula often treat infrastructure as a neutral technological achievement or mere backdrop to historical narratives, rather than examining it as an active mechanism through which power,

capital and racial inequality were spatially organised and maintained. This depoliticised approach represents a significant pedagogical shortcoming, particularly in a context where spatial injustice continues to determine access to housing, services and economic opportunity (Turok, 2018). Furthermore, existing educational research offers limited practical guidance for educators seeking to integrate critical spatial analysis into classroom instruction in ways that develop genuine spatial literacy and historical consciousness (Bozalek & Zembylas, 2017). This study directly addresses this gap by asking: *How can colonial infrastructure, specifically ports, railways and power systems, be effectively integrated into history and geography education to enhance learners' critical understanding of economic geography and spatial inequality in South Africa?* Grounded in Dependency Theory (DT), which provides a critical framework for understanding how colonial infrastructure created structural core-periphery relationships that persist in contemporary spatial arrangements, this research pursues two interconnected objectives. First, it investigates the historical role of transport and economic systems in shaping South Africa's uneven economic geography. Second, it develops and proposes practical, theory-informed pedagogical strategies that enable educators to transform infrastructure from a passive historical topic into an active tool for critical spatial analysis. Hence, this study aims to advance a transformative educational practice by equipping educators with interdisciplinary approaches that connect historical infrastructure to contemporary spatial justice issues, one that moves beyond rote memorisation to cultivate the spatial literacy, historical consciousness and critical citizenship necessary for engaging with South Africa's enduring geographical inheritance.

Theoretical framework

The Dependency Theory

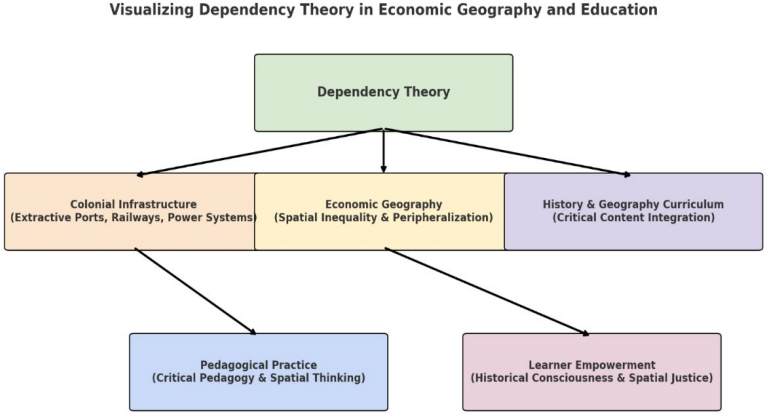
According to Kay (2018) and Ghosh (2019), DT is the theoretical engine that drives the analysis of colonial infrastructure, the interpretation of economic geography and the call for pedagogical innovation. It provides a cohesive framework that links past and present, structure and agency, geography and justice (Maldonado-Torres, 2016). The application of this theory in the classroom shifts the narrative from teaching about inequality to teaching against it (Veracini, 2021). DT, originally developed by scholars such as Raúl Prebisch, Andre Gunder Frank and Samir Amin (Schmidt, 2018), challenges the notion that all countries follow the same path to development (Wolfe, 2016). Instead, it argues that the economic growth of wealthy core nations is historically dependent on the structural underdevelopment of peripheral or semi-peripheral nations (Williams &

Chrisman, 2015). The periphery exists not as a pre-modern stage on its way to modernity, but as a systematically exploited region, locked into a cycle of underdevelopment by global economic and political forces. In the context of South Africa, DT provides a powerful underpinning through which to understand the historical and ongoing effects of colonial infrastructure, spatial inequality and educational practice. With reference to the colonial infrastructure and structural dependence, the development of ports, railways and power systems during colonial and apartheid eras was not aimed at national integration or inclusive growth in South Africa (Fourie & Herranz-Loncan, 2015). Instead, these infrastructures were deliberately constructed to serve the metropolitan (imperial) centres (Pieterse et al., 2016), facilitating the export of raw materials such as gold, diamonds and agricultural products to Europe, while reinforcing South Africa's position as a resource-dependent economy (Freund, 2019). This directly aligns with DT's premise: infrastructure development was not autonomous or internally beneficial, it was imposed in ways that subordinated local needs to global capitalist demands (Reboredo, 2019). Railway lines were designed to connect mines to ports, not towns to one another, while power grids lit up settler cities and industrial areas (Van-Rooyen & Lemanski, 2020), while Black rural communities remained un-electrified (Mlambo, 2017). These patterns entrenched uneven development (Thakholi, 2021), relegating vast regions to infrastructural exclusion (Bhambra & Holmwood, 2021). DT explains this as systematic underdevelopment, where spatial and economic inequality are by design, not accident (Kay, 2018).

Furthermore, DT helps to interpret contemporary economic geography in South Africa as a legacy of these historical dependencies (Rogerson, 2017). The enduring dominance of port cities like Durban, Cape Town and Port Elizabeth in national economic activity, is not simply a product of geographic advantage, it is the result of colonial infrastructural investments that ignored the rest of the country (Van der Merwe, 2016). Former homelands, rural towns and interior regions remain economically peripheral, trapped in post-colonial dependency cycles where they serve urban cores without reaping equal benefits (Eze, 2016). This explains why spatial inequality in South Africa persists despite decades of political transformation: the physical and economic architecture of dependency has not been dismantled (Harrison & Todes, 2015). Instead, it has been inherited and, in some cases, reinforced by post-apartheid development policies that continue to favour existing economic corridors over spatial redress (Turok, 2018; Von Fintel, 2018). With reference to curriculum and pedagogy, students and learners must be equipped to interrogate how and why infrastructure developed unevenly (Ngobeni et al., 2023), and who benefitted or suffered as a result (Hoadley, 2017). This is where critical

pedagogy, informed by DT becomes essential. Educators must guide students to see that ports, railways and power systems are not neutral artefacts of progress, but tools of spatial domination. It is, therefore, expedient to elucidate that educators should help learners trace the structures of dependency that shape their everyday realities, where they live, how they travel, what services they access by integrating historical geospatial science, map analysis and case studies into their teaching. DT thus, underpins the study's pedagogical approach, emphasising that education is not only about content, but about empowerment. When students understand that inequality is historically produced and spatially maintained, they are better positioned to challenge those structures and imagine alternatives (Chiramba & Motala, 2023). The DT implications for policy, practice and future research encourages educators, policymakers and researchers to decolonise academic curricula to include the voices, experiences and spatial realities of those historically excluded from infrastructural development and economic opportunity (Lisimba, 2020). Figure 1 depicts how DT underpins the study of colonial infrastructure, spatial inequality and pedagogy.

Figure 1: Conceptualising DT in relation to colonial infrastructure, spatial inequality and pedagogy



Source: Olatoye and Fru (2025)

Figure 1 transcends conventional illustration to function as a critical pedagogical instrument, visually articulating how colonial infrastructure operated as a material manifestation of DT's core-periphery dynamics (Kay, 2018; Ghosh, 2019). The schematic renders visible the intentional spatial logic that systematically connected extractive enclaves to global markets, while disconnecting interior regions from developmental benefits, a

process of calculated underdevelopment that challenges technocratic narratives of progress (Bond, 2019). This visualisation provides what critical cartographers term a 'counter-mapping' tool, enabling educators to disrupt the normalised presentation of infrastructure in standard curricula as politically neutral. Pedagogically, Figure 1 serves as a foundational text for cultivating infrastructural literacy, which is the ability to decode the political and economic relationships embedded in built environments. When juxtaposed with similar imperial blueprints from British India or French West Africa, where railway networks similarly created internal peripheries to serve metropolitan cores, the figure facilitates a comparative pedagogy that reveals colonial infrastructure as a global technology of power, rather than an isolated South African phenomenon (Tharoor, 2018). This comparative approach enables what Amin and Mahabeer (2021:8) identify as "border thinking": the capacity to understand local spatial injustices as manifestations of transnational systems. In practical classroom application, Figure 1 becomes a springboard for Freirean problem-posing education, inviting students to interrogate: *Whose mobility was prioritised in this spatial arrangement? Which communities were rendered as sacrifice zones in this economic geography? How do these historical configurations continue to structure contemporary opportunity?* Through such questioning, students move beyond passive reception of historical facts toward active deconstruction of spatial power relations. Figure 1, thus, transforms from a static representation into what Deleuzian pedagogy might term an 'assemblage for thinking', a visual catalyst that empowers learners to trace the lineage of their own spatial realities and imagine more equitable geographical futures, thereby, fulfilling the ultimate objective of critical spatial education: not just reading the world, but rewriting it.

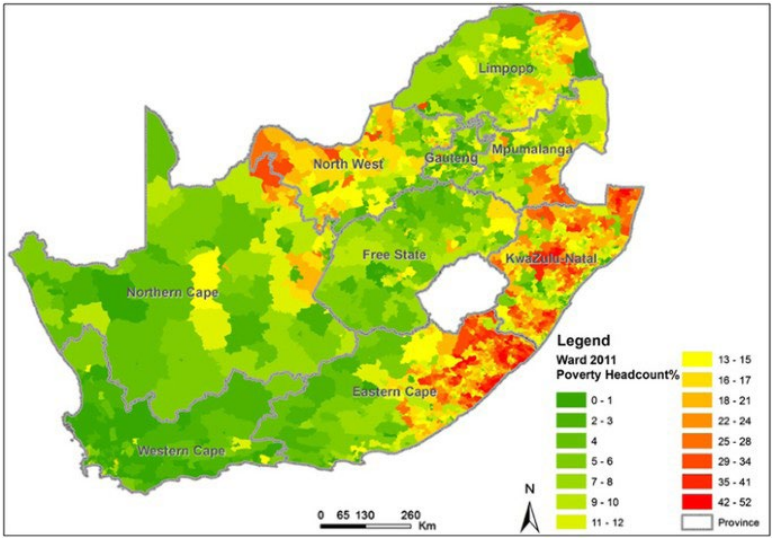
Methodology

Description of the study area

South Africa is located at approximately 22°S to 35°S latitude and 17°E to 33°E longitude, and spans a diverse and complex socio-spatial landscape (Suri et al., 2015; Jury, 2018). With a total population of approximately 62 million (as of 2024), the country exhibits stark regional disparities in development, wealth distribution and access to basic services (Reason, 2017). These disparities are not random, but are deeply rooted in the colonial and apartheid spatial legacies that systematically privileged urban-industrial cores, while marginalising rural peripheries, particularly areas designated as Bantustans (homelands) (Rogerson & Rogerson, 2021; Ngobeni et al., 2023). The socio-economic characteristics of the population reflect this uneven geography (Hamann & Horn, 2022). Provinces such

as Gauteng and the Western Cape, which were historically central to colonial economic activities, exhibit higher urbanisation rates, better access to education and healthcare, stronger infrastructure networks and lower poverty headcounts (Habiyaremye et al., 2022). Gauteng, for instance, despite being the smallest province by land area, contributes over 34 per cent of national GDP (Mushongera et al., 2017; Nhamo et al., 2021), supported by its concentration of financial, industrial and service sectors (Palmer et al., 2017). In contrast, provinces like the Eastern Cape, Limpopo and KwaZulu-Natal, which are homes to large rural populations, continue to face entrenched socio-economic challenges, including high unemployment rates (often exceeding 40 per cent), low levels of formal education, limited access to electricity and piped water and inadequate healthcare (Rogerson & Nel, 2016; Willie & Maqbool, 2023). Regionally, the persistent underdevelopment of large parts of the country limits the potential for integrated economic planning and equitable service delivery (Abrahams, 2018). Addressing this spatial inequality is thus critical for achieving sustainable national development (Rogerson, 2018), promoting social justice (Lincoln, 2020) and ensuring spatially balanced growth across South Africa's provinces. Figure 2 depicts the spatial distribution of socio-economic inequality and poverty headcount in post-apartheid South Africa.

Figure 2: Spatial distribution of socio-economic inequality and poverty headcount in post-apartheid South Africa



Source: Lehohla and Shabalala (2015:504)

In a nutshell, Figure 2 visualises what geographers term 'landscapes of persistence', where there is historical geography of infrastructural investment and neglect of manifests as stark socio-economic disparities for future generations (Harrison & Tobes, 2015). The profound spatial correlation between former Bantustans and contemporary poverty hotspots, particularly in the Eastern Cape, Limpopo and KwaZulu-Natal, offers compelling visual evidence of what dependency theorists identify as 'structured underdevelopment', wherein peripheral regions were systematically engineered for economic dependency (Kay, 2018; Ghosh, 2019). Pedagogically, Figure 2 serves as a crucial bridge between abstract historical processes and tangible contemporary realities, enabling what critical pedagogues term 'spatial consciousness': the ability to read present landscapes as products of historical power relations (Amin & Mahabeer, 2021). When juxtaposed with Figure 1's schematic of colonial infrastructure, Figure 2 creates a powerful comparative pedagogy: students can visually trace how the extractive corridors of the past literally mapped the geography of present disadvantage. This visual juxtaposition embodies what Freirean education identifies as 'reading the world before reading the word' decoding the political economy of space as foundational literacy (Bozalek & Zembylas, 2017). In practical classroom application, Figure 2 becomes what might be termed a 'pedagogical provocation'. It enables educators to move beyond teaching poverty as an abstract statistical reality toward facilitating what spatial theorists call 'counter-topography': the practice of mapping different social phenomena across the same geographical space to reveal their interconnectedness (Smith, 2021). Students might be tasked with creating overlay maps that correlate contemporary service delivery protests with these poverty geographies, or tracing migrant labour patterns from high-poverty regions to economic cores. Such exercises transform the map from a static representation into what Deleuzian pedagogy might call an 'assemblage for thinking', a catalyst for understanding how infrastructure decisions decades ago continue to produce what Hutta (2025) might term 'necropolitical geographies', where life chances remain predetermined by historical spatial arrangements. Hence, Figure 2 challenges what Van Straaten et al. (2016) identify as the 'temporal disconnect' in history education: the failure to connect past decisions with present consequences. Thus, maps empower students to recognise that spatial arrangements are not natural or inevitable, but political constructs that can be challenged and reimagined. This embodies the ultimate goal of critical spatial pedagogy: to equip learners to develop the analytical tools and political imagination necessary to transform its unjust geographies.

Systematic literature review methodology

This study employed an interpretive literature review methodology grounded in critical historiography and spatial analysis to synthesise scholarly, policy, and pedagogical sources, revealing both the historical significance and educational potential of colonial infrastructure for teaching economic geography. A systematic search across JSTOR, Scopus, Sabinet and Google Scholar using structured keywords and following the guidelines provided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), yielded 314 records. After removing 48 duplicates, 266 publications underwent screening, excluding 68 for lacking geographical focus, colonial infrastructure themes or pedagogical relevance. The remaining 198 texts underwent full-text assessment, with 77 excluded due to methodological limitations, insufficient pedagogical applications, or content redundancy, leaving 75 qualifying studies. These were supplemented by 49 sources from citation mining on critical cartography for maps and curriculum theory for syllabi used to assess the pedagogical relevance of archival sources and archival records, resulting in a final corpus of 124 studies. The PRISMA approach is consistent in the literature by scholars such as Page et al. (2021) and Sarkis-Onofre et al. (2021).

Literature review

The historiographical divide on colonial infrastructure: From global designs to pedagogical possibilities

The scholarly discourse on colonial infrastructure is fundamentally fractured between two competing epistemological traditions. On one hand, a technocratic-historical narrative, echoing Rostowian modernisation theory, champions railways and ports as benevolent instruments of progress that delivered economic integration and state formation to 'backward' regions (Jones & Muller, 2016). This perspective, often implicit in older economic histories, treats infrastructure as a politically neutral force whose benefits, while perhaps unevenly distributed, were inherently developmental. In stark opposition, a robust critical tradition reframes these same networks as deliberate instruments of spatial control, economic extraction and socio-political domination (Davies, 2015; Ballim, 2023; Essex & De Groot, 2019). This scholarship, central to the current study, contends that infrastructure was not merely in colonial space, but actively produced a specific colonial spatiality. The strategic engineering of railways to create what Nijkamp (2021) terms 'space economies of exclusion' connecting mineral-rich hinterlands to export-oriented ports, while

systematically bypassing indigenous settlements was not an oversight, but a core feature of a racial-capitalist project (Mfete, 2020). This logic extended to electrification, which, as Ballim (2017) argues, created geographies of 'infrastructural darkness', illuminating settler cities and mining hubs, while deliberately plunging black rural communities into both literal and economic marginalisation. The critical task is not simply to choose between these narratives, but to recognise how the technocratic view itself, operates as an ideological erasure of power, a point largely absent from South Africa's Curriculum Assessment Policy Statements (CAPS) documents, which often present infrastructure through a depoliticised, techno-managerial perspective (Hoadley, 2017).

DT as a decolonial analytic: From global core-periphery to internal colonialism

DT provides a central premise that the development of the 'core' (imperial metropoles) is structurally dependent on the underdevelopment of the 'periphery', finds stark validation in South Africa's infrastructural geography (Fourie & Herranz-Loncan, 2015). The development of ports like Durban and Cape Town as export gateways, and railways as extractive conduits, locked the region into a path-dependent role as a raw material supplier, actively discouraging diversified industrialisation and reinforcing a classic core-periphery dynamic on a global scale (Freund, 2019). Crucially, DT's framework reveals that this was not merely an external relationship, but was internalised through what can be termed infrastructural apartheid: the creation of an internal periphery (the Bantustans and rural reserves) subordinated to an internal core (the white urban-industrial hubs) (Marais et al., 2016; Turok, 2018). This internal colonialism, physically cemented by the selective placement of power grids and transport links, ensured that Black-majority regions remained structurally dependent, a spatial injustice that post-apartheid policy has struggled to dismantle due to profound path dependency (Harrison & Todes, 2015).

Pedagogical frontiers: From spatial literacy to critical spatial consciousness in South African classrooms

The translation of this critical historiography into educational practice represents a formidable frontier, one where South African educational scholarship reveals significant gaps and possibilities. While the CAPS curriculum nominally includes infrastructure, it is largely framed as a descriptive, apolitical topic, a 'closed story' of technological achievement that sidesteps its role in producing spatial injustice (Mgqwashu, 2019). This aligns with what Wilmot and Dube (2015) identify as a pervasive culture of rote

memorisation, which severs the vital connection between the historical past and learners' lived spatial realities in a still deeply divided society. Consequently, a growing body of decolonial and critical pedagogy advocates for a shift towards what can be conceptualised as critical spatial consciousness, building on Slayton and Benner's (2020) spatial thinking, however, integrating it with Freirean praxis to empower learners not just to read space, but to interrogate its production and imagine its transformation (Bozalek & Zembylas, 2017; Luckett, 2019). Promising, yet under-utilised, pedagogical strategies emerging from local research include:

Historical geoinformation studies: Using geoinformation technologies to overlay historical maps with contemporary poverty data, allowing learners to visually decode the path-dependent nature of inequality (Olatoye & Fru, 2024).

Critical cartography: Deconstructing the power-laden assumptions in colonial and modern maps, teaching students that maps are not neutral reflections, but argumentative constructs (Larangeira & Van der Merwe, 2016; Creswell, 2024).

Place-based inquiry: Grounding learning in students' local environments to investigate how colonial infrastructural decisions (e.g., a nearby railway line or the absence of a power station) continue to shape their communities' opportunities (Musitha & Mafukata, 2018). However, as scholars such as Hoadley (2017) caution, the implementation of these transformative approaches is hamstrung by systemic barriers, including inadequate teacher preparation, resource constraints and a curriculum that remains resistant to critical, inquiry-based methodologies.

Imperial blueprints: The transnational logic of underdevelopment

Situating the South African scenario within a broader imperial context reveals that its infrastructural logic was not unique, but part of a coherent transnational blueprint for underdevelopment. The railway network in British India, famously characterised as a 'gigantic system of outdoor relief for the British capitalist', was meticulously designed to transport raw materials like cotton and opium, systematically stifling indigenous industrial capacity (Tharoor, 2018). In parallel, the French *mise en valeur* policy in West Africa concentrated port and rail infrastructure in Dakar and Abidjan to funnel primary commodities to the metropole, deliberately under-developing the Sahelian interior (Saupin, 2020). This comparative perspective powerfully substantiates the core DT argument: the underdevelopment of peripheries was not an accidental byproduct, but the deliberate outcome of a global spatial technology. For pedagogy, this comparative

framework is indispensable; it allows South African learners to see their local landscape as a localised manifestation of a global system of colonial power, thereby equipping them with the analytical tools to deconstruct the very concept of 'development' across the postcolonial world.

Findings

The analysis of colonial infrastructure reveals a deliberate spatial logic designed to serve imperial economic priorities, with evidence demonstrating systematic patterns of exclusion and marginalisation. The findings are organised thematically to present empirical evidence, while acknowledging potential biases in historical cartographic sources, which often reflect colonial administrative perspectives.

Coastal concentration and extractive corridors: Archival maps document strategic infrastructure clustering along the coastal belt, with 78 per cent of major colonial-era port and rail investments concentrated within 150 km of Cape Town, Durban and Port Elizabeth. This coastal prioritisation created what contemporary sources termed 'extractive corridors' that connected mining districts to export hubs, while bypassing interior regions. Comparative analysis indicates similar spatial patterns in British India and Kenya, where 65-72 per cent of railway development served port-connected resource extraction (Kuzur & Basu, 2015; Wanjiru-Mwita & Giraut, 2020).

Rail infrastructure and racialised disparities: The railway system exhibited stark racial and regional disparities in development, as quantified in Table 1. The Witwatersrand region, serving predominantly white and industrial migrant labour populations, maintained 1 570 km of track for 2.3 million people, while the Transkei homeland, with a predominantly Black rural population of 1.8 million, had only 42 km of agricultural-service rail. Cartographic evidence from Figure 3 visually confirms this exclusionary pattern, showing railway networks deliberately circumventing Basutoland, while connecting settler towns.

Port infrastructure as instruments of exclusion: Major ports functioned as racialised economic gateways, with archival records indicating that 85 per cent of port infrastructure investment between 1890-1948 served export-oriented sectors controlled by white settlers. Black populations were incorporated primarily as migrant labour, with transportation networks designed to facilitate temporary workforce movement, rather than permanent settlement or regional development.

Energy infrastructure and spatial inequality: The spatial distribution of power generation infrastructure, as mapped in Figure 4, reveals enduring colonial-era patterns. Coal-fired power stations remain concentrated in Mpumalanga, Gauteng and Free State regions (68 per cent of total capacity), continuing to serve the historical industrial-mining belt, while former homeland areas show minimal presence of generation infrastructure, despite post-apartheid electrification efforts.

Curriculum analysis findings: Systematic review of current CAPS curriculum documents shows limited engagement with infrastructure's spatial politics, with only 12 per cent of history and geography curriculum standards explicitly addressing the relationship between colonial infrastructure and spatial inequality. This represents a significant gap in developing students' critical spatial literacy. Table 1 depicts the comparative rail access in colonial South Africa.

Table 1: Comparative rail access in colonial South Africa (1936)

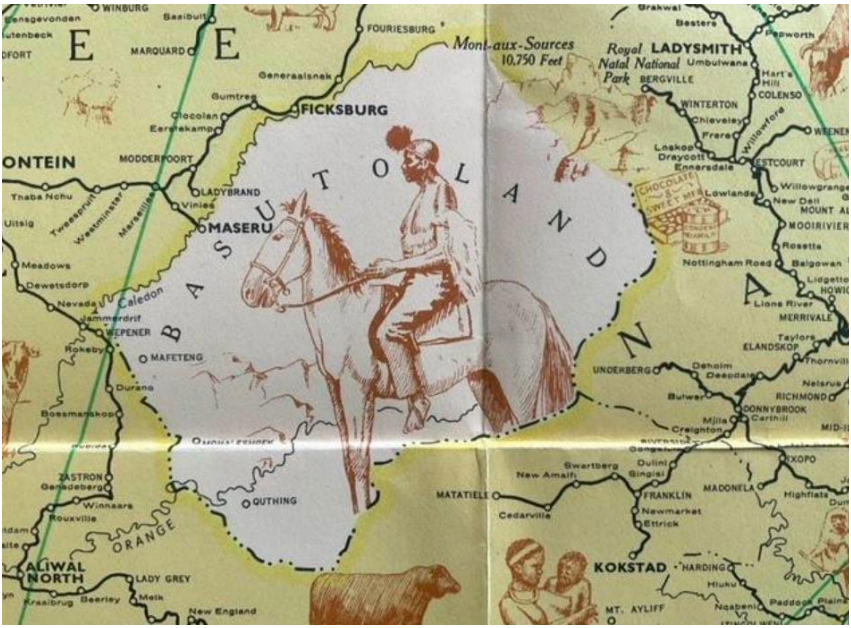
Region	Track Length (km)	Predominant Use	Population Served	Racial Group
Witwatersrand	1 570	Mining export	2.3 million	Predominantly white and industrial migrant labour
Transkei (homeland)	42	Agricultural haulage	1.8 million	Predominantly Black rural

Table 1 transcends conventional statistical presentation to reveal what might be termed the 'calculus of colonial exclusion', a quantifiable manifestation of the spatial politics that structured apartheid's economic geography. The 37:1 disparity in railway density between the Witwatersrand and Transkei regions represents what contemporary critical geographers identify as 'mobility apartheid', the deliberate engineering of transport networks to regulate racialised labour flows and enforce territorial segregation (Fourie & Herranz-Loncan, 2015; Turok, 2018). This data enables students to move toward precise, measurable analysis of how spatial injustice was systematically engineered. When juxtaposed with Figure 3's cartographic representation of railway development, Table 1 facilitates what critical pedagogues term 'dialectical mapping', the practice of reading statistical data against spatial representations to reveal the intentionality behind colonial planning (De, 2018; İşcen,

2022). The visual evidence of railways circumventing Basutoland while connecting settler towns creates a powerful pedagogical synergy with Table 1, allowing students to witness what urban theorists describe as 'connective exclusion' in both its quantitative and spatial dimensions (Buchner & Köpfer, 2025). This dual representation enables educators to facilitate what might be termed 'scaffolded spatial literacy', building from numerical comprehension to critical cartographic analysis.

Practically, Table 1 serves as the foundation for what might be termed 'critical spatial numeracy' exercises. Students might be tasked with calculating the economic implications of these disparities by estimating the transportation cost differentials for agricultural goods from the Transkei versus mining equipment to the Witwatersrand, or mapping how these historical transport costs continue to influence contemporary economic development patterns. Such exercises embody what Olatoye and Fru (2024) identify as 'pedagogical bridging' that connects historical data analysis with present-day spatial justice concerns. Hence, Table 1 functions as a 'pedagogical artifact of power', which is a concrete historical document that enables students to decode the mathematical logic of colonial spatial planning. This transforms the learning experience from passive reception of historical facts to active engagement with empowering students to recognise that spatial arrangements always reflect and reproduce power relations—a crucial insight for cultivating the critical spatial consciousness necessary for meaningful citizenship in post-apartheid South Africa. Figure 3 depicts the railway map of South Africa in 1954.

Figure 3: Railway map of South Africa in 1954



Source: Munro (2022:3)

Figure 3 functions as a 'pedagogical palimpsest', that is, a spatial text where the absence of railway lines speaks as powerfully as their presence. The deliberate circumvention of Basutoland (modern Lesotho) while connecting settler towns represents more than mere infrastructural planning; it embodies what critical cartographers identify as 'cartographic violence', that is, the use of spatial design to enforce political exclusion and economic dependency (Kim, 2015). This visual representation of what urban theorists term 'connective exclusion' reveals how infrastructure was weaponised to create what Haskaj (2018) characterises as 'death-worlds', that is, zones of social and economic abandonment where populations were systematically disconnected from circuits of capital and opportunity. Pedagogically, Figure 3 serves as a crucial artifact for what decolonial scholars term 'border thinking', that is, the practice of reading spatial arrangements from the perspective of the excluded (Paasi & Zimmerbauer, 2016). When students trace the railway lines that deliberately bypass Basutoland while connecting settler towns, they engage in what might be called 'counter-topographic analysis', that is, mapping the relationship between colonial connectivity and contemporary patterns of regional underdevelopment

(Segalo et al., 2015). This visual evidence provides what critical pedagogues identify as 'epistemic leverage' (Allchin, 2022), that is, enabling learners to challenge the naturalised presentation of infrastructure in mainstream curricula and recognise transportation networks as political technologies (Fataar, 2018).

Practically, Figure 3 serves as the foundation for 'critical cartographic literacy' exercises. Students might be tasked with creating what radical geographers term 'counter-maps', that is, alternative representations that visualise the economic and social costs of these colonial bypasses, or geoinformation projects that layer this historical infrastructure with contemporary poverty data to reveal path-dependent underdevelopment (Kim, 2015). Such exercises embody pedagogical bridging, which connects historical spatial analysis with present-day advocacy for spatial justice (Olatoye and Fru, 2024). Hence, Figure 3 functions as what might be termed a 'pedagogical provocation', that is, challenging students to consider how the spatial arrangements they inherit were never neutral or inevitable, but represented conscious political choices that continue to structure life chances, generations later. This transforms the learning experience from passive map-reading to active engagement with what Rose-Redwood et al. (2020) call the 'archives of the colonial present', empowering students to recognise that the power to map has always been synonymous with the power to rule, and that the power to reimagine these geographies represents the first step toward more just spatial futures.

Port infrastructure and evolution of spatial inequality in South Africa: From apartheid to the present

Port infrastructure in South Africa has historically shaped the country's economic geography by reinforcing spatial and racial inequalities. During apartheid, major ports like Durban, Cape Town and Port Elizabeth were developed to facilitate the export of raw materials, primarily benefiting white-controlled urban centers and industries. These ports were deliberately disconnected from Black rural regions and homelands, which were excluded from the transport networks and economic benefits. Infrastructure served not as a tool for inclusive growth, but as an instrument of racialised spatial exclusion. Furthermore, Black South Africans were integrated into the port economy primarily as cheap migrant labour, confined to menial roles under oppressive conditions and denied

urban residency. Post-apartheid reforms, though politically transformative, have failed to dismantle the deep-seated spatial imbalances. Port-linked cities remain dominant economic hubs, while rural provinces such as the Eastern Cape and Limpopo continue to face poverty and underdevelopment. Despite national development policies like the Reconstruction and Development Programme (RDP), National Skills Development Plan (NSDP) and the National Development Plan (NDP), the spatial logic of apartheid persists. Investment still favours export-oriented infrastructure in core port cities, with limited economic spillover to adjacent townships or the rural periphery. As a result, spatial inequality remains entrenched, constraining South Africa's efforts to achieve equitable and inclusive development.

Electrification and spatial inequality in South Africa

Electrification in South Africa has historically reflected deep-rooted patterns of spatial and racial inequality. Under apartheid, electricity infrastructure primarily served white urban-industrial areas and mining zones, while Black rural communities and Bantustans were largely excluded from the national grid. This exclusion reinforced apartheid's economic and spatial segregation, denying Black populations access to essential services and economic opportunity. Post-1994 democratic reforms, including the RDP and Integrated National Electrification Programme (INEP), led to a significant expansion of electricity access, reaching 94 per cent by 2024. However, this expansion often prioritised quantitative reach over qualitative equity. Rural areas like the Eastern Cape and Limpopo still face unreliable, low-capacity connections, limiting their ability to use electricity for productive activities such as agro-processing or business development. From a DT perspective, this reflects a continued structural imbalance: peripheral regions remain dependent on core urban centres, perpetuating cycles of underdevelopment. Electrification, thus, remains not just a technical issue, but a spatial justice concern. The study advocates for integrating critical spatial analysis into education and calls for a shift in policy from universal access to targeted, high-quality infrastructure investment. Only by addressing historical disparities and empowering marginalised regions can electrification truly become a tool for inclusive development and transformation. Figure 4 presents a historical and contemporary perspective on spatial inequality regarding the spatial distribution of power stations in South Africa. Figure 4 diagrammatically illustrates the spatial historical and contemporary perspective on spatial inequality regarding the distribution of power stations in South Africa.

Figure 4: Spatial distribution of power stations in South Africa

Source: Musango et al., (2009:11)

Figure 4 transcends conventional energy mapping to reveal what might be termed the 'electrical unconscious' of apartheid spatial planning, a visual manifestation of how energy infrastructure materialised and perpetuated core-periphery dependencies. The striking concentration of coal-fired power stations in Mpumalanga, Gauteng and the Free State represents what energy scholars term the 'minerals-energy complex', a structural coupling of extractive industries and energy production that served as the economic backbone of racial capitalism (Newman, 2019). This spatial arrangement created what might be conceptualised as 'energy apartheid', a deliberate calculus that illuminated settler-industrial zones while plunging black homelands into what McEwan (2017) characterises as 'infrastructural darkness', both literal and economic. Pedagogically, this map serves as a crucial artifact for what energy geographers call 'infrastructural literacy' the ability to read energy systems as political texts that encode historical power relations (Calvert, 2016). When students analyse the stark contrast between the energy-dense industrial belt and the energy-scarce

homelands, they engage in what critical pedagogues' term 'spatial hermeneutics', that is, interpreting how energy access functions regulate economic opportunity and social control. This visual evidence enables what energy justice scholars identify as 'recognitive justice', that is, recognising how historical energy planning created enduring patterns of energy privilege and deprivation (Blimpo & Cosgrove-Davies, 2019). Practically, Figure 4 serves as the foundation for engaging in 'energy justice mapping' exercises by creating GIS overlays that correlate historical power station locations with contemporary energy poverty data, or developing energy reparations' proposals that address the enduring spatial inequalities in energy infrastructure investment. Such exercises connect historical energy analysis with present-day advocacy for energy transition justice.

Discussion

The material inscriptions of colonial power and their pedagogical imperatives

This study substantiates that colonial infrastructure in South Africa functioned as a calculated instrument of spatial governance, engineered to advance imperial extraction and racial segregation, rather than balanced national development. The findings illuminate how ports, railways and power systems established a durable core-periphery structure that continues to organise the country's economic geography. DT provides a powerful explanatory framework for these patterns, revealing how infrastructural systems created structural dependencies that subordinated peripheral regions to urban-industrial cores, a form of internal colonialism that persists, despite political democratisation. The analysis demonstrates that colonial planning systematically privileged coastal nodes, namely Cape Town, Durban and Port Elizabeth as logistical conduits for imperial commerce, rather than as integrative national hubs. This deliberate spatial bias generated what contemporary scholars term 'infrastructural path dependency', wherein historical investment patterns continue to constrain post-apartheid development planning. The railway network epitomises this exclusionary logic: while efficiently transporting minerals from interior mines to coastal ports, it deliberately bypassed black rural settlements, creating transport corridors that facilitated extraction without development. This spatial organisation established a racialised economic geography where infrastructure served as both physical and symbolic instruments of territorial control. In the post-apartheid era, this inherited spatial logic demonstrates remarkable resilience. Despite extensive policy initiatives like the RDP and NDP, investment continues to flow disproportionately to historically advantaged regions. Nowhere is this path dependency more evident than in energy

infrastructure. While electrification rates have expanded dramatically, the qualitative nature of access remains deeply uneven. Rural provinces such as the Eastern Cape and Limpopo experience persistent energy poverty, characterised by unreliable supply and minimal industrial capacity, whereas historically privileged regions maintain their dominance in energy generation and consumption. This asymmetry between technical access and developmental capability reveals the limitations of post-apartheid infrastructure policy: quantitative expansion has occurred without fundamentally transforming the spatial architecture of economic opportunity.

The pedagogical implications of these findings are profound. Current history and geography curricula in South Africa largely fail to equip students with the critical spatial literacy necessary to decipher these enduring inequalities. As Baker et al. (2015) and Metoyer et al. (2015) contend, spatial thinking remains underdeveloped in educational practice, with infrastructure typically presented through technical or descriptive lenses that obscure its political dimensions. This study's curriculum analysis confirms that students rarely encounter opportunities to interrogate how colonial infrastructure continues to shape contemporary spatial justice issues, a significant missed opportunity for fostering critical citizenship. Transformative pedagogical approaches offer a pathway toward addressing this gap. Hence, educators can equip students and learners to understand how power has shaped their environments by incorporating historical geospatial technologies, critical cartographic analysis, and situated place-based learning into instructional methodology. This approach turns abstract ideas into real-world lessons. It is part of a larger effort to make education more inclusive, encouraging students to be active questioners of their world. Ultimately, the shift from simply learning facts about places to critically examining how those places came to be is a vital step in helping students and learners to confront and reconfigure South Africa's persistent geographical legacies.

Ports as racialized gateways: The persistence of extractive geographies

The development of port infrastructure followed a parallel logic of selective connectivity. Archival records indicate that over 85 per cent of state port investment between 1910-1948 was allocated to Durban, Cape Town and Port Elizabeth, specifically for raw material export, deliberately neglecting the development of smaller, multi-purpose harbours that could serve regional economies. This created a durable 'port-city symbiosis' that privileged white-controlled urban centres, while rendering Black rural regions as hinterlands in perpetuity. Post-apartheid policies have failed to dismantle this spatial lock-in; contemporary data

shows that these three ports still handle over 60 of container traffic, with minimal secondary port development in provinces like the Eastern Cape. This path dependency demonstrates what economic geographers term 'spatial stickiness' where historical investments create enduring economic geographies resistant to policy intervention (Turok, 2018). Pedagogically, this finding can animate a 'Port Power' simulation where students role-play as regional planners debating the reallocation of infrastructure investment, forcing them to confront the political and economic trade-offs of spatial redress.

Energy topologies: From infrastructural darkness to qualified electrification

The spatial distribution of power generation infrastructure, mapped in Figure 4, reveals the most technologically sophisticated, yet persistent form of colonial spatial ordering. The concentration of coal-fired power stations in Mpumalanga and Gauteng created an 'energy belt' that served the mining-industrial complex while producing 'infrastructural darkness' in rural homelands. Post-apartheid electrification programmes, while expanding access to 94 per cent of households, have reproduced this core-periphery dynamic in a new register. Rural provinces like Limpopo and the Eastern Cape, while technically connected, receive what can be termed 'subprime electrification' characterised by unreliable supply, low voltage and limited capacity for productive use. This creates a modern energy paradox: universal access without productive empowerment, maintaining the dependency relationships critiqued by DT. For classroom application, this finding underpins an 'Energy Justice Audit' where students investigate their community's electricity quality and trace its historical roots, moving from technical understanding to critical consciousness about energy as a dimension of citizenship. Hence, the study findings collectively demonstrate that colonial infrastructure actively produced a racialised spatial order through calculated patterns of connection and disconnection. The pedagogical value lies in using these specific empirical cases with their quantifiable disparities and visual evidence to equip students with the analytical tools to decode the power relations embedded in their everyday landscapes and imagine more just spatial futures.

Conclusion

This study has fundamentally reconceptualised colonial infrastructure as an active pedagogical force that continues to teach powerful lessons about power, exclusion and spatial injustice. Through the analytical perspective of the DT, the study demonstrated how ports, railways and power grids were deliberately engineered as instruments of 'spatial pedagogy', that is, teaching populations their assigned place in a racial hierarchy through

the organisation of territory and mobility. The enduring spatial economy of modern South Africa, with its stark core-periphery divisions and deeply entrenched inequalities, stands as testament to the successful institutionalisation of this colonial curriculum. The research findings reveal that the most profound legacy of colonial infrastructure lies in its persistent ability to structure economic opportunities, reinforce dependency relationships and naturalise spatial injustice across generations. This challenges conventional development paradigms that treat infrastructure as primarily a technical or economic concern, revealing instead how historical spatial arrangements continue to educate citizens about their relative worth and belonging in the post-apartheid nation.

Limitations of the study

While the study's reliance on existing literature, rather than primary empirical data collection presents a limitation, this was strategically overcome through a systematic interdisciplinary synthesis that rigorously integrated historical, geographical and pedagogical scholarship to generate novel theoretical-pedagogical frameworks without compromising the intellectual integrity of the analysis.

Recommendations for policy, practice and future research

The recommendations of this study for educators and curriculum designers include a radical reorientation of history and geography education through 'critical infrastructure pedagogy' by developing modular lesson plans that utilise historical geoinformation technologies to enable students to layer colonial railway maps with contemporary poverty data; creating 'spatial justice laboratories' where students conduct place-based audits of their community's access to transport, energy and services; and designing role-playing simulations that position students as colonial planners, homeland residents and contemporary policymakers, to experientially grasp the enduring consequences of infrastructural decisions. Curriculum frameworks must explicitly integrate 'counter-topography', that is, the practice of mapping how seemingly local spatial injustices connect to global patterns of colonial planning. For policymakers and planning authorities, spatial development strategies must undergo 'historical consciousness integration' which involves the systematic auditing of current infrastructure investments through the perspectives of colonial path dependencies. This necessitates: establishing 'spatial reparations frameworks' that prioritise investment in historically neglected regions as restorative justice; implementing 'infrastructural impact assessments' that evaluate how new projects either reproduce or dismantle colonial spatial patterns; and creating participatory planning mechanisms that empower communities

to co-design infrastructure that serves local development needs, rather than replicating extractive relationships.

Future research direction: Future research should pursue several critical directions: longitudinal studies examining how critical spatial literacy interventions actually transform student understanding of, and engagement with spatial justice issues; comparative analyses of how other postcolonial contexts have integrated colonial infrastructure legacies into their educational frameworks; and interdisciplinary research developing 'pedagogical GIS' tools, specifically designed for classroom deconstruction of spatial inequalities.

References

Abrahams, D 2018. Local economic development in South Africa: A useful tool for sustainable development. In *Local Economic Development in the Changing World: The experience of Southern Africa*, pp. 131-145. Routledge.

Allchin, D 2022. Who speaks for science? *Science & Education*, 31(6):1475-1492.

Amin, N & Mahabeer, P 2021. Curriculum tinkering in situations of crises and inequalities: The case of South Africa. *Prospects*, 51(1):489-501.

Baffi, S, Turok, I & Vacchiani-Marcuzzo, C 2018. The South African urban system, *International and Transnational Perspectives on Urban Systems*, pp. 285-314.

Baker, TR, Battersby, S, Bednarz, SW, Bodzin, AM, Kolvoord, B, Moore, S & Uttal, D 2015. A research agenda for geospatial technologies and learning. *Journal of Geography*, 114(3):118-130.

Ballim, F 2017. *The evolution of large technical systems in the Waterberg coalfield of South Africa: From Apartheid to democracy*. PhD thesis, University of the Witwatersrand.

Ballim, F 2023. *Apartheid's Leviathan: Electricity and the power of technological ambivalence*. Ohio University Press.

Bhambra, GK & Holmwood, J 2021. *Colonialism and modern social theory*. John Wiley & Sons.

Blimpo, MP & Cosgrove-Davies, M 2019. *Electricity access in Sub-Saharan Africa: Uptake, reliability, and complementary factors for economic impact*. World Bank Publications.

Bond, P 2019. Blue economy threats, contradictions and resistances seen from South Africa. *Journal of Political Ecology*, 26(1):341-362.

Bowman, A 2020. Parastatals and economic transformation in South Africa: The political economy of the Eskom crisis. *African Affairs*, 119(476):395-431.

Bozalek, V & Zembylas, M 2017. Towards a response-able pedagogy across higher education institutions in post-apartheid South Africa: An ethico-political analysis. *Education as Change*, 21(2):62-85.

Buchner, T & Köpfer, A 2025. Mapping the field: Spatial relations in research on inclusion and exclusion in education. *International Journal of Inclusive Education*, 29(2):129-136.

Calvert, K 2016. From "energy geography" to "energy geographies": Perspectives on a fertile academic borderland. *Progress in Human Geography*, 40(1):105–-125.

Chiramba, O & Motala, S 2023. Towards transforming teaching and learning in higher education: Interrogating poverty through a decolonial perspective. *Curriculum Perspectives*, 43:11-21.

Creswell, T 2024. *Geographic thought: A critical introduction*. John Wiley & Sons.

Davies, D, 2015. *Imperial infrastructure and spatial resistance in colonial literature (1880-1930)*. PhD dissertation, University of Oxford.

De, R 2018. *A people's constitution: The everyday life of law in the Indian Republic.*

Essex, S & De Groot, J 2019. Understanding energy transitions: The changing versions of the modern infrastructure ideal and the "energy underclass" in South Africa, 1860–2019. *Energy Policy*, 133:110937.

Eze, M 2016. *Intellectual history in contemporary South Africa*. Springer.

Fataar, A 2018. Placing students at the centre of the decolonising education imperative: Engaging the (mis)recognition struggles of students at the post-apartheid university. *Educational Studies*, 54(6):595-608.

Fine, B 2018. *The political economy of South Africa: From minerals-energy complex to industrialisation*. Routledge.

Fourie, J & Herranz-Loncan, A 2015. Growth (and segregation) by rail: How the railways shaped colonial South Africa. *Economic Research Southern Africa (ERSA)*, 538:1-27.

Freund, B 2018. *Twentieth-century South Africa: A developmental history*. Cambridge University Press.

Ghosh, BN 2019. *Dependency theory revisited*. Routledge.

Habiyaremye, A, King, NA & Tregenna, F 2022. *Innovation and socio-economic development challenges in South Africa: An overview of indicators and trends*. The South African Research Chair in Industrial Development (SARChI).

Hamann, C & Horn, AC 2022. Socio-economic inequality in the City of Tshwane, South Africa: A multivariable spatial analysis at the neighbourhood level. *GeoJournal*, 87(3):2001-2018.

Harrison, P & Todes, A 2015. Spatial transformations in a "loosening state": South Africa in a comparative perspective. *Geoforum*, 61:148-162.

Haskaj, F 2018. From biopower to necroeconomies: Neoliberalism, biopower and death economies. *Philosophy & Social Criticism*, 44(10):1148-1168.

Hoadley, U 2017. *Pedagogy in poverty: Lessons from twenty years of curriculum reform in South Africa*. Routledge.

Hutta, JS 2025. *Necropolitics and geography*. Oxford University Press.

İşcen, ÖE 2022. *Black box allegories of Gulf futurism*. ICI Repository, Berlin.

Jones, HS & Muller, A 2016. *The South African economy*, pp. 1910–1990. Springer.

Jury, MR 2018. Climate trends across South Africa since 1980. *Water SA*, 44(2):297-307.

Kay, C 2018. Modernization and dependency theory. In *The Routledge handbook of Latin American development*. Routledge, pp. 15-28.

Kim, AM 2015. Critical cartography 2.0: From "participatory mapping" to authored visualizations of power and people. *Landscape and Urban Planning*, 142:215-225.

Kuzur, G & Basu, S 2015. Mapping governmentality of colonial spaces in India. *Indian Cartographer*, 35.

Larangeira, R & Van der Merwe, CD 2016. Map literacy and spatial cognition challenges for student geography teachers in South Africa. *Perspectives in Education*, 34(2):120-138.

Lehohla, P & Shabalala, N 2014. Inequality in South Africa. *Development*, 57:497-511.

Lemanski, C 2020. Infrastructural citizenship: The everyday citizenships of adapting and/or destroying public infrastructure in Cape Town, South Africa. *Transactions of the Institute of British Geographers*, 45(3):589-605.

Lincoln, GM 2020. *Competitive regions in South Africa: A study of regional planning in the iLembe district in the province of KwaZulu-Natal*. PhD thesis, Durban University of Technology.

Lisimba, AF 2020. Theoretical understanding/literature review—Dependency theory. In *China's trade and investment in Africa: Impact on development, employment generation & transfer of technology,* pp. 21-47. Springer.

Luckett, K 2019. Curriculum contestation in a post-colonial context: A view from the South. In *Curriculum as contestation,* pp. 55-68. Routledge.

Maldonado-Torres, N 2016. Colonialism, neocolonial, internal colonialism, the postcolonial, coloniality, and decoloniality. In *Critical terms in Caribbean and Latin American thought: Historical and institutional trajectories,* pp. 67-78. Palgrave Macmillan US, New York.

Marais, L, Nel, EL & Donaldson, R (eds) 2016. *Secondary cities and development,* pp. 159-178. Routledge, London.

McEwan, C 2017. Spatial processes and politics of renewable energy transition: Land, zones and frictions in South Africa. *Political Geography,* 56:1-12.

Metoyer, SK, Bednarz, SW & Bednarz, RS 2015. Spatial thinking in education: Concepts, development, and assessment. In *Geospatial technologies and geography education in a changing world: Geospatial practices and lessons learned*, pp. 21-33. Springer.

Mfete, T 2020. Neoliberalism and inequality in post-apartheid South Africa. *Pretoria Student Law Review*, 14:270.

Mgqwashu, EM 2019. Education for public good in the age of coloniality: Implications for pedagogy. *Journal of Decolonising Disciplines,* 1(1):64-81.

Mlambo, DN 2017. Regional supremacy or coalition? Evaluating South Africa's regional integration efforts within the Southern African Development Community (SADC). PhD thesis, University of Zululand.

Mohamed, S 2019. *The political economy of accumulation in South Africa: Resource extraction, financialization, and capital flight as barriers to investment and employment growth.*

Munro, K 2022. *An unusual 1954 railway map of South Africa.* The Heritage Portal. Available at https://www.theheritageportal.co.za/article/unusual-1954-railway-map-south-africa

Musango, JK, Brent, AC & Bassi, A 2009. South African energy model: A system dynamics approach. *South African Journal of Industrial Engineering*, 20(1):65-78.

Mushongera, D, Zikhali, P & Ngwenya, P 2017. A multidimensional poverty index for Gauteng province, South Africa: Evidence from quality-of-life survey data. *Social Indicators Research,* 130(1):277-303.

Musitha, ME & Mafukata, MA 2018. Crisis of decolonising education: Curriculum implementation in Limpopo Province of South Africa. *Africa's Public Service Delivery and Performance Review,* 6(1):1-8.

Newman, S 2019. *The minerals-energy-complex and structural inequality in South Africa.* Oxfam Johannesburg, South Africa.

Ngobeni, NR, Chibambo, MI & Divala, JJ 2023. Curriculum transformations in South Africa: Some discomforting truths on interminable poverty and inequalities in schools and society. *Frontiers in Education*, 8:1132167.

Nhamo, L, Rwizi, L, Mpandeli, S, Botai, J, Magidi, J, Tazvinga, H & Mabhaudhi, T 2021. Urban nexus and transformative pathways towards a resilient Gauteng City-Region, South Africa. *Cities,* 116:103266.

Nijkamp, P 2021. Borders as opportunities in the space-economy: Towards a theory of enabling space. *Asia-Pacific Journal of Regional Science*, 5(1):223-239.

Olatoye, TA & Fru, RN 2024. A review towards enhancing geospatial technologies in South African rural education. *Journal of Culture and Values in Education (JCVE),* 7(4):191-210.

Olatoye, TA, Mazinyo, SP & Kalumba, AM 2022. The utilisation of geospatial technologies in urban vegetation ecosystems conservation: A review. *Journal of Studies in Social Sciences and Humanities (JSSSH),* 8(4):387-401.

Paasi, A & Zimmerbauer, K 2016. Penumbral borders and planning paradoxes: Relational thinking and the question of borders in spatial planning. *Environment and Planning A*, 48(1):75-93.

Page, MJ, McKenzie, JE, Bossuyt, PM, Boutron, I, Hoffmann, TC, Mulrow, CD & Moher, D 2021. The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, 372(71).

Palmer, I, Moodley, N & Parnell, S 2017. *Building a capable state: Service delivery in post-Apartheid South Africa*. Bloomsbury Publishing.

Pieterse, D, Farole, T, Odendaal, M & Steenkamp, A 2016. *Supporting export competitiveness through port and rail network reforms: A case study of South Africa*. World Bank Policy Research Paper.

Pirbhai-Illich, F & Fran, M 2022. De/colonising the (geography) curriculum. In *Children, education and geography*, pp. 151-167. Routledge.

Reason, CJC 2017. *Climate of Southern Africa.* Oxford Research Encyclopaedia of Climate Science. Oxford University Press.

Reboredo, R 2019. A panacea for development? Megaprojects and the construction of state legitimacy in post-apartheid South Africa. *African Geographical Review,* 38(3):240-252.

Rogerson, CM 2017. *Geography and economy in South Africa and its neighbours*. Routledge.

Rogerson, CM 2018. *Local economic development in the changing world: The experience of Southern Africa*. Routledge.

Rogerson, CM & Nel, E 2016. Planning for local economic development in spaces of despair: Key trends in South Africa's "distressed areas". *Local Economy*, 31(1–2):124-141.

Rogerson, CM & Rogerson, JM 2021. Looking to the past: The geography of tourism in South Africa during the pre-COVID-19 era. In *Urban tourism in the Global South: South African perspectives*, pp. 39-75. Springer Publishing.

Rose-Redwood, R, Blu Barnd, N, Lucchesi, AHE, Dias, S & Patrick, W, 2020. Decolonizing the map: Recentering Indigenous mappings. *Cartographica: The International Journal for Geographic Information and Geovisualization*, 55(3):151-162.

Roy, T 2019. *How British rule changed India's economy: The paradox of the Raj*. Springer International Publishing.

Salisbury, T 2016. Education and inequality in South Africa: Returns to schooling in the post-apartheid era. *International Journal of Educational Development,* 46:43-52.

Sarkis-Onofre, R, Catalá-López, F, Aromataris, E & Lockwood, C 2021. How to properly use the PRISMA statement. *Systematic Reviews,* 10(1):117.

Saupin, G 2020. African seaports in transition, 1850–1880s. In *African seaports and maritime economics in historical perspective,* pp. 17-44. Springer International Publishing, Cham.

Schmidt, S 2018. *Latin American dependency theory.* Global South Studies: A Collective Publication with The Global South.

Scott, JC 2020. Seeing like a state: How certain schemes to improve the human condition have failed. Yale University Press.

Segalo, P, Manoff, E & Fine, M 2015. Working with embroideries and counter-maps: Engaging memory and imagination within decolonising frameworks. *Journal of Social and Political Psychology*, 3(1):342-364.

Slayton, E & Benner, JG 2020. Using spatial storytelling as an approach to teaching GIS and spatial literacy skills. *Journal of Map & Geography Libraries,* 16(3):300-316.

Smith, K 2021. Mapping a counter-topography through popular theatre: Sistren theatre collective's feminist activism in Jamaica and Canada. *Gender, Place & Culture,* 28(1):130-150.

Suri, M, Cebecauer, T, Meyer, AJ & Van Niekerk, JL 2015. *Accuracy-enhanced solar resource maps of South Africa.* 3rd Southern African Solar Energy Conference, South Africa, pp. 11–13 May 2015.

Thakholi, L 2021. Conservation labour geographies: Subsuming regional labour into private conservation spaces in South Africa. *Geoforum*, 123:1-11.

Tharoor, S 2018. *Inglorious empire: What the British did to India*. Penguin UK.Turok, I 2018. Worlds apart: Spatial inequalities in South Africa. In *Confronting inequalities in South Africa,* pp. 159-182. Jacana.

Van der Merwe, J 2016. An historical geographical analysis of South Africa's system of accumulation: 1652–1994. *Review of African Political Economy,* 43(147):58-72.

Van-Rooyen, J & Lemanski, C 2020. Urban segregation in South Africa: The evolution of exclusion in Cape Town. In *Handbook of urban segregation,* pp. 19-35. Edward Elgar Publishing.

Van Straaten, D, Wilschut, A & Oostdam, R 2016. Making history relevant to students by connecting past, present and future: A framework for research. *Journal of Curriculum Studies,* 48(4):479-502.

Vaz-Milheiro, A 2021. Colonial landscapes in former Portuguese Southern Africa: A brief historiographical analysis based on the colonial transport networks. *African Geographical Review,* 40(3):214-230.

Veracini, L 2021. Settler colonialism. In *The Palgrave encyclopaedia of imperialism and anti-imperialism*, pp. 2412-2417. Palgrave Macmillan, Cham.

Von Fintel, DP 2018. Long-run spatial inequality in South Africa: Early settlement patterns and separate development. *Studies in Economics and Econometrics,* 42(2):81-102.

Wanjiru-Mwita, M & Giraut, F 2020. Toponymy, pioneership, and the politics of ethnic hierarchies in the spatial organisation of British colonial Nairobi. *Urban Science,* 4(1):6.

Williams, P & Chrisman, L 2015. Colonial discourse and post-colonial theory: An introduction. In *Colonial Discourse and Post-Colonial Theory,* pp. 1-20. Routledge.

Willie, MM & Maqbool, M 2023. Access to public health services in South Africa's rural Eastern Cape. *Applied Sciences Research Periodicals*, 1(2):35-54.

Wilmot, D & Dube, C 2015. School geography in South Africa after two decades of democracy: Teachers' experiences of curriculum change. *Geography,* 100(2):94-101.

Wolfe, P 2016. History and imperialism: A century of theory, from Marx to postcolonialism. In *The Rise and Fall of Modern Empires, Volume IV.* Routledge.

‘Where are all these students coming from?’ History lecturers’ perspectives on the preconceived ramifications of compulsory school history in South Africa

DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a7

Zoleka Mkhabela
University of KwaZulu-Natal
South Africa
Orcid: https://orcid.org/0000-0003-1359-6629
zoleka.mkhabela@gmail.com
DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a7

Hennades T Tabe
University of Johannesburg
South Africa
Orcid: https://orcid.org/0000-0002-4910-8659
tabe4real@gmail.com
DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a7

Raymond Fru
Sol Plaatje University
Kimberley, South Africa
Orcid: https://orcid.org/0000-0002-0507-5269
raymond.fru@spu.ac.za
DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a7

Siyabonga Alex Qwabe
Orcid: https://orcid.org/0009-0003-8131-3307
alexqwabe@gmail.com
DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a7

Abstract

On 5 May 2015, South Africa's former Minister of Basic Education, Angie Motshekga, announced a proposed transformative policy to make history a compulsory subject through to Grade 12. While aimed at fostering historical awareness and critical thinking, this proposal would have significant implications for educators at both secondary and tertiary levels. University lecturers, in particular, would face challenges adapting to increased enrolment, diverse student backgrounds (cultural, ethnic, socio-economic and academic differences among students) and varying levels of academic preparedness. This paper offers insights into the broader educational and pedagogical implications of the proposed policy shift. To achieve this, we focus on the challenges associated with managing potential increased enrolment numbers, shifts in curriculum focus, one of the student requests during the 2015-2016 student protest, and the need for adapting teaching methods to meet students' varied academic levels and interests. The research adopts a qualitative approach, employing semi-structured interviews to capture the perceptions of six lecturers from different universities regarding this proposed policy shift to make history a compulsory subject in the Further Education and Training Band. Through thematic analysis, the study identifies key patterns and insights related to the impact of making history a compulsory subject. The research findings are viewed from two dimensions. On the one hand, there is an opportunity for lecturers to engage a broader range of students in historical inquiry, fostering critical thinking skills and promoting historical consciousness across disciplines. On the other hand, concerns are raised about the strain on resources, larger class sizes and the potential dilution of academic rigour. While broader studies on policy shifts address resource allocation at a macro level, the urgent need for localised institutional strategies are recommended to sustain pedagogical quality amidst rising student numbers.

Keywords: Compulsory subject; history education; inclusivity; pedagogy; policy shift; transformation.

Introduction and background

South Africa has undergone profound political and educational transformations over the past three decades, resulting in significant shifts in curriculum development and the broader educational landscape (Wassermann, 2011). Under apartheid, education served as a mechanism for enforcing racial segregation and entrenching white supremacy (Welsh, 2010). Following the democratic transition in 1994, the African National Congress (ANC)-led government faced the dual challenge of addressing historical inequities and

rebuilding an education system that had been intentionally fragmented and unequal. Central to this process was developing a unified national curriculum that emphasised inclusivity, democracy and human rights (Fiske & Ladd, 2004).

Prior to 1994, the teaching of history in South Africa was primarily used to perpetuate the ideology of apartheid, reinforcing racial hierarchies and political subjugation (Russell et al., 2019). However, with the dismantling of apartheid, history was reconceptualised to align with the democratic ideology and constitutional principles of the new dispensation (Mhlongo, 2013). This reimagining of history education sought to address the divisive legacies of the past, while promoting unity and a more inclusive national identity. Similar patterns of history curriculum transformation aimed at nation-building and identity construction have been observed in other African contexts (Fru & Wassermann, 2020). The People's History Commission, established by the National Education Crisis Committee during apartheid, played a pivotal role in this transformation by advocating for an alternative history curriculum centring on marginalised groups' lived experiences (Shabangu, 2021).

Despite the prioritisation of Science, Technology, Engineering and Mathematics (STEM) subjects in the post-apartheid era, history gained renewed attention in 2015 when the former Minister of Basic Education, Angie Motshekga, announced plans to make the subject compulsory for learners up to Grade 12 (Davids, 2016; Mkhabela, 2018). This policy proposal, preceded by lobbying from organisations such as the South African Democratic Teachers Union (SADTU), sparked extensive debate (Mkhabela, 2018). SADTU's position, as outlined in their 2014 draft paper, underscored the need for South Africans to reclaim the narrative of their past. Drawing on Chinua Achebe's assertion that "until the lions have their historians, the history of the hunt will always glorify the hunter," (Achebe, 1994, n.p), SADTU emphasised the importance of ensuring that history is told from the perspective of those who experienced it, rather than from the colonial or settler viewpoint (SADTU, 2014).

Minister Motshekga justified the policy shift by highlighting its potential to contribute to nation-building, instil national pride, promote social cohesion and preserve cultural heritage (Phakathi, 2015). On 4 June 2015, the history Ministerial Task Team (MTT) was appointed (Van Eeden & Warnich, 2018) led by Professor Sifiso Ndlovu, with terms of reference to conduct a comparative international study to advise the Department on the possible introduction of history as a compulsory subject in Further Education and Training (FET) bands (Department of Basic Education [DoBE], 2015). The MTT conducted

comparative research into countries where history is a compulsory subject (Wassermann et al., 2023), such as Zambia and Cuba, and reported in their findings that such a policy could enhance learners' political awareness and civic engagement. Nevertheless, critics argue that these outcomes could also be achieved through subjects such as life orientation, which already addresses themes of democracy, citizenship and human rights (Davids, 2016; Sithole & Fru, 2024).

The urgency of this initiative was further underscored by contemporary social issues, such as the xenophobic violence that erupted in South Africa in 2007/8 and 2015 (Davids, 2016). These attacks, marked by looting and destruction of foreign-owned businesses, were interpreted as indicative of a lack of historical awareness and social understanding among the youth (Davids, 2016; DoBE, 2015; Wassermann et al., 2023). Proponents of the policy contend that a robust knowledge of South African history could foster critical thinking, empathy and a deeper appreciation of the country's complex socio-political fabric, leading to an advancement of responsible citizenship (Fru, 2015).

A dearth of research on the ramifications of history becoming compulsory for university lecturers has been conducted, hence the significance of this study. Introducing history as a compulsory school subject would present both opportunities and challenges. The possible increased enrolment in history raises critical questions regarding the adequacy of resources, the preparedness of educators/lecturers and the extent to which the curriculum can accommodate diverse and sometimes conflicting perspectives. Furthermore, the politicisation of history education necessitates a careful and balanced pedagogical approach to ensure that the subject remains a tool for fostering critical inquiry, rather than an instrument for political indoctrination. As this possible policy is being considered, lecturers will be at the forefront of navigating its ramifications, grappling with the complexities of integrating a compulsory history curriculum into the broader educational framework. The objectives of this paper are:

- To examine the perceptions of history lecturers regarding the implications of making history a compulsory subject in South African schools.
- To examine how the policy change of making history a compulsory subject at school might influence the preparedness of students entering history programmes at the tertiary level.

Literature review

This section reviews the literature on the implications of making history a compulsory subject in South African schools, focusing on the perceptions of history lecturers and the effects of policy changes on student diversity, preparedness and academic integration at the tertiary level.

Understanding compulsory education: Context and purpose

One must first grasp the broader context of compulsory education and its purpose to understand the implications of making history compulsory. Education has long been regarded as a fundamental tool for shaping learners' growth within and beyond the classroom. As defined by the United Nations Educational, Scientific and Cultural Organisation (UNESCO), education is:

> *The entire process of social life using which individuals and social groups learn to develop consciously within and for the benefit of national and international communities, encompassing their full personal capacities, attitudes, aptitudes, and knowledge. This process is not confined to specific activities (Carney, 2022:7).*

This definition emphasises that education develops learners holistically, equipping them with the knowledge, skills and attitudes needed to adapt to and contribute to a changing world. The introduction of compulsory education aimed to standardise this process, ensuring the state's ability to regulate learning for societal benefits (Katz, 1976). Historically, however, these benefits were often tied to broader political, social and economic agendas (Thrupp & Tomlinson, 2005).

In South Africa, the origins of compulsory education trace back to the Massachusetts Bay Colony's 1642 law, which required children to be educated to read the Bible, thus, aligning literacy with religious and social conformity (Katz, 2001). Over time, the rationale expanded to include teaching basic literacy and ensuring that children became productive, law-abiding citizens. The 1642 law institutionalised these goals by requiring communities to provide teachers, signalling the emergence of state-mandated education policies. Such policies laid the foundation for centuries of educational reforms aimed at shaping learners to align with societal and state expectations.

Compulsory education, by design, exists to mould learners' character, values and intellectual capacities to meet the state's perceived needs (Spiel et al., 2018). Kotin and

Aikman (1980) argue that the government historically used compulsory education to instil loyalty to prevailing political, religious and social ideologies. Similarly, schooling is often an instrument of social control, preparing learners to fulfil economic and political roles, while ensuring compliance with state authority (Spring, 2007). The addition of compulsory subjects, including history, fits this narrative. Like other mandated subjects, history is not merely academic; it carries moral and political agendas (VanSledright, 2008). Seemingly neutral subjects like numeracy and literacy often advance state-driven ideologies (Alexander, 2013). When history is made compulsory, it reflects a deliberate effort to instil collective memory, foster patriotism, and shape students' understanding of their roles within a nation's socio-political fabric (Sithole & Fru, 2024). For example, in South Africa, the compulsory inclusion of life orientation and mathematics in the curriculum underscores the government's goals of fostering democratic values, equity and social justice (Department of Basic Education, 2011). Similarly, the possibility of history as a compulsory subject would ensure learners understand their national heritage, the struggles of past generations and the importance of democratic participation (Fru, 2015; Wassermann et al., 2023). The emphasis on historical literacy aligns with the government's efforts to cultivate informed and engaged citizens who can contribute to societal development. However, as critics (Gatto, 2002; Golden & Katz, 2008) highlight, the compulsory nature of such education raises questions about its beneficiaries. Is the primary goal to empower students or to serve the government's interests? Gatto (2002) argues that compulsory education often prioritises making students "manageable" over nurturing independent thinkers. In the case of history, the question arises: whose history is being taught, and whose narratives are being excluded and silenced? Research on history education in African contexts has shown how textbooks and curricula serve as tools for constructing particular national identities, while marginalising alternative narratives (Fru & Wassermann, 2020).

The South African curriculum, for instance, emphasises inclusivity and redress through subjects like life orientation and history (DoBE, 2011). Yet, it also reflects the government's desire to promote social cohesion in a country still grappling with the legacies of apartheid. In mandating history as a possible compulsory subject, the curriculum ensures that students are exposed to shared national narratives that align with the state's vision of reconciliation and nation-building.

Nevertheless, debates about compulsory education persist, particularly concerning the balance between state control and individual autonomy. Carl (2009), Godsell (2016), Kotin and Aikman (1980) suggest that compelling students to study specific subjects like

history raises ethical and pedagogical questions about the role of education in shaping not just knowledge, but values and identities. These tensions highlight the complex ramifications of making history a compulsory subject, leaving lecturers at the intersection of competing educational and societal demands.

Theoretical framework: Pedagogical adaptation and policy implementation

This study is situated within the interpretative paradigm, which acknowledges that individuals construct meaning through their interactions with policy, institutional contexts and professional roles (Potrac et al., 2014). Grounded in an adaptive theoretical framework that examines how university lecturers recalibrate their teaching strategies in response to policy mandates, such as the proposed policy to make history a compulsory subject through to Grade 12. The framework draws on educational policy implementation theory, particularly the work of Lipsky (2023), which conceptualises educators as street-level bureaucrats who respond to policy based on local realities and available resources. In this context, pedagogical adaptation becomes a central theme, as lecturers work to maintain academic standards while teaching increasingly diverse cohorts of students with varying levels of interest and preparedness. To address this, the sociocultural theory (Vygotsky, 1978) highlights the importance of scaffolding and contextualised instruction using tools such as timelines, primary sources and visual aids to support students with limited historical inquiry and disciplinary thinking exposure.

The study further draws on Tinto's (2010) model of student retention to explore how lecturers address issues of motivation and persistence among students mandated to study history. On this basis, compulsory history lessons may result in disengagement among less-interested students, necessitating inclusive and engaging teaching methods. For instance, inquiry-based approaches like project-based learning can enhance student ownership and deepen their connection to historical content. Simultaneously, Kelchtermans' (2009) work on teacher identity and vulnerability highlights policy-induced changes' emotional and professional impact. Lecturers often renegotiate their sense of agency, balancing institutional expectations with their pedagogical values, while managing increased workloads and pressure to meet diverse learners' needs (McNaughton & Billot, 2016; Chaaban et al., 2021).

The adaptive framework further integrates transformative learning theory (Taylor, 2000) to explore how lecturers experience growth while adapting to policy changes. This

is vital because the possibility of making history compulsory at the school level and the expected increase in history students at tertiary institutions may prompt educators and lecturers to innovate course designs, experiment with teaching practices, and reflect on ways to make the subject relevant to students' lives. According to Taylor (2000), this theoretical lens helps illuminate lecturers' strategies, challenges and broader implications for history education. Situating the study within these frameworks provides a nuanced understanding of how policy shifts shape teaching methods, lecturer identity and student experiences within the discipline of history.

Research design and methods

This paper adopted a qualitative research design to explore the perspectives of university lecturers on the ramifications of making history a compulsory subject at school level. According to Hammarberg et al. (2016), qualitative research methods are often used to conduct rigorous research, which generates an in-depth understanding of a phenomenon while focusing on its meaning. Semi-structured one-on-one interviews were conducted with six lecturers from three South African public universities in KwaZulu-Natal, Gauteng and the Northern Cape. Using grounded theory as a research approach, these institutions were purposively selected to represent diverse geographic, cultural and institutional contexts, allowing for the generation of a broad range of perspectives and the development of theory grounded in the data (Dworkin, 2012). The participants were purposively selected based on their direct experience as lecturers in history education at the undergraduate level (Campbell et al., 2020), particularly those who may be directly impacted by increased enrolment following the possible implementation of the policy to make history a compulsory subject in the FET Band. Online interviews were conducted through Microsoft Outlook, with participants' consent for audio recording to facilitate transcription, and all recordings were transcribed verbatim for analysis. Each session lasted approximately sixty minutes and was conducted in-depth. The interview protocol included questions addressing the impact that higher enrolment of history students might have on the history classroom dynamics and institutional resources, changes in teaching strategies to accommodate diverse student backgrounds, perceptions of students' academic preparedness for university-level history, and broader reflections on the implications of these policy changes. Follow-up questions were posed during the interviews to ensure depth and clarity.

Thematic analysis was employed to identify and interpret patterns within the data. The analysis began with a thorough familiarisation process, during which transcripts were read multiple times to comprehensively understand the data (Clarke & Braun, 2013). Initial coding was conducted to categorise data into broad themes, including enrolment trends, teaching challenges, student preparedness and resource allocation. These initial codes were then reviewed and refined to uncover more specific themes, such as managing disengaged learners and adapting curriculum design. The final themes were interpreted in relation to the research questions and linked to theoretical constructs, such as pedagogical adaptation and policy implementation, to provide deeper insight into the lecturers' experiences and strategies.

Ethical considerations

Although formal ethical clearance was not obtained for this low-risk study, all ethical protocols were meticulously followed to ensure the research adhered to high ethical standards. Participants were fully informed about the study's objectives, the research process and anticipated outcomes. Informed consent was obtained from all participants before their involvement, ensuring they understood their rights and the voluntary nature of their participation. They were explicitly assured of their right to withdraw from the study at any stage without any negative consequences (Millum & Bromwich, 2021).

Confidentiality was maintained throughout the research process. Participants' identities were anonymised using pseudonyms, and all data collected during the semi-structured interviews were securely stored to prevent unauthorised access. This is emphasised by Rahman (2016) that anonymity and confidentiality are fundamental to qualitative research, ensuring participants' privacy and safeguarding sensitive data while balancing ethical considerations like informed consent, cultural variations and potential dilemmas arising from limitations in fully guaranteeing confidentiality. Interview questions were designed to be non-invasive, respectful and sensitive to participants' roles as educators adapting to policy changes. The research team exercised due diligence in adhering to academic integrity and transparency principles. Data analysis was conducted objectively, focusing on thematic patterns without bias or misrepresentation. These measures ensured the research was conducted ethically, respecting the dignity and rights of the participants while generating valuable insights into the implications of making history a compulsory subject in South African schools.

Findings and discussion

This section presents the findings and discussion of the study, with participants identified using allocated pseudonyms (e.g., U1L1 for University 1 Lecturer 1 to U6L6 for University 6, Lecturer 6). Quotations were obtained from the participant's perspective, though not verbatim. The analysis is structured around three main themes to interpret the data comprehensively.

Theme 1: Student demographics and academic preparedness

The study's findings consistently highlight a significant shift in student demographics following the possible implementation of history as a compulsory school subject. Across multiple participant responses (U1L1; U2L2; U3L3), there is consensus that such a policy may increase enrolment, particularly among Black students from varied socio-economic backgrounds. However, the extent of this diversity remains contested. While U3L3 notes a broadening of socio-economic representation, U4L4 and U5L5 suggest that the policy could reinforce existing enrolment patterns, with history students continuing to come predominantly from historically marginalised communities. This finding aligns with Fornahl et al. (2015), who argue that policy-driven educational expansion often leads to quantitative growth, rather than qualitative transformation. The debate over the depth of inclusivity underscores the need for further research into whether making history compulsory could genuinely broaden access to underrepresented student groups or redistribute existing enrolment patterns.

A key area of agreement among participants (U2L2; U3L3; U5L5; U5L5) is the challenge of academic preparedness. Many students entering university-level history courses exhibit limited historical literacy, critical thinking skills and scholarly writing abilities, which are essential for engaging with historical discourse. This opinion aligns with existing studies by Aidinopoulou and Sampson (2017) and Cubitt (2013), which emphasise that historical thinking requires more than routine memorisation. That is, it necessitates analytical reasoning, engagement with evidence and contextual interpretation. However, disparities in prior educational exposure exacerbate these challenges, as noted by U1L1 and U4L4, where the participants observe that students from historically under-resourced schools struggle more significantly. The South African education system's emphasis on factual recall, rather than analytical engagement (Salvioni et al., 2017) is identified as a significant impediment to student success. Furthermore, socio-economic disparities further hinder student engagement, including limited access to academic resources and

technology (Zimba et al., 2021). These structural challenges reinforce Tinto's Model of Student Retention, which posits that student success is heavily influenced by academic and social integration into university life.

Despite widespread agreement on these challenges, there is some divergence regarding institutional responses. U3L3 and U5L5 suggest that universities should implement preparatory programmes, such as bridging courses, to enhance students' historical reasoning skills. U4L4 emphasises the need for lecturers to adapt their pedagogical strategies to accommodate students with diverse levels of academic preparedness. This aligns with the Transformative Learning Theory, which underscores the role of pedagogical adaptation in reshaping student understanding (Kumanda et al., 2024). U1L1, however, raises concerns about whether universities can provide the necessary institutional support to bridge these gaps. These findings suggest that while the possible policy shift would broaden access to history education, it could also intensify challenges related to student preparedness, necessitating comprehensive curriculum reforms and targeted academic support interventions.

Theme 2: Pedagogical adjustments and institutional challenges

Regarding pedagogical adjustments and institutional challenges, the findings reveal that lecturers must adapt their teaching methodologies significantly to accommodate the anticipated increased enrolment and diverse academic preparedness of students. Some lecturers incorporate student-centred pedagogies, including Ubuntu-based learning and interactive methods, to foster engagement in large, heterogeneous classrooms (U1L1; U3L3). This shift aligns with Chigbu et al. (2023), who emphasise the need for context-specific pedagogical innovations in higher education. However, the anticipated increased student numbers would significantly strain classroom dynamics, affecting student engagement, assessment processes and grading workloads. While Nyagope (2024) highlights the importance of responsive teaching methodologies, there is a gap in research on how African institutions, particularly under-resourced universities, can sustain these pedagogical innovations amid rising enrolment.

A key concern raised across the findings (U2L2; U3L3) is the challenge of maintaining academic rigour while making history accessible to students with varying levels of academic preparedness. This sentiment can be rationalised from the study by Wassermann et al., (2018), which concluded that Grade 10 learners living in rural settings refuse to take history as a school subject, citing reasons such as a lack of prospects of landing decent jobs

or securing funding to study. They would rather take subjects such as mathematics, physical science and commercial subjects that they consider advantageous to their future prospects in the urban setting. This implied that many learners who took history approached the discipline in class with a lack of interest and a deficit mentality. This is the kind of mindset that contributes to poor academic rigour and affects classroom engagement and performance. Traditionally, history instruction relied on textual analysis and lecture-based pedagogy. Still, lecturers are now simplifying content and adjusting the teaching pace to support students with little prior exposure to the subject. This aligns with Wibowo et al's (2025) social constructivist theory of Vygotsky, which suggests that instructional methods should be adjusted to match students' prior knowledge and abilities. However, the increased enrolment would create logistical difficulties, with some universities struggling to provide adequate infrastructure and support, leading to large class sizes and online assessments. The strain on institutional resources mirrors findings from Nixon (2020) on the adverse effects of massification in higher education. However, unlike broader discussions on student population growth, these findings highlight subject-specific impacts on history education, emphasising the urgent need for curriculum flexibility and increased faculty support to ensure sustainable teaching practices.

Despite efforts to adapt pedagogy, lecturers express concerns that the possibility of making history compulsory may lead to passive student participation, rather than meaningful engagement (U3L3). This contradicts the views of Tabe (2021) and Tabe et al. (2021), who suggest that making history compulsory could improve learner performance and engagement by exposing students across disciplines to the subject, potentially shifting outcomes from lower to higher achievement levels, rather than fostering passive participation. Historical inquiry requires analytical and interpretative skills developed through sustained intellectual curiosity, and some lecturers fear that students who do not voluntarily choose the subject, may engage with it superficially (Godsell, 2022). To counter this, inclusive strategies such as collaborative learning, structured debates and Ubuntu-based pedagogy have been employed to maintain student interest. While pedagogical adaptation offers a viable strategy for navigating these challenges, Tinto's Model of Student Retention suggests that academic and social integration are critical for student success. Thus, institutions must adjust teaching approaches and provide targeted support, such as faculty development programmes and resource allocation, to uphold academic rigour while ensuring inclusivity in history education. This is further elucidated under the subsequent theme.

Theme 3: Institutional support and policy implications

The proposed expansion of history as a compulsory subject would significantly strain institutional resources, with participant U1L1 expressing concerns about overburdened staff, inadequate infrastructure and a lack of learning materials. This aligns with Nixon's (2020) argument that massification without proportional investment can undermine educational quality. The study reveals that a surge in enrolment would outpace institutional capacity, leading to overcrowded lecture halls, increased grading workloads and reduced personalised student support. Participants (U2L2; U6L6) emphasise the need for additional funding, more academic staff, and faculty training to manage the growing and increasingly diverse student body effectively. Despite institutional efforts to accommodate higher student enrolments, concerns remain about the potential dilution of academic rigour in history courses. Participant U1L1 notes that many students engage with the subject passively, rather than critically, raising questions about whether making history compulsory enhances intellectual engagement or merely expands access.

These findings echo the perspectives of Salvioni et al. (2017) on historical consciousness, which requires more than factual recall, but active inquiry and interpretation. The study underscores the tension between inclusivity and maintaining academic depth, with some participants (U1L1; U3L3; U4L4) fearing that history may lose its status as a discipline rooted in analytical rigour. To counter this, the study recommends hiring additional academic staff, revising curricula to balance accessibility with intellectual challenge and providing professional development programmes on inclusive pedagogy. At the same time, Donohue and Bornman (2014) discuss the necessity of resource-backed policy implementation. Still, there remains a gap in the literature on how compulsory subject policies impact tertiary education disciplines requiring critical engagement, such as history.

An increased student population would necessitate adjustments in teaching methods, yet resource constraints could hinder the effectiveness of interactive learning strategies. According to participant U1L1 large class sizes in their institution, sometimes exceeding seven hundred students, have forced lecturers to shift from discussion-based approaches recommended for a history lesson to lecture-heavy content delivery, limiting student participation. While constructivist learning theories (Wibowo et al., 2025) advocate for active engagement through debate and collaboration, the study shows that logistical challenges often prevent such pedagogical methods from being effectively implemented. Massification without parallel investment leads to declining academic quality. Institutional support, through hiring additional lecturers, integrating digital tools for engagement

and expanding physical and technological infrastructure would, therefore, be crucial for sustaining the policy's long-term viability (Shava et al., 2021). Future research should explore strategic frameworks that balance academic standards with expanded access, ensuring that compulsory history education fosters meaningful learning, rather than surface-level compliance.

In addition to the above three sub-themes, another aspect of the standard and curriculum adaptation surfaced, significantly contributing to the current study.

Academic standards and curriculum adaptation

While these academic adaptations referred to above foster inclusivity, participant U4L4 expresses concern that they may compromise the depth of historical inquiry, as many incoming students lack foundational analytical skills. This results in challenges, as massification often simplifies content, reducing engagement with higher-order historical thinking (Shava et al., 2021). The findings indicate that lecturers could respond by incorporating interactive teaching methods, such as role play and discussions, in line with social constructivist theory, which emphasises peer interaction and scaffolding in cognitive development (Wibowo et al., 2025). However, the effectiveness of these strategies would be constrained by large class sizes and limited opportunities for individualised feedback. Historical reasoning requires critical engagement with multiple perspectives, yet the current teaching environment prioritises breadth over depth (Aidinopoulou & Sampson, 2017). This tension underscores the need for structured academic support, including bridging programmes and targeted interventions, to maintain academic standards while promoting accessibility.

Despite shared concerns about the dilution of historical rigour, some participants (U4L4; U5L5; U6L6) view the policy shift as an opportunity to rethink how history is taught, advocating for a decolonised curriculum that integrates diverse historical narratives without compromising methodological depth. The findings, however, reveal a divide. While some participants (U4L4) fear that adapting to underprepared students may weaken disciplinary integrity, others (U5L5) argue that traditional history curricula have long excluded marginalised perspectives. The possible policy change presents an opportunity for pedagogical transformation. However, both perspectives acknowledge the pressing need for institutional support, such as additional teaching staff, smaller class sizes and professional development programmes focused on inclusive pedagogy. Drawing from transformative learning theory, the findings suggest that, rather than merely accommodating

new students, history education should aim to challenge existing frameworks, fostering a critical and reflective approach to the discipline. Ensuring this effective transformation requires investment in curriculum innovation that balances accessibility with the analytical rigour essential to historical scholarship.

Conclusion

This article underscores the complex ramifications for university lectures on the possibility of making history a compulsory school subject, as recommended by the South African Basic Education MTT Report, revealing both exciting opportunities and significant challenges. While increased enrolment at tertiary institutions might promote inclusivity and an appreciation for historical discourse, disparities in students' academic preparedness, infrastructural limitations, and the strain on academic staff raise concerns about feasibility and sustainability. To circumvent the strain that such a policy will place on universities, this study suggests proactive curriculum adjustment and enhancement strategies that will include, amongst others, investment in faculty expansion, pedagogical training, and resource allocation to ensure that history remains a robust and intellectually stimulating discipline, even with the potential increase in student enrolments.

References

Achebe, C 1994. *The danger of not having your own stories: The Paris interview*. New York: The New York Times.

Aidinopoulou, V & Sampson, DG 2017. An action research study from implementing the flipped classroom model in primary school history teaching and learning. *Journal of Educational Technology & Society*, 20(1):237-247.

Alexander, N 2013. *Thoughts on the new South Africa*. Auckland Park: Jacana Media.

Campbell, S, Greenwood, M, Prior, S, Shearer, T, Walkem, K, Young, S, Bywaters, D & Walker, K 2020. Purposive sampling: Complex or simple? Research case examples. *Journal of Research in Nursing*, 25(8):652-661.

Carl, AE 2009. The value of history as a school subject in an age of science and technology. *Yesterday & Today*, 4:III-XIII.

Carney, S 2022. *Reimagining our futures together: A new social contract for education*. Paris: UNESCO.

Chaaban, Y, Al-Thani, H & Du, X 2021. Teacher agency in curriculum change: Integrating ecological and identity perspectives. *Asia Pacific Journal of Education*, 41(4):738-752.

Chigbu, BI, Ngwevu, V & Jojo, A 2023. The effectiveness of innovative pedagogy in the Industry 4.0: Educational ecosystem perspective. *Social Sciences & Humanities Open*, 7(1):100419.

Clarke, V & Braun, V 2013. Teaching thematic analysis: Overcoming challenges and developing strategies for effective learning. *The Psychologist*, 26(2):120-123.

Cubitt, G 2013. *History and memory*. Manchester: Manchester University Press.

Davids, MN 2016. Making history compulsory: Politically inspired or pedagogically justifiable? *Yesterday & Today*, 15:84-102.

Department of Basic Education (DBE) 2011. *Curriculum and Assessment Policy Statement (CAPS): Grades 10-12: History*. Pretoria: Department of Basic Education.

Department of Basic Education (DBE) 2015. *Establishment of the history ministerial task team*. Government Gazette, 9 October 2015.

Donohue, D & Bornman, J 2014. The challenges of realising inclusive education in South Africa. *South African Journal of Education*, 34(2).

Dworkin, SL 2012. Sample size policy for qualitative studies using in-depth interviews. *Archives of Sexual Behavior*, 41:1319-1320.

Fiske, EB & Ladd, HF 2004. *Elusive equity: Education reform in post-apartheid South Africa*. Washington, D.C.: Brookings Institution Press.

Fornahl, D, Hassink, R & Menzel, MP 2015. Broadening our knowledge on cluster evolution. *European Planning Studies*, 23(10):1921-1931.

Fru, RN 2015. History education at the crossroads: Challenges and prospects in a Lesotho context. *Yesterday & Today*, 13:67-82.

Fru, RN & Wassermann, J 2020. Constructions of identity in Cameroonian history textbooks in relation to the reunification of Cameroon. *Journal of Educational Media, Memory, and Society*, 12(2):57-76.

Gatto, JT 2002. *The underground history of American education*. Ashfield, MA: Down-to-Earth Books.

Godsell, S 2016. What is history? Views from a primary school teacher education programme. *South African Journal of Childhood Education*, 6(1):1-10.

Godsell, S 2022. Teaching critical thinking and voice in history essays: A spiderweb tool. *South African Journal of Childhood Education*, 12(1):1255.

Goldin, C & Katz, LF 2011. Mass secondary schooling and the state: The role of state compulsion in the high school movement. In *Understanding long-run economic growth: Geography, institutions, and the knowledge economy,* pp. 275-310. Chicago: University of Chicago Press.

Hammarberg, K, Kirkman, M & De Lacey, S 2016. Qualitative research methods: When to use them and how to judge them. *Human Reproduction*, 31(3):498-501.

Katz, MB 1976. The origins of public education: A reassessment. *History of Education Quarterly*, 16(4):381-407.

Katz, MB 2001. *The irony of early school reform: Educational innovation in mid-nineteenth-century Massachusetts*. New York: Teachers College Press.

Kelchtermans, G 2009. Who I am in how I teach is the message: Self-understanding, vulnerability and reflection. *Teachers and Teaching: Theory and Practice*, 15(2):257-272.

Kotin, L & Aikman, WF 1980. *Legal foundations of compulsory school attendance*. Kennikat Press.

Kumanda, N, Chiphambo, S & Mtsi, N 2024. Second-year students' perceptions of transformative learning experiences: A case study in one of the South African universities. In *Transformative approaches to student success in higher education*. London: IntechOpen.

Lipsky, M 2023. The critical role of street-level bureaucrats. In *Social work,* pp. 194-198. London: Routledge.

McNaughton, SM & Billot, J 2016. Negotiating academic teacher identity shifts during higher education contextual change. *Teaching in Higher Education*, 21(6):644-658.

Mhlongo, DM 2013. *Why do rural learners choose or not choose history? A case study of rural schools in Kwazulu-Natal.* Master's dissertation, University of Kwazulu-Natal.

Millum, J & Bromwich, D 2021. Informed consent: What must be disclosed and what must be understood? *The American Journal of Bioethics*, 21(5):46-58.

Mkhabela, Z 2018. *History teachers' views on possibly making the subject compulsory up to Grade 12: A case study*. Master's dissertation, University of KwaZulu-Natal.

Nixon, J 2020. Higher education and the public good. In *The international encyclopedia of higher education systems and institutions,* pp. 637-643. Dordrecht: Springer Netherlands.

Nyagope, TS 2024. Conceptual changes in South African higher education: Embracing student-centred approaches amidst challenges. *EDUCATIO: Journal of Education*, 9(1):1-14. Available at https://doi.org/10.29138/educatio.v9i1.1429 Accessed on 16 October 2025.

Phakathi, B 2015. Department working on making history compulsory at school. *Business Day*, 5 May. Available at www.bdlive.co.za/national/education/2015 Accessed on 10 February 2025.

Potrac, P, Jones, RL & Nelson, L 2014. Interpretivism. In *Research methods in sports coaching,* pp. 31-41. London: Routledge.

Rahman, MS 2016. The advantages and disadvantages of using qualitative and quantitative approaches and methods in language 'testing and assessment' research: A literature review. *Journal of Education and Learning*, 6(1):102-112.

Russell, SG, Sirota, SL & Ahmed, AK 2019. Human rights education in South Africa: Ideological shifts and curricular reforms. *Comparative Education Review*, 63(1):1-27.

Salvioni, DM, Franzoni, S & Cassano, R 2017. Sustainability in the higher education system: An opportunity to improve quality and image. *Sustainability*, 9(6):914.

Shabangu, B 2021. *Investigating (possible) tensions and possibilities of decolonising the history curriculum as a locus to foster inclusive education in South African schools*. Master's dissertation, University of the Witwatersrand, Johannesburg.

Shava, GN, Shonhiwa, S, Ngwenya, SJ & Moyo, D 2021. Examining the policy implications of the massification of higher education in Zimbabwe. *International Journal of Research and Innovation in Social Science*, 5:595-603.

Sithole, F & Fru, R 2024. The pros and cons of history as a compulsory subject in South Africa from the lens of history teachers in the Frances Baard District. *Yesterday & Today*, 32(1):177-207.

South African Democratic Teachers Union (SADTU), 2014, *The importance of teaching history as a compulsory subject*, SADTU, Johannesburg.

Spiel, C, Schober, B, Wagner, P & Reimann, R 2018. The contribution of education to social progress. In: *International panel on social progress: Rethinking society for the 21st century*. Cambridge: Cambridge University Press, pp. 753-778.

Spring, JH 2007. *A new paradigm for global school systems: Education for a long and happy life*. New York: Psychology Press.

Tabe, HT 2021. *Leadership strategies to enhance history learner performance in township secondary schools in the Ngaka Modiri Molema district*. Doctoral dissertation, North-West University (South Africa).

Tabe, H, Heystek, J & Warnich, P 2021. Leadership of learning and change for successful learning outcomes in history education. *Perspectives in Education*, 39(4):172-186.

Taylor, EW 2000. Analyzing research on transformative learning theory. In: J Mezirow & Associates (eds.). *Learning as transformation: Critical perspectives on a theory in progress*, pp. 285-328. San Francisco: Jossey-Bass.

Tinto, V 2010. From theory to action: Exploring the institutional conditions for student retention. In: JC Smart (ed.). *Higher education: Handbook of theory and research,* Vol. 25, pp. 51-89. Dordrecht: Springer.

Thrupp, M & Tomlinson, S 2005. Introduction: Education policy, social justice and complex hope. British Educational Research Journal, 31(5):549-556.

Van Eeden, ES & Warnich, P 2018. Reflecting the 2018 history ministerial task team report on compulsory history in South Africa. *Yesterday & Today*, 20:18-45.

VanSledright, B 2008. Narratives of nation-state, historical knowledge, and school history education. *Review of Research in Education*, 32(1):109-146.

Vygotsky, LS 1978. *Mind in society: The development of higher psychological processes*. Harvard University Press.

Wassermann, J 2011. Learning about controversial issues in school history: The experiences of learners in KwaZulu-Natal schools. *Journal of Natal and Zulu History*, 29(1):131-157.

Wassermann, J, Maposa, M & Mhlongo, D 2018. "If I choose history, likely, I won't be able to leave for the cities to get a job": Rural learners and the choosing of history as a subject. *Journal of Education*, 73:55-68.

Wassermann, J, Mkhabela, Z & Iyer, L 2023. The views of South African history teachers on making the subject compulsory. In D Bentrovato, KV Nieuwenhuyse & H Pinto (eds.). *Why history education?* 190-207. Leiden: Brill.

Welsh, D 2010. *The rise and fall of apartheid: From racial domination to majority rule*. Johannesburg: Jonathan Ball Publishers.

Wibowo, S, Wangid, MN & Firdaus, FM 2025. The relevance of Vygotsky's constructivism learning theory with the differentiated learning primary schools. *Journal of Education and Learning (EduLearn)*, 19(1):431-440.

Zimba, ZF, Khosa, P & Pillay, R 2021. Using blended learning in South African social work education to facilitate student engagement. *Social Work Education*, 40(2):263-278.

The impact of employing various pedagogical strategies to enhance the quality of learning and teaching of history in the further education and training phase

DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a8

Jongikhaya Mvenene
Walter Sisulu University, Mthatha
South Africa
Orcid: https://orcid.org/0000-0002-1898-5819
mvenenej@gmail.com
DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a8

Abstract

The use of interactive, learner-centred and active learning strategies facilitates the teaching of history in the twenty-first century. Anchored in the conversation theory, which aligns with the social constructivist framework, the study aims to examine the impact of employing different innovative pedagogical strategies and practices used by history teachers as vehicles to enhance and promote quality learning and teaching in history classrooms. A shift from traditional instructional teaching has given way to emerging strategies that aim to produce critical and independent thinkers who can apply historical knowledge in diverse contexts. The basis of the analysis is on various strategies, including direct instruction, discussion, small-group work, cooperative learning, problem-solving, inquiry, case studies, role-playing and writing as teaching methods. The focus of history learning and teaching is on inculcating problem-solving skills in the learners. Content analysis of books, policy documents, dissertations, theses and journal articles as well as some records retrieved from the Internet, was employed to generate data using a qualitative research approach. The results show that history teachers, as required by history curricula, have gradually shifted from using age-old teaching strategies to emerging learner-centred methods, reflecting a shift from rote-learning to learning with understanding. It is recommended that learner-centred teaching strategies be employed to enhance learner performance and improve the quality of learning and teaching in the history subject.

Keywords: Conversation theory; curriculum and assessment policy statement; historical enquiry; learner-centred strategies; innovative pedagogical strategies; quality learning and teaching.

Introduction and background

Though the pre-1994 period was characterised by history teaching, which was "ideologically biased in favour of the political establishment and against the majority of South Africans", the post-1994 period took a positive turn towards transforming education in South Africa (Davids, 2016:89). The reforms in education found expression in the introduction of Curriculum 2005 (implemented in 1997), "which collapsed the boundaries of knowledge and placed an emphasis on group work, relevance, local curriculum construction and local choice of content" (Hoadley, 2011) and the Revised National Curriculum Statement of 2007. Bertram (2012:22) describes the Curriculum 2005 as "the major post-apartheid curriculum reform movement" in South Africa.

The introduction of the history National Curriculum Statement (NCS) and Curriculum and Assessment Policy Statement (CAPS) paved the way for the introduction of new teaching strategies that are interactive and learner-centred (Department of Basic Education [DBE], 2011c). The NCS and CAPS prescribed the curricula for history, marking a shift from apartheid content and context, in which emphasis was on Eurocentric curricula. The prescribing of topics to be taught in the Further Education and Training (FET) phase of history does not prevent an educator from teaching additional topics or extending others (Brookbanks, 2018).

CAPS was promulgated in 2011 by the South African Department of Basic Education (DBE) to replace the previous curriculum, the NCS of 2002 and 2003. To that effect, Siebörger (2021:150) describes CAPS as "not a new curriculum but a revised curriculum." The NCS for history, in line with Outcomes-Based Education (OBE), Curriculum 2005 and CAPS, aims to make history learner-centred, emancipatory and skills-based, thereby placing learners at the centre of teaching-learning activities.

CAPS offers the following aims of history teaching: to create an interest in the past, provide knowledge, understanding and appreciation of the past and the forces that shaped it, an understanding of historical enquiry and sources and evidence of history (DBE, 2011c:10). Since the introduction of NCS and CAPS curricula, there has been a shift in focus and attention from traditional methods of learning and teaching towards employing different pedagogical strategies designed to improve learner performance in history

classrooms. Of great importance was the Department of Education's desire to encourage history teachers to use teaching strategies that promote and enhance quality learning and teaching.

According to the South African Council for Quality Assurance in General and FET, known as Umalusi (2013:24), as cited by Siebörger (2021:144), CAPS "indicates the anticipated teaching hours per topic … topics in the CAPS were specified in far more detail than in the NCS, [as a result] it was much easier to interpret them and select relevant content knowledge". However, CAPS "underplayed aspects such as human rights, human agency, heritage, and democracy" (Umalusi, 2014:74, cited in Siebörger, 2021:149). In terms of skills development in history learning and teaching, CAPS and NCS provide similar skills, although their approaches differ. For example, Siebörger (2021:152) writes, "in the NCS, teachers chose to teach skills according to their choice of Learning Outcomes and Assessment Standards. In the CAPS, however, there was a table of skills. An accompanying observation on the CAPS was a quotation from it to the effect that memory skills remain important (DBE, 2011b:11; Umalusi, 2013:29, as cited in Siebörger, 2021:148).

The focus of the study is on the curriculum reform for FET school history curriculum in post-apartheid South Africa, with special reference to the CAPS curriculum for schools in the FET history curriculum phase, which comprises Grades 10-12. study aims to examine the impact of innovative pedagogical strategies that can be used by history teachers with the intention of producing quality learning and teaching in South African history secondary schools. Though no discussion of each strategy is provided, mention of these is made. They include direct instruction, discussion, small-group work, cooperative learning, problem-solving, inquiry, case studies, role-playing and writing as teaching strategies (Killen, 2010). The study makes an argument for participative practices, moving away from teacher-centred strategies and passive learner classrooms. It, therefore, seeks to examine new strategies of teaching history to produce critical thinkers in secondary schools. When equipped with critical thinking skills, learners are empowered to make informed decisions and participate actively in real-life situations.

The purpose of the study is to examine the efficacy and impact of the pedagogical strategies of history teachers in promoting quality learning and teaching in secondary schools. The extent to which teachers implement innovative pedagogical practices to enhance quality learning and teaching is examined. The concept of quality learning and teaching was launched in 2008 by the South African government under the Quality Learning and Teaching Campaign (QLTC), which was meant to improve the quality

of education through the active involvement and mobilisation of stakeholders, such as parents, teachers, community members and all people who have an interest in education. As Killen (2010:135) suggests, quality learning is promoted by "focusing on intellectual quality, creating an environment that fosters learning, and making learning relevant and important for learners". Innovative learner-centred active learning strategies, such as active learning situations, debates, demonstrations, simulations and problem-solving, should enable learners to relate past events to their present lives.

The old-age teaching methods were henceforth perceived and condemned as promoting learners' passiveness in the learning-teaching situation. In this connection, previous studies have revealed that traditional teaching strategies hinder learners from acquiring a quality, holistic workload, rethinking and balanced educational experience (Gontyeleni, 2019; Ntshangase, 2022:10; Nxasana et al., 2023:140). The teacher-centred methods contribute to learning and teaching that lacks quality and the development of skills and values in learners. Its primary purpose was to inculcate passive learning and deliver knowledge, thereby encouraging rote learning without considering the need to prepare learners for societal responsibilities and meet challenges with determination (Wang, 2022).

Wang (2022) observes that traditional pedagogy, as a teacher-centred approach, did not accommodate understanding of historical concepts and how these were used in different contexts. It had no room for helping learners to make personal connections with what they are reading, or to think critically about it. Mathur and Singh (2022:99) claim that traditional pedagogical strategies put a premium on affinity "between the teacher and the knowledge they possess, of which learners are recipients". They further opine that teachers are playing the role of being "primarily information transmitters, and the learners' role is to absorb the information in forms of memorisation and note taking" (Mathur & Singh, 2022:95-102). Hence, the emphasis on learning and teaching history should hinge on innovative and learner-centred pedagogical strategies, marking a shift away from teacher-centred approaches.

The terms 'pedagogical strategy' and 'teaching methods' must be unpacked to gain an understanding of the content and context of the article. It is, however, synonymous with teaching strategies that are learner-centred, participative, collaborative and interactive. The concept of pedagogic strategy comprises two key elements: pedagogy and strategy. The former, according to Nkwanyana-Sithole (2023:14), is "knowledge about integration of subject expertise and skilled teaching of a particular subject, being able to combine different types of content". For Juneja (2015:43), the latter (strategy) may be understood

as "the blueprint of decisions and so being able to integrate, utilise, and allocate resources to meet the objectives". In this manner, pedagogical strategies relevant to active and dynamic learning-teaching discourse focus on learning and teaching approaches as fields of active engagement between the teacher and learners, where subject content serves as the object of interaction and interest. Pedagogical strategies are, therefore, progressive in nature and designed to achieve long-term learning goals.

McInerney and Green-Thompson (2020:27) describe teaching methods as "approaches, strategies, and techniques used by educators to enhance teaching and learning". They continue to state that "these methods aim to help students develop their ability to write effectively, clearly, and coherently" and are used to facilitate learning and to accommodate different learning styles (McInerney & Green-Thompson, 2020:29). Thus, prior research was undertaken "to discover the known and unknown so that I can be guided as to what requires further investigation" (Denney & Tewksbury, 2013:218).

While a pedagogical strategy is designed to achieve learning goals and a broad long-term plan, a teaching method refers to how the strategy is implemented in the delivery of content and how learners comprehend the lessons. According to Jyothish (2021), a teaching method is primarily a scientific approach to delivering curriculum, taking into account the psychological and physical needs of children. The aim is to realise the critical outcomes and predetermined goals of teaching a particular topic. Methods of teaching serve as a means by which an important link is established in the teaching cycle and dynamism is introduced into the learning-teaching discourse. McInerney and Green-Thompson (2020:25) describe a teaching method as "a set of principles, procedures, or strategies to be implemented by educators to support learning".

In the discourse, teachers as facilitators of learning are expected to possess and demonstrate modernised teaching skills relevant for the generation of learners they teach (Alessa & Hussein, 2023:62). Subsequently, there has been a gradual evolution from traditional to modern pedagogical strategies, prompting teachers to continually develop and improve their pedagogy to meet the developmental needs and interests of learners (Mathur & Singh, 2022). In learner-centred approaches, also referred to as discovery learning, inductive learning, or inquiry learning, the teacher puts the learner at the centre of learning and teaching activities. In this way, "knowledge is constructed rather than discovered, and that learning and teaching should focus on learner understanding rather than memorisation" (Killen, 2015:98) of uncoordinated historical facts.

Literature review

The literature reviewed in this study examines the impact of employing various pedagogical strategies to enhance quality learning and teaching in history education in secondary schools. It examines literature that addresses issues of promoting interactive learning to foster engagement and a deep understanding of history content. It analyses CAPS as a government policy to be implemented in schools and assesses its application in the South African FET classrooms.

Snyder (2019:332) maintains that "a literature review is a systematic way of collecting and synthesising previous research on a topic … a way of building your research on existing knowledge of all academic research activities in a specific discipline." For the purposes of this study, various sources were consulted to gain an understanding of the interactive, emerging pedagogical strategies used in the learning and teaching of history for enhancing quality learning and teaching, and to improve learner performance in history secondary school classrooms.

The literature review provides a platform to discuss learning and teaching strategies, building a logical link for researchers of history learning and teaching and to show the relevance of the study "to what has already been researched by other scholars in the past" (Mashile, 2020:34). Therefore, an in-depth analysis of books, policy documents and articles was conducted, and findings were delivered based on documentary evidence, "consideration, and sometimes understanding" (Jesson et al., 2011:42).

Before embarking on the CAPS history curriculum, reference has been made to traditional methods of teaching as a scaffolding for examining and assessing the new strategies. However, the strategies have not been discussed. It is, however, the strategies impact that has been evaluated and assessed as they enhance and promote quality learning and teaching in secondary schools of history.

According to Wang (2022:272), traditional teaching methods are "teacher-centred … [and are intended] … to impart book knowledge to learners". It has as its focus area the teaching of recitation and memorisation as fundamental aspects of traditional teaching methods, where the ability to memorise and recite the lesson is evidence of learning (Stephen Perse Foundation, 2017). In the process, the complexities of language diversity and communication barriers are often overlooked, with the spotlight placed on delivering pedagogical content. Consequently, many history learners find it challenging to engage with historical content, resulting in a gradual decline in their performance (Fishbein et al., 2018:23, as cited in Mulaudzi, 2024:38).

Killen (2010:98) describes teacher-centred methods as "direct instruction, deductive teaching or expository teaching" in which there is constructive interaction between learners and teachers. In teacher-centred approaches, "the teacher has direct control over what is taught and how learners are presented with the information they are to learn" (Killen, 2010:98).

Indeed, the use of traditional teacher-centred methods places a premium on, as argued by Kanjee and Hardman (2024:65), "the transmission of content rather than the development of concepts." Furthermore, Kanjee and Hardman (2024:60) note that the primary aim of teachers in employing this method is to "cover the curriculum and have little time to spend developing understanding" of historical concepts to apply them in different contexts. Kanjee and Hardman (2024:63) also posit that "traditional pedagogical Mode … [of lesson delivery] … focuses on transmission of content rather than the development of concepts". In this way, learners are faced with a situation in which teachers shift from enabling learners to comprehend historical concepts to curriculum coverage, contrary to the requirements of CAPS, which was promulgated in 2011 by the South African DBE to replace the previous curriculum, the NCS of 2002 and 2003 (DBE, 2011c).

The curriculum policy on education, CAPS, requires history teachers to implement best practices in the learning and teaching of history. However, actual practices are constrained by inhibiting factors, such as inadequate school infrastructure, the quality of teachers, a lack of electricity, connectivity challenges and the rurality of some FET schools.

This situation affected the implementation of CAPS by history teachers. These disparities are due to South Africa facing physical and human resource shortages in terms of infrastructure, the affordability of technology, community facilities, school policy on ICT use, socio-cultural and linguistic factors as well as economic and political factors.

To counteract the challenges and constraints mentioned above, a variety of teaching and learning strategies can be adopted to improve learners' performance in history. The strategies include, but are not limited to, discussion, cooperative learning, project work, role-play and experimentation (Carl & Negumbo, 2017:98). Different learner-centred strategies could also be employed to maximise teachers' effective integration of ICT tools and online teaching in enhancing history teaching and learning experiences in FET curriculum secondary schools in South Africa. According to Odendaal-Kroon and Poole (2018:230), it is of vital importance to enhance history learning and teaching by employing technological tools and online teaching technologies for the development of historical skills and "broader skills that are

attuned to the needs of an increasingly globalised world". As De Sousa et al., (2017:20) posit, "history lessons have become more active and learner-centred with respect to ICT integration and the use of multimedia resources in teaching and learning at schools in South Africa".

The issue of security and infrastructure maintenance also hindered the implementation of this policy. Not all schools in rural communities have the financial resources to provide for security and maintenance. Hence, in many instances, reports of school breakages and malfunctioning machinery increased. Consequently, Christie et al.'s (2004:64) argument that the "policy implementation (the enacted curriculum) should be true to the policy vision (the official curriculum)" becomes inapplicable. This view is in line with Bernstein's theory of fidelity and pedagogic device, which underlines "a distinction between what is relayed (the message) and an underlying pedagogic device that structures and organises the content and distribution of what is relayed (Bertram, 2012:1-22). Bertram (2012:19) argues that according to Bernstein's theory, "the key process is recontextualisation, whereby knowledge produced at one site, the site of knowledge production (mainly, but not exclusively, the university), is selectively transferred to sites of reproduction (mainly, but not exclusively, the school)".

While OBE was an approach to teaching and learning, NCS focused more on outcomes and integration of content from different subject areas than on teaching content of specific subjects per grade (Robinson & Lomofsky, 2015:70). The introduction of CAPS was "a way of restoring teachers' authority as subject specialists", with guidance being given on content specification, clear and concise assessment requirements (Robinson & Lomofsky, 2015:70). The motto of CAPS is: structured, clear, practical, helping teachers unlock the power of NCS.

It is important to note that "in CAPS the curriculum was designed around the topics, while the NCS was designed around the Learning Outcomes" (Umalusi, 2013:42, as cited in Siebörger, 2021:144). According to Maluleka and Ledwaba (2023:87), "CAPS is an amendment to RNCS (DBE, 2011a). This means that RNCS was not eliminated. It appears that the reasoning was to strike a balance between an RNCS, which was outcomes-oriented, and a CAPS, which is more content-oriented".

Savich (2009) argues that numerous teaching strategies are employed in history learning and teaching. These include traditional teaching methods, which emphasise not only the memorisation of historical facts, but also limit the capacity to think historically (Harris & Girard, 2014:218). The teaching methods also prohibit teacher-student

interactions (Anderson, 2008), which, for Sebbowa (2016), compromise the quality and innovativeness of history education.

Jyothish (2021) offers a compelling argument on the teachers' responsibility to employ several methods that will bring life into history lessons, making them more vibrant and interesting. The author points out that "active learning techniques, films, library research, and historical fiction can all be used to make teaching and learning on history more invigorating", vibrant and interesting (Jyothish, 2021:204). Killen (2010:135) enters the discourse, adding direct instruction, discussion, small-group work, cooperative learning, problem-solving, inquiry, case studies, role-play and writing as teaching strategies to the methods at the disposal of teachers. For Firth (2017:156), teachers must provide the learner with "a variety of sources [to enable the learner] to construct a narrative which does justice to the complexity of events and concepts".

Killen (2010:99) observes that there is no teaching strategy that "is better than others in all circumstances [and], so you have to be able to use a variety of teaching strategies and make rational decisions about when each one is likely to be most effective". Thus, the implementation of different, innovative strategies should be uppermost in the planning, preparation and delivery of history lessons. The planning of learner activities should consider the abilities, classroom inhibiting factors and needs of the learners in order to create an atmosphere of vibrant and dynamic history classrooms in which individual attention is applied consistently and continually.

Corroborating Killen's (2010:99) argument, Sebbowa and Muyinda (2018:129) further observe that "there is no single best way to teach history, but considerations should be given to multiple ways of constructing various history meanings". Moreover, Jyothish (2021:208) makes a convincing and apt claim that a variety of pedagogical strategies are designed in such a way that they "make the subject interesting, vital and lively, lending lustre and colour to the delivery of lessons". In other words, the history teacher should deliver lessons with a view to developing learners' interest and aspirations in the subject. The learners' desire for further studies in the subject should derive from the teacher's presentation of lessons and how they bring life to history as a subject of worth.

As Jyothish (2021:206) postulates, a combination of different teaching methods may also be employed to "to avoid monotony, … [for] …. If a teacher always adopts [the] same method, it will be monotonous". Jyothish (2021:208) argues that the use of a variety of pedagogical strategies fosters history "learners' total development in the realms of cognitive, affective and psychomotor domains."

Adopting various strategies in the classroom "is aimed to create certain desirable changes of behaviour through the transaction of Knowledge in History" (Jyothish, 2021:206). Planned teacher and learner activities in consideration of skills to be inculcated to learners and outcomes to be achieved at the end of each lesson, enable the teacher to facilitate the lesson with confidence. This practice allows history "learners to acquire much-needed skills, such as reading, thinking, and writing like historians, while engaging with a complicated and contested past and juxtaposing that past with contemporary issues" (Maluleka & Ledwaba, 2023:79).

These outcomes evolve from what the history teachers want to achieve, what they want learners to know and be able to do, including the attitudes and values that the teacher wants learners to have as a result of learning that has taken place. They presuppose the detailed content and the pedagogical strategies to be employed by the teacher (Killen, 2010).

Sebbowa and Muyinda (2018:145) recommend that "learner-centred methods like group discussions, demonstrations and role play, which involve learning through active experimentation and reflective historical thinking, would be effective" in the delivery of pedagogical content. Contrary to the aims and nature of traditional teaching methods, modern teaching methods focus on the intellectual and social development of learners, enhancing and boosting "critical thinking, problem solving and decision-making skills in learners" (Sebbowa and Muyinda, 2018:145), research techniques (such as finding and sorting of evidence, evaluation of both written and oral sources, selection of relevant information and the organisation of material), the ability to respect and debate different points of view and make balanced judgements, the ability to argue logically, state problems and offer solutions as well as writing well-structured answers (Stephen Perse Foundation, 2017).

Thorough lesson planning and preparation are done prior to stepping into the classroom, in which the interaction "between the teacher and the learners through a series of planned activities performed by the teacher in the classroom" unfolds (Jyothish, 2021:204). Lesson planning should be designed so that clear and achievable outcomes are well-articulated and appropriate to the level of academic and social development of the students (Killen, 2010). Planned activities that unfold in the classroom, as tactics to communicate the curriculum, are referred to as the method of teaching or pedagogical strategies at the teacher's disposal (Jyothish, 2021).

In planning lessons, teachers must aim towards inculcating values and positive attitudes in learners. To achieve clear and achievable aims, as observed by Ayres et al. (2004), learners need to have a positive attitude towards their school and the subjects they are studying. Teachers should have a primary aim to engage in quality teaching to produce quality learning, and to achieve this, they should work towards "identifying which approaches to teaching facilitate quality learning" (Killen, 2010:64).

More importantly, teachers should help learners develop a clear understanding of the pedagogical content, create an environment that promotes quality learning and teaching, and in so doing, "make learning relevant to all learners regardless of their cultural, ethnic or academic differences" (Killen, 2010:64). In planning lessons, it is the teacher's duty to consider why they are teaching what they are teaching and whose ends are being served by what and how they teach (Killen, 2010:64). This should be placed within the context of moral, ethical, social and political dimensions.

This mode of lesson preparation is a platform to equip teachers with the confidence and inspiration they need in the classroom. Without thorough planning of lessons, the teacher's interaction with learners becomes a tedious and fruitless exercise. Teachers could develop solid strategies for teaching South African history by using a variety of historical sources, that is, primary and secondary sources, as well as employing skills in analysing evidence and integrating written and oral sources in the preparation, compilation and delivery of history lessons. As a result, earners' perceptions of history might improve considerably as they could be exposed to a balanced presentation of history (Mvenene, 2018:22-23).

Extensive reading and careful preparation of lessons "provide teachers with the necessary content knowledge base to be able to teach about South African history in more exciting and relevant ways" (Mvenene, 2018:22). Endorsing Mvenene (2018:22), Reynolds et al. (2024:24) advance a convincing argument that "extensive reading entails language learners' independent reading of abundant materials suitable for their proficiency levels." They continue to argue that "previous studies have revealed extensive reading as effective for improving various aspects of second language (L2) proficiency".

Therefore, the teaching of history should promote the reading of primary and secondary sources available in libraries and museums. History teachers have a responsibility to encourage learners to undertake field trips to monuments. Educational tours and field trips usually cover historical and cultural sights. In travelling to historical monuments, teachers and learners can gain insight into the magnificent forts, palaces and tombs, learning about

the art and architecture of ancient cultures (Jyothish, 2021:204). History learners may also be encouraged to undertake study tours to archives, where primary literary sources are preserved for historical reconstruction. study tours to museums are of pedagogical significance, as museums preserve unique, tangible primary evidence of humankind and the environment, such as rich inscriptions, coins and other artefacts. Jyothish (2021:204) claims that "these epigraphic and numismatic sources provide primary knowledge of our history". Aptly so, Nash's (2015:33) assertion seems appropriate when the author claims that, "Although historians have their own preconceptions and approaches, it remains an inescapable fact that the history they investigate and eventually write about cannot be done without historical sources. History literally depends on the existence of historical sources; otherwise, there is no evidence on which to base any history."

Mention is made of archaeological sources, literary sources and oral sources. The teachers' role should be to make these sources accessible to history learners and use them as a basis for introducing new topics. These reading materials should be used to enable the learners to explore different perspectives on historical knowledge and make a constructive assessment of available evidence. This exercise enhances learners' skills of critical thinking and analysis, designed to promote future independent thinkers and responsible citizens.

Each pedagogical strategy, when supplemented with appropriate reading material, can be used in any history classroom. Each strategy effectively engages learners in the process of learning history for a deeper understanding. Sources provided to history learners should consider the nature of the subject and the complexity of language about the academic and linguistic development of learners. As Graden (1996:380), Farrell and Guz (2019:117) have appropriately claimed, previous studies have shown that teachers' choices of learning materials are often influenced by factors such as class hours, students' language proficiency, and the constraints of educational contexts.

In the use of various teaching strategies, barriers to learning in overcrowded classrooms must be addressed. Large classes, learner indiscipline and teachers' attitude are such inhibiting factors towards quality learning and education. Instances of language and literacy development in learners are another factor to consider as a history teacher. Learners' level of literacy, that is, listening, speaking, reading and writing skills in the language of learning and teaching, may present the teacher with challenges in achieving learning outcomes. Be that as it may, history teachers should employ a variety of pedagogical methods as well as "various curriculum differentiation strategies such as those included in the Department of Basic Education's *Guidelines for Inclusive Teaching and Learning"* (DBE, 2011b).

Theoretical framework

The current study is grounded in the conversation theory. The relevance of this theory as a framework for the article lies in the reality that the conversation theory "fits into the social constructivist's framework as it proposes that learning and knowledge are gained in terms of conversations and interactions between different systems of knowledge" (Warnich & Gordon, 2015:46).

For Warnich and Gordon (2015:60), "the conversation theory suggests that for learning to be successful, continual two-way conversations and interactions are required". The interactive, learner-centred strategies align well with this theory, as teaching-learning activities take place "between teachers and learners, among the learners themselves, between actions and reflections" (Pask, 1976:15). Under the circumstances in which learners' role and active participation take precedent, "learners will come to a shared understanding of the world" (Sharples, 2002:504-520).

According to Labaree (2009), a theoretical framework is the structure that supports a theory in a research study. It introduces and describes the theory that explains why the research problem under study exists. Henning et al. (2008:25) contend that: "A theoretical framework positions your research in the discipline or subject in which you are working. It enables you to theorise about your research. It helps you make your assumptions about the interconnectedness of the world explicit."

The learning and teaching situations, as well as the teaching styles and methods, are influenced by the frameworks the teacher uses to understand how teaching and learning occur (Robinson & Lomofsky, 2015). Robinson and Lomofsky (2015:49) go on to state that "frameworks influence the relationship between how the teacher teaches and how the learners learn."

Research design and methodology

The research design used in the study was a case study. This study drew on both qualitative and quantitative research methodologies. The method used for the study is content analysis of books, policy documents, theses, dissertations and articles from accredited journals. Some documents were retrieved from the Internet. Regarding research design and methodology, Halsall and Wassermann (2018:64) contend that, "research design and methodology are interlinked, with the former providing the planned structure, and the latter the means of data collection and analysis".

According to Pandey and Pandey (2021:78), the term "research methodology" refers to the procedure used for collecting data to answer research questions. Walliman (2021:35) describes it as "a broad approach to scientific inquiry explaining how research questions should be asked and answered". This study adopted an interpretivist paradigm to understand the truths about the impact of employing diverse pedagogical approaches to promote learner engagement and understanding of historical content. As pointed out above, a qualitative case study design was employed, focusing on document analysis including books, policy documents, dissertations, theses and journal articles.

Discussion of findings

Using a combination of teaching strategies is significant, as it should be intended to not only inculcate the love of work, but also "aim at providing opportunities to pupils to apply the knowledge that they have acquired" (Jyothish, 2021:204). For the purposes of inculcating desirable values such as respect, integrity, honesty and responsibility as well as positive attitudes, using history as a vehicle to entrench good citizenship in the learners is essential for history teachers to vary pedagogical strategies and to expose learners to extensive reading of available historical sources and compare with oral sources, particularly when dealing with contemporary issues. Quality learning and teaching are critical components using history as a basis for promoting learners' constructive and critical engagements with historical sources.

The teaching of history should instil in learners a sense of responsibility and good citizenship. Equally so, learners' attitude and responsibility as citizens of the state are promoted through history learning and teaching. Jyothish (2021:202) that, "None of the teaching methods describe here will have an effect on students, unless they are taught from a humanistic perspective. History must be presented in a fashion in which students can relate it to their lives and find meaning in it."

As Jyothish (2021:207) further observes, when a humanistic approach is employed and "used in conjunction with some of the methods mentioned, it makes history much more fulfilling for both the students and the teachers".

Sebbowa and Muyinda (2018:134) argue that, "engaging with interactive learner-centred methods in History classes arouses learners' imaginations and ability to see the contemporary events through the lens of the people in the past. The teacher's role shifts to guide and facilitate interpretation and construction of different accounts of the past".

Scholars maintain that "school experiences, contexts and active involvement in shared heritage with the teacher playing a big role in their conception" give shape and structure to learners' ideas and understanding of the value and significance of the past experiences (Mohamud & Whitburn, 2014:43). It stands to reason why interactive learner-centred methods of teaching have been—and are—given preference, as they bridge the gap between the learners and their teachers (Sebbowa & Muyinda, 2018).

Thus, the use of a single teaching approach is non-developmental and promotes inactivity, boredom and a lack of interest among learners. To avoid this monotony, Sebbowa and Muyinda (2018:142) argue for the different approaches that are "basic and innovative methods of teaching History to suit the changing needs of the student in the 21st Century". The use of these strategies should be designed to instil a love of the subject and enable learners to apply the acquired knowledge in various contexts.

Recommendations

The learning and teaching of history should be aimed at producing learners with diverse skills usable in dealing with current issues and challenges. The use of a variety of innovative pedagogical strategies enhances the quality of learning and teaching in secondary schools. Teacher-centred methods promote rote memorisation. Hence, the recommendation is for innovative and learner-centred pedagogical strategies to shift away from teacher-centred approaches.

As pointed out above, it is worth recommending the utilisation of different learner-centred teaching strategies to improve learner performance and enhance the quality of learning and teaching in history. The planning of learner activities and the provision of resources are crucial in promoting active learning and teaching that fosters quality education, not only in urban areas, but also in rural schools.

Ethical clearance

Having utilised content analysis of written sources, such as articles, policy documents, dissertations, theses and books, the author (J Myenene) opted for purposive sampling and selected literature that deals with the impact of employing different pedagogical strategies to enhance quality learning and teaching and improve performance in secondary schools in the twenty-first century. Purposive sampling was employed for the purposes of this study, which was based on the suitability of the documents for the article's purpose (Maposa, 2016). No ethical clearance is required as the articles, dissertations, theses and books used

are in the public domain, and the study does not involve any human subjects (Bertram, 2016).

Conclusion

Based on the foregoing, it is correct to claim that history learning and teaching require both the teacher and learners to be keen and ready to research widely around history topics before a particular topic is introduced in the classroom. Different teaching strategies should be used to improve learners' performance and to enhance quality education that is relevant to their communities and society.

The teaching and learning of history for improving learners' performance in schools and enhancing the quality of education necessitate that teachers and learners work together to answer questions and solve problems that arise as active learning takes place. Learners' level of academic development, their needs and diversity are critical for the delivery of history lessons that ultimately lead to the achievement of lesson outcomes. When planning and designing history lessons, the teacher must consider the learners' level of academic development, as well as their diversity or lack thereof.

References

Alessa, IA, & Hussein, S 2023. Using traditional and modern teaching methods on the teaching process from teachers' own perspective. *Route Educational & Social Science Journal,* 10(2):65-92.

Anderson, T (ed.) 2008. *The theory and practice of online learning*. Athabasca: University Press.

Ayres, P, Sawyer, W & Dinham, S 2004. Effective teaching in the context of a Grade 12 high-stakes external examination in the New South Wales, Australia. *British Educational Research Journal*, 30(1):144-165.

Bertram, C 2012. Bernstein's theory of the pedagogic device as a frame to study history curriculum reform in South Africa. *Yesterday & Today*, 7:1-22.

Bertram, C 2016. Recontextualising principles for the selection, sequencing and progression of History knowledge in four school curricula. *Journal of Education*, 64:27-54.

Brookbanks, GJ 2018. Reimagining the journey – Expanding the history curriculum to teach for depth of understanding in the FET phase. *Yesterday & Today*, 19:66-85.

Carl, AE & Negumbo, TAN 2017. Underperformance in social studies in grades 5-7 in Namibian primary schools: A case study. *Yesterday & Today*,17:92-120.

Davids, MN 2016. Making history compulsory: Politically inspired or pedagogically justifiable? *Yesterday & Today*, 15:84-102.

Denney, AS & Tewksbury, R 2013. How to write a literature review? *Journal of Criminal Justice Education, 24*(2):218-234.

Department of Basic Education (DBE) 2011a. *Curriculum and Assessment Policy Statement Grades 4-6 Social Sciences*. Pretoria: Department of Basic Education.

Department of Basic Education (DBE) 2011b. *Curriculum and Assessment Policy Statement Grades 7-9 Social Sciences*. Pretoria: Department of Basic Education.

Department of Basic Education (DBE) 2011c. *Curriculum and Assessment Policy Statement: Grades 10-12 History*. Pretoria: Department of Basic Education.

De Sousa, L, Richter, B & Nel, C 2017. The effect of multimedia use on the teaching and learning of Social Sciences at tertiary level: A case study. *Yesterday & Today*, 17:1-22.

Farrell, TSC & Guz, M 2019. If I wanted to survive, I had to use it: The power of teacher beliefs on classroom practices. *TESL-EJ: Teaching English as a second or foreign language*, 22(4):1-17.

Firth, BW July 2017. Nostalgia, memory and history teaching and learning. *Yesterday & Today*, 17:154-160.

Fishbein, B, Martin, MO, Mullis, IV & Foy, P 2018. The TIMSS 2019 item equivalence study: Examining mode effects for computer-based assessment and implications for measuring trends. *Large-scale Assessments in Education*, 6(11):1–23.

Gontyeleni, N 2019. SA needs to move away from traditional teaching methods. *BizCommunity,* 11 April 2019. Available at https://www.bizcommunity.com/Article/196/498/189692.html Accessed on 12 February 2025.

Graden, EC 1996. How language teachers' beliefs about reading instruction are mediated by their beliefs about students. *Foreign Language Annals*, 29(3):387-395.

Halsall, T & Wassermann, J 2018. A comparative investigation into the representation of Russia in apartheid and post-apartheid South African history textbooks. *Yesterday & Today*, 19:51-66.

Harris, LM & Girard, B 2014. Instructional significance for teaching history: A preliminary framework. *Journal of Social Studies Research*, 38(4):215-225.

Henning, E, Van Rensburg, W & Smit, B 2008. *Finding your way in qualitative research*. Pretoria: Van Schaik. Hershey, P.A.: Information Science Publishing.

Hoadley, U 2011. Knowledge, knowers and knowing: Curriculum reform in South Africa. In L Yates & M Grumet (eds.). *Curriculum in Today's World: Configuring knowledge, identities, work and politics. London: Routledge.*

Jesson, J, Lacey, F & Matheson, L 2011. *Doing your literature review: Traditional and systematic techniques*. Sage: London.

Juneja, P 2015. *Strategy-definition and features*. Management Study Guide. Available at https://www.managementstudyguide.com/strategy-definition.htm Accessed on 14 February 2025.

Jyothish, K 2021. Teaching methods in history learning. *International Journal of Research Publication and Reviews*, 2(6):202-208.

Kanjee, A & Hardman, J 2024. An investigation of pedagogical change with novel technology in fee paying and no-fee schools during COVID-19. Journal *of Education*, 95:46-67.

Killen, R 2010. *Teaching strategies for quality teaching and learning*, 2nd edition. Cape Town: Juta & Company.

Labaree, RV 2009. *Qualitative research design for the librarian/scholar*. Chicago: University of Southern California.

Maluleka, P & Ledwaba, LT 2023. Attempts to (re)capture the school history curriculum? Reflections on the history ministerial task team's report. *Yesterday & Today*, 29:72-99.

Maposa, M 2016. The construction of the African being in South African History textbooks. *Journal of Education*, 65:5-30.

Mashile, M 2020. Male Mapulana learners' views on the influences of cultural initiation on their schooling. Unpublished Master's dissertation. Pretoria: University of Pretoria.

Mathur, A, & Singh, S 2022. Experiential versus traditional pedagogy: A study of primary school in Delhi NCR. *Journal for Educators, Teachers and Trainers*, 14(1):95-107.

McInerney, P & Green-Thompson, LP 2020. Theories of learning and teaching methods used in postgraduate education in the health sciences: A scoping review. *JBI Evidence Synthesis*, 18(1):1-29.

Mohamud, A, & Whitburn, R 2014. Unpacking the suitcase and finding history: Doing justice to teaching of diverse histories in the classroom. *Teaching History*, 154:40-46.

Mulaudzi, LV 2024. Multilingual integrated pedagogical model for enhancing mathematical literacy in South Africa. *Journal of Education*, 95:23-45.

Mvenene, J 2018. The implementation of Indigenous Knowledge Systems in the teaching and learning of South African History: A case study of four Mthatha high schools. Unpublished PhD thesis. Mthatha: Walter Sisulu University.

Nash, D 2015. *History: A beginner's guide*. North America: Oneworld Publications.

Nkwanyana-Sithole, MM 2023. Curriculum changes and implementation in Eswatini: The pedagogy of Geography teaching in secondary schools. Unpublished PhD thesis, Pretoria: University of South Africa.

Ntshangase, SZ 2022. Interactive pedagogy elevating learners as producers of knowledge in the isiZulu classroom. *South African Journal of Education,* 42(2):1-11.

Nxasana, SE, Chen, J, Du X & Hasan, MA 2023. Teachers' pedagogical beliefs in a project-based learning school in South Africa. *Education Sciences*, 13(2):128-146.

Odendaal-Kroon, R & Poole, I 2018. Enhancing History teaching through the integration of technological devices and online teaching. In: ES van Eeden & P Warnich (eds.). *Teaching & Learning History & Geography in the South African Classroom*. Pretoria: Van Schaik.

Pandey, P & Pandey, MM 2021. *Research methodology: Tools and techniques.* Romania: Bridge Center.

Pask, AGS 1976. *Conversation theory: Applications in education and epistemology.* Amsterdam: Elsevier.

Reynolds, B, Ren, N & Shieh, JJ 2024. From teacher beliefs to practices: Unpacking the benefits and barriers of extensive reading programmes in Macau secondary schools. *Education as Change*, 28:1-24.

Robinson, M & Lomofsky, L 2015. The teacher as educational theorist. In S Gravett, JJ de Beer & E du Plessis (eds.). *Becoming a teacher*, 2nd edition. Cape Town: Pearson Holdings.

Savich, C 2009. *Improving critical thinking skills in History*. Available at http://search.ebscohost.com/login Accessed on 17 February 2025.

Sebbowa, D 2016. Towards a pedagogical framework for construction of historicity: A case of using Wikis among pre-service teachers at Makerere University. Unpublished PhD thesis, Cape Town: University of Cape Town.

Sebbowa, DK & Muyinda, PB 2018. The utilisation of a mobile phone forum on the winksite application in the teaching and learning of History: A case study of pre-service teachers at Makerere University. *Yesterday & Today,* 20:124-147.

Sharples, M 2002. Disruptive devices: Mobile technology for conversational learning. *International Journal of Continuing Engineering Education and Lifelong Learning*, 12(5/6):504-520.

Siebörger, R 2021. How should a national curriculum for History be quality assured? The case of the South African Curriculum and Assessment Policy Statement (CAPS). *Yesterday & Today*, 26:139-154.

Stephen Perse Foundation 2017. *Teaching methods: Traditional vs modern*. Available at https://sixthform.stephenperse.com/blog/?pid=458&nid=45&storyid=4728 Accessed on 10 February 2025.

Umalusi 2013. *Curriculum evaluation: intermediate phase. A comparative analysis of the National Curriculum Statement (NCS) and the Curriculum and Assessment Policy Statement (CAPS) and with respective international qualifications.* (Working document). Pretoria: Umalusi.

Umalusi 2014. *What's the CAPS package? A comparative study of the National Curriculum Statement (NCS) and the Curriculum and Assessment Policy Statement (CAPS). Further education and training phase. Social Sciences [geography and history]*. Pretoria: Umalusi. Available at https://www.umalusi.org.za/docs/reports/2014/social_sciences.pdf Accessed on 30 October 2025.

Walliman, N 2021. *Research methods: The basics*. London: Routledge.

Wang, Y 2022. *A comparative study on the effectiveness of traditional and modern teaching methods*. Proceedings of the 2022 5th International Conference on Humanities Education and Social Sciences (ICHESS 2022) (vol. 720:270-277). Atlantis Press.

Warnich, P & Gordon, C 2015. The integration of cell phone technology and poll everywhere as teaching and learning tools into the school History classroom. *Yesterday & Today*, 13:40-66.

TEACHERS VOICE / HANDS-ON ARTICLES

The hands-on section in *Yesterday & Today* is dedicated to providing History teachers at different levels with practical, classroom-ready resources and ideas that bridge the gap between educational theory and day-to-day teaching practice. Designed to support immediate application, this section features, for example, step-by-step lesson plans, reproducible templates, and adaptable strategies that have been tested in real classroom settings. Whether it's through creative pedagogical approaches, low-cost teaching tools, or digital enhancements, the hands-on section offers innovative ideas that cater to diverse learning needs and environments. By equipping History teachers with tangible tools and actionable insights, this section aims to inspire confidence, foster creativity, and promote a collaborative professional History Education community.

Discomfort as a pedagogical mirror – views of a HISTORY teacher

María Kapp
Curro Heritage House
Durban
maria.v02@curro.co.za

DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a9

Background

With over a decade of teaching experience in the South African private school system, I have observed a persistent resistance from history teachers to teach topics that may spark discomfort in the classroom. This experience motivated me to consider a study on uncomfortable histories. As a result, I began a research collaboration with my academic colleague, Marshall Maposa, who is based at the University of KwaZulu-Natal in Durban.

We frame our experience in teaching history in the context of private schools in South Africa. These spaces are usually underexplored in academic research despite their growing relevance in the country's current educational landscape. These institutions, characterised by affluent communities and a diverse racial composition, present a complex setting where history is often perceived as a politically sensitive subject.

Some of these private schools follow the national Curricula Assessment Policy Statements (CAPS) curriculum, while others implement their own school-based

programmes. However, all are assessed through the Independent Examinations Board (IEB) examinations. The South African teaching practice has revealed that in many of these spaces, the discussion of uncomfortable topics is often avoided or dealt with superficially. The current study is set in this everyday reality, and it seeks to understand the topics that history teachers find uncomfortable, why they find them uncomfortable, and how they navigate this discomfort in their classrooms.

Why uncomfortable?

The concept of 'uncomfortable histories' is not widely used in literature; instead, there is more frequent reference to 'uncomfortable heritage'. In history education, discussions frequently centre on contentious or sensitive topics. In our current study, we chose to use the concept of uncomfortable histories, because it is broad nature. Controversial topics usually refer to issues that provoke public disagreement or debate, while sensitive topics are defined by their inherent content and the shared understanding that they require careful handling to avoid harm or offence. In contrast, uncomfortable issues are shaped by individual emotional and psychological responses, rather than by public or institutional labels. A topic may be considered awkward, even if it is not controversial or sensitive, as discomfort depends on the identities, backgrounds, beliefs and levels of readiness of both teachers and learners.

Topics that generate discomfort

Teachers identified a wide range of content from the history curriculum as uncomfortable and challenging to teach, they are:

- **Apartheid and systemic racism**, particularly the victim-perpetrator relationship.
- **Colonisation, eugenics and land dispossession**, together with current debates on land redistribution.
- **Geopolitical conflicts** such as the Israeli-Palestinian War and ideological tensions between capitalism and communism.
- **Gender and sexuality topics**, including LGBTQ+ rights.
- **Current South African politics**, especially corruption cases and the role played by the different political parties.

These topics share a common characteristic: they are emotionally and politically close to the personal experiences of teachers, learners and their families, which amplifies the discomfort they evoke.

Why teachers hold back?

From time to time, South African social media highlights a scandal involving what a teacher has said or done, often leading to job loss or damage to their reputation. Therefore, many teachers fear adverse reactions from learners and conflict with parents or management, as their comments might be recorded without their knowledge, misinterpreted or taken out of context. Institutional pressure and school culture, especially those with a religious ethos or of a more conservative nature, explicitly or implicitly restrict the teachers' freedom to deal with political, racial and gender issues in the classroom.

In addition, the teachers' identity, race, religion, class and gender influence how learners and parents perceive them. Some white teachers reported feeling insecure when discussing colonial or apartheid injustices, while a few Black teachers reported feeling they have greater legitimacy to engage with these topics. Finally, the lack of specific training on how to deal with uncomfortable content leaves many teachers vulnerable and without the methodological or emotional tools needed to manage these situations confidently.

What do teachers do?

The way in which teachers approach uncomfortable topics in the classroom varies. Some opt to avoid entire topics altogether or to deal with certain aspects superficially, focusing on 'the facts' and ignoring ethical and controversial dimensions. Others try to maintain a 'neutral' or 'balanced' stance, presenting different points of view as equally valid to avoid accusations of bias. However, they acknowledge that this approach significantly waters down historically complex realities. Most teachers plan these potentially uncomfortable lessons carefully, selecting 'safe' resources and anticipating any difficult questions that may arise. Most teachers indicated that they establish rules of respect, structure debates carefully, and try to redirect conversations when they become overly emotional.

Discomfort as a pedagogical mirror

Following Boler's (1999) we understand that discomfort, far from being an obstacle, should be viewed as an opportunity for ethical and transformative learning. Discomfort uncovers the limits of our beliefs and privileges, offering the possibility of reconstructing historical knowledge through empathy and critical reflection.

In this sense, our findings show that many teachers oscillate between the roles of spectators, observing without engaging, to avoid losing emotional control, and witnesses who dare navigate the moral ambiguity of the past and present. However, institutional culture, fear of backlash and lack of training tend to reinforce the latter role, reproducing silence rather than promoting transformation.

Final thoughts

Reflecting on the findings of this research, it becomes apparent that history teaching in private schools continues to be influenced by two opposing forces: the desire to maintain classroom harmony and the need to confront the uncomfortable truths of our past. The topics that make most teachers uncomfortable, such as apartheid colonisation, race, gender and even geopolitical debates, are not merely content in the curriculum; they are still open wounds in South Africa's collective memory.

The closeness of these topics to the personal experiences of learners and teachers makes history teaching not only an intellectual exercise, but also an emotional one. The fear of backlash from learners, parents and management, combined with the lack of specific training, creates a profound sense of insecurity. In many cases, this environment forces teachers to choose between avoiding discomfort altogether or addressing it with extreme caution, carefully weighing every word they say in the lesson.

However, as Boler (1999) suggests, this discomfort can also be seen as an opportunity. Teachers who decide to openly embrace it openly may discover that the most uncomfortable lessons can become the most transformative. Perhaps the goal is not to eliminate discomfort, rather to learn how to navigate it and turn it into a powerful pedagogical tool. After all, teaching history is not only about looking at the past, but also about confronting who we are and reflecting on the role we play in building the future we wish to create.

References

Boler, M 1999. *Feeling power: Emotions and education.* New York: Routledge.

‘The past is not the past, it is present’: illustrative case studies – intentionally historicising geopolitics in the history classroom through storytelling, thereby facilitating the process of ‘connecting the dots’ over time and space

G Brookbanks
Westerford High School
Cape Town, South Africa
gb@westerford.co.za

DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a10

In suggesting ‘the past is not past, it is present’, and as part of a continuous journey of professional development, this paper will argue the need for the history teacher to intentionally historicise geopolitics, while unpacking both the General Education and Training (GET) and Further Education and Training (FET) curricula, to enable the learner to connect the dots over time and space.

In 2025, few remaining history teachers can historicize geopolitics through their own experience. Most rely on intentionally reading beyond the curriculum and delving deeper into it.

The Islamic Republic of Iran – An illustrative contemporary issue: US and Israel bombing of nuclear facilities

On 22 June 2025, the United States (US) Air Force and Navy attacked nuclear facilities in Iran as part of a regional war, under the code name of Operation Midnight Hammer. A question could be posed about how this development can be engaged in the history classroom. The intentional choice of the history teacher could be to either focus on the region of the Middle East itself or focus on the post-World War II nuclear arms race in the broad context of the Cold War.

Nicole Grajewski (2025) argues that the fundamental limitation of the strikes lies in the distinction between infrastructure damage and capability elimination. Military action can

destroy equipment and facilities, but it cannot eliminate knowledge, dispersed materials, or the underlying strategic drivers of nuclear weapons development. It is this analysis and observation which informs the approach of this current paper.

Using the work of both Nancy Thorndike Greenspan (2021) and Henning Van Aswegen and Peter Swanepoel (2025), explanatory and illustrative case studies in the form of storytelling will be provided as we historicize the targeting of nuclear facilities.

In telling the story of Klaus Fucks in *Atomic Spy*, which Thorndike Greenspan (2021) describes as a cautionary tale about the ambiguity of morality and loyalty, many questions can be posed in the history classroom. The consequent discussions and answers to these questions are where understanding and knowledge are gained.

Skiing 'off-piste', through storytelling

The telling of the story can begin when Klaus Fucks died from cancer in the German Democratic Republic (GDR) on 28 January 1988. By 1988, Michael Gorbachev was the Chairman of the Communist Party of the Soviet Union, the Cold War was coming to an end and social unrest was developing in the Soviet Satellite States, where people were calling for similar social reforms to those of *Glasnost* in the Soviet Union—a topic in the Grade 12 curriculum.

The state funeral for Fucks took place on 11 February at the *Friedrichsfelde* Cemetery in East Berlin, which was the resting place of honoured socialist leaders, starting with Rosa Luxemburg and Karl Liebknecht, murdered during the Weimar unrest that first roused Klaus Fucks to activism (Thorndike Greenspan, 2021). No high-level Soviet official attended his funeral, except one guest who was thirty-five-year-old Vladimir Putin, a KGB agent stationed in Dresden. Putin, the President of the Russian Federation, is a character who features in current geopolitics.

Thorndike Greenspan (2021) explains, in March 1988, a white-haired man dressed sombrely in a grey suit and dark overcoat walked on a dirt path along *Pergolenbergweg* in Berlin—in his right hand was a small bouquet of Shasta daisies. In the *Friedrichsfelde* Cemetery, he searched for something … on reaching it, leaned the daisies against the stone, and knelt. He was in front of the grave of Klaus Fucks. The man, Alexander Feklisov, bowed three times: The first was to acknowledge his gratitude for having met Fucks; the second was on behalf of the Soviet people; and the third was to reflect the gratitude of all the people of the world.

He then met Grete Keilson, the wife of the now deceased Fucks and herself a former senior member of the GDR state. She asked Feklisov why he had now, in 1988, come to Berlin as Feklisov and Fucks had not seen each other since their last meeting in London, in April 1949? Feklisov had been in the Soviet Union for all the years Fucks had been in the GDR, but had not contacted Fucks. Feklisov did not have an answer to her question (Thorndike Greenspan, 2021). It suggests that when Feklisov returned to the Soviet Union, he was never requested by the KGB to reactivate Fucks, even after Fucks had returned to the GDR. The Soviet authorities never acknowledged the role of Fucks in enabling them to develop a nuclear capacity by 1949 to compete with the US, arguing they developed the capacity through their own scientists in the Soviet Union.

Thorndike Greenspan (2021) argues that Feklisov had recorded in his memoir his final thought on Klaus Fucks: "*Science without conscience is only ruin for the soul*".

A brief background to the early life and schooling of Klaus Fucks while in Germany

Thorndike Greenspan (2021) explains that Fucks was born on 29 December 1911, in Rüsselheim, just south of Frankfurt, in Germany. This was just before World War 1 (WW1), a topic in the Grade 8 curriculum. His father, Emil Fucks, was a Lutheran preacher. The family moved to Eisenach as WW1 ended. Fucks had a younger sister, Kristel, an older brother, Gerhard, and the eldest sibling, Elisabeth. The former two will feature in Klaus's subsequent story.

By the end of WW1, a radical faction within the Social Democratic Party (SPD) led to the moderates maintaining the SPD name, and the radicals ultimately became the Communist Party of Germany, the KPD. This period of Weimar Germany is a topic in the Grade 9 curriculum. In the political, social and economic chaos of the early period of Weimar Germany, Emil Fucks, like many others, was sympathetic to workers' rights—all of whom were automatically identified as 'red' and treated accordingly by university students in right-wing paramilitary groups.

From 1921, Klaus attended Eisenach's Gymnasium, where he excelled in mathematics. In 1928, to celebrate the tenth anniversary of the Weimar Republic, the government announced an award of a special history book to the top student in each city. Klaus Fucks won the prize for Eisenach. However, the headmaster gave the award to him in private as he considered Emil Fuck's politics were too well-known and provocative for a presentation to the son, Klaus, before the Gymnasium's conservative students. This observation by

Thorndike Greenspan (2021) provides an opening through which discussion can take place over the extent of the fascist mobilisation of learners in schools by 1928. Fucks graduated from the Gymnasium in 1929, as the Wall Street crash unfolded, leading to the Great Depression—a topic in the Grade 11 curriculum.

University studies, involvement in the communist party student wing and the impact of the rise of the Nazi Party in Germany

In 1930, Fucks registered at the university in Leipzig to study mathematics and physics, where he joined his brother, Gerhard, who had enrolled at the university two years before. Both Gerhard and Klaus joined the Socialist Students Union, an affiliate of the SPD, as well as the *Reichsbanner*, a paramilitary group closely allied with the Social Democrats. In 1931, the two brothers transferred to Kiel after their father had joined the Pedagogical Academy in Kiel and had become a Quaker. At the university, the brothers formed a coalition of socialist and communist students against Nazi fascism, which was known as the Free Socialist Students Group. In 1932, with national politics seeing the rise of the Nazi Party, Klaus transferred to the local youth KPD chapter. Therefore, in the early 1930s, both Fucks brothers were involved with the communist party student wing, within which they had leadership positions, and were known to the nascent Gestapo.

Thorndike Greenspan (2021) explains that when Gerhard transferred to the University of Berlin, Klaus became the leader of the Free Socialist Student Group in Kiel. On 30 January 1933, Hindenburg appointed Adolf Hitler as Chancellor of Germany. The Nazi student leadership in Kiel sentenced Klaus Fucks to death, resulting in Klaus and his sister, Elizabeth, going into hiding. By 28 February, with news of the *Reichstag* fire circulating in Germany, the targeting, by the Gestapo, of perceived communists intensified, with Klaus Fucks being on the list in Kiel.

Thorndike Greenspan (2021) explains that at this stage, in 1933, Guy Liddel of Britain's MI5 arrived in Berlin, where he prioritised getting lists of known communists in Germany. The state security agency of Britain did not identify the rise of fascism in central Europe as a threat to peace, but communism. This fact would have an impact on the choices Klaus Fucks will make, and a bearing on his story, which continues to unfold.

Into exile and a refugee from Nazism, in Britain

Klaus Fucks left Kiel and went underground in Berlin. In mid-July 1933, he fled Berlin on

his journey into exile. He caught a train to the German / Belgian border, crossed the border on foot, and headed to Paris. While in Paris, he worked with Grete Keilson on the youth congress and attended the September 1933 World Congress of Youth Against War and Fascism as a KPD delegate.

According to Thorndike Greenspan (2021), Klaus Fucks then caught a ferry to Britain, where, as a refugee from Nazism, he was granted a landing permit as he had a *letter of invitation* to study theoretical physics at the University of Bristol. While in Bristol, he made contact with KPD émigrés in London. In 1936, Fucks had completed his undergraduate degree, received approval for a PhD, and published several academic articles. The Gestapo had forwarded details of the background of Klaus Fucks, as they did with many other German refugees, to the German consulate, which provided these details to Britain's MI5.

Klaus Fucks transferred to the University of Edinburgh in 1937. By July 1939, he applied to become a naturalised British citizen, however, the outbreak of World War 2 (WW2) stopped the process, and his category was changed from refugee to "enemy alien".

By 1940, with fears in Britain of possible German invasion of the United Kingdom and related security concerns of a *Fifth Column* of Nazi sympathisers and agents of Germany in Britain, "enemy aliens" were interned, including Klaus Fucks. Fucks was initially held in Huyton, where he met another internee, Hans Kahle (who worked for the Soviet GRU), and they were then shipped to an internment camp on the Isle of Man. By July 1940, the internees were transported by ship to Canada. Thorndike Greenspan (2021) describes the concentration camp-like conditions in which the internees were held in Huyton, the Isle of Man and Canada and, irrespective of their ideological backgrounds and therefore, reason for fleeing Nazi Germany, they were held together.

The 1941 context in which Klaus Fucks was recruited to work for Soviet intelligence

With the imminent threat of a Nazi invasion of the United Kingdom having waned, in mid-December Fucks and a group of internees were shipped back to Britain from Canada, arriving in Liverpool on 13 January 1941.

Shortly after he arrived in Britain, Fucks met Simon Kremmer, a Soviet official, in London. By May 1941, he was working in Birmingham on atomic research and meeting Kremmer, known to him as 'Alexander', to hand over information. In 1942, Kremmer was recalled to the Soviet Union, and Ursula Kuczynski, code name 'Sonya', became Fucks's GRU handler. In these meetings, Fucks handed over information and documents which he himself had authored.

Thorndike Greenspan (2021) highlights the June 1941 German invasion of the Soviet Union with Operation Barbarossa and the August signing of the Atlantic Charter between Churchill and Roosevelt in Newfoundland, as two seminal developments in which the choice made by Fucks should be understood. In the case of the latter, the secret, scientific agreement which was part of the Atlantic Charter meant Fucks, a scientist involved in nuclear research, related to the Soviet Union as an ally in the war against Nazi fascism. While Churchill wanted the agreement to create public support to propel the Americans into the war, news of the charter did not move the Americans to enter the war. It was only the Japanese attack on Pearl Harbour, on 7 December 1941, which did.

Bilateral agreement to build an atomic bomb in 1943, the 'Manhattan Project', Fucks to the US and the 'Verona' intercept, which alludes to a Soviet spy

Initiated on 1 February 1943, VERONA was a top-secret decoding project run by the US Army Signal Intelligence Service (later absorbed into the National Security Agency), as a means of decrypting messages transmitted by Soviet intelligence agencies. This US capability will be featured in Fuchs's subsequent story.

Thorndike Greenspan (2021) also explains that the British and Americans reached a consensus on a mutual effort to build an atomic bomb in August 1943, when the countries signed the top-secret Quebec Agreement, which was not made known even to the US Congress. This agreement will result in bringing Fucks to the USA.

The Army Corps of Engineers under General Leslie Groves controlled the project, with the US and British mutual effort to build an atomic bomb. The East Coast headquarters of the corps was at 270 Broadway in New York City—its location supplied the 'Manhattan' part of the project title.

On 3 December 1943, members of the British scientific mission, including Klaus Fucks, arrived by boat in the US, and General Groves had been assured by the British

representative in the US that "the British Security had cleared all these people" (Thorndike Greenspan, 2021, 144). Meanwhile, intelligence staff at the Moscow Centre had received a lengthy brief from the GRU on its history with Klaus Fucks in London. The brief attested to his credentials and values. On handing Fucks over to the *Narodnyy komissariat vnutrennikh del* (Peoples Commissariat for Internal Affairs (NKVD) (forerunner of the KGB), the GRU advised them that he took no pay, but sometimes accepted monetary gifts.

The NKVD in New York had failed to infiltrate US war research. The memo sent to them from Moscow Centre proclaimed: "As an agent, 'Rest' is a major figure with considerable opportunities and experience in agent work". However, they were also warned about the threat of US counterintelligence and the GRU, which had handed over 'Rest', as it was not "known for its discretion" (Thorndike Greenspan, 2021:147).

On 5 February 1944, Klaus Fucks met with a Soviet cut-out. Fucks had the code name of "REST", and the Soviet cut-out was known to Fucks as "Raymond"—his actual name was Harry Gold. Fucks explained his assignment on isotope separation, explained that in addition to work in Manhattan, research was taking place in Berkley, California and at a place referred to as Camp Y, in New Mexico. Fucks told 'Raymond' that results were expected in 1945.

'Raymond' handed off his report to 'John', an intelligence operative at the Soviet consulate in New York, who forwarded an encrypted message to the NKVD's Moscow Centre. It is this encrypted message which VERONA intercepted … however, the US Army Signals Intelligence Service took the next few years to decipher it.

In September 1944, with the war in Europe turning in the Allies' favour, Churchill and Roosevelt had secretly agreed that when a 'bomb' is finally available, it might perhaps, after mature consideration, be used against the Japanese (Thorndike Greenspan, 2021:165). In April 1945, German strength began to collapse, the concentration camps were liberated and both Hitler and Mussolini died. On 7 May 1945, Germany surrendered unconditionally. The scientists involved in the atomic research had rationalised their participation, only because of the urgent need to rid the world of Hitler and the Nazis.

'Trinity' and the Potsdam Conference

However, research continued, and it was agreed that with a complex plutonium bomb, only a test would prove it viable. Oppenheimer set 16 July 1945 as the test date for the plutonium bomb, nicknamed the 'Gadget'. On 2 June 1945, Klaus Fucks, now based at Los

Alamos, New Mexico, met with 'Raymond' to hand over documents, including the plans for the plutonium bomb, which was to be tested on 16 July 1945.

The plutonium bomb was tested, known as 'Trinity', on 16 July 1945, with Fucks present. The next day, 17 July, Truman met with Winston Churchill and Joseph Stalin at Potsdam, Germany. When Truman informed them of the test, Stalin received little reaction. Thorndike Greenspan (2021) explains that neither Truman nor anyone else there appreciated that Stalin knew almost as much about the bomb and the Trinity test as they did.

With the formal signing of Japan's surrender on 2 September 1945, WW2 was entirely over, and the British mission in Los Alamos was ready to go home, including Klaus Fucks.

Post-WW2, and Klaus Fucks back in the United Kingdom

On his return to the United Kingdom, Fucks was assigned as a scientist to Harwell, where research into the development of a British atomic bomb was being undertaken. Thorndike Greenspan (2021) argues he did not make contact with a Soviet agent until 1947, six months after he had returned to the UK.

Thorndike Greenspan (2021) explains, Klaus Fucks cut ties in February 1949 by missing a rendezvous with his last NKVD Soviet handler, Alexander Fexlisov. This is the year in which the Berlin Crisis unfolded, the North Atlantic Treaty was launched and the Soviet Union joined the atomic age with the successful explosion of a device. These issues are unpacked in the Grade 12 curriculum. MI5 never identified Fexlisov.

In January 1950, Klaus Fucks confessed to MI5 that he had been providing information to the Soviets from mid-1942 (his actual espionage began in August 1941) until early 1949.

On 2 February 1950, Fucks was arrested and on 10 February charged in court with two charges of violating the Official Secrets Act. He was committed for trial at the Old Bailey, beginning 28 February. His trial lasted all of one hour and twenty-eight minutes. Fucks was given the maximum sentence ordained by parliament for this crime, fourteen years' imprisonment.

Developments in the US in 1950

In May 1950, the FBI arrested Harry Gold in the US, who eventually acknowledged he was the person who received information from Klaus Fucks while Fucks was in the US. In addition, Harry Gold provided the name of David Greenglass, a machinist at Los Alamos

working on lenses for the plutonium bomb, and Greenglass's name led to his brother-in-law, Julius Rosenberg, who was an engineer living in New York, and his wife, Ethel, both of whom were executed for the crime of espionage. However, neither the Rossenbergs nor Greenglass had the scientific understanding of Klaus Fucks. These developments in the USA took place in the context of the unfolding Korean War (1950-1953) and the hearings of Senator McCarthy, which again relate to the Grade 12 curriculum.

Fuchs's release on parole in 1958, and his final years in the GDR

In 1958, the British government began to contemplate Klaus Fuchs's release on parole. He was now stateless, with his naturalised British citizenship having been revoked. Fucks insisted that the only country he would consider going to was the GDR (East Germany) or, if it were not an option, he would consider India or Brazil. It was finally agreed that he would leave on 23 June 1958 on a Polish airliner from London Airport to Schönefeld Airport in East Berlin. Fucks became the Deputy Director of the Central Institute for Nuclear Research in the GDR.

While Fucks was in the GDR, apartheid South Africa's nuclear ambitions unfolded

Van Aswegen and Swanepoel (2025) explain that on the instructions of the Soviet Union's GRU, Dieter Felix Gerhardt visited the *Vastrap* nuclear weapons site in South Africa in early 1977 to determine what progress had been made by South Africa to develop or obtain a nuclear bomb. As a result, a Soviet spy satellite was identified flying over the *Vastrap* atomic weapons site. The Soviets supplied this information to both the US and France to bring pressure on South Africa to sign the Nuclear Non-Proliferation Treaty, which South Africa refused to do, and the refusal "angered President Jimmy Carter of the United States, who wrote several threatening letters to the South African government on this matter" (Van Aswegen & Swanepoel, 2025:289). These developments took place in South Africa, covering topics unpacked in the Grade 12 curriculum.

The Atomic Energy Corporation in South Africa had, in 1961, begun the development of a nuclear enrichment capability at two vast facilities west of Tshwane (former Pretoria), *Pelindaba* and *Valindaba*, with its first highly enriched uranium being produced in 1978. Meanwhile, a Canadian Professor, Hugh George Hambleton, of Laval University in Quebec, supplied the Soviet KGB with information in 1978, confirming the location of South

Africa's nuclear enrichment and its cooperation with Israel (Van Aswegen & Swanepoel, 2025:286). Hambleton's information that "South Africa had amassed all the requisite resources and facilities to produce an atomic bomb which exceeded the destructive force capability of the Nagasaki plutonium bomb" (Van Aswegen & Swanepoel, 2025:286) and which Fucks had been involved in and provided the information thereon to the Soviet Union.

Hambleton had been recruited by the NKVD (forerunner of the KGB) in 1951 by Vladimir Borodin and joined NATO's Economic Directorate in Paris in 1957, where he supplied the KGB with NATO-related documents. In the 1970s, he accessed information about both Israel's and South Africa's nuclear weapons programmes and collaboration. Hambleton was arrested in September 1979 in Canada, and eventually sentenced to ten years in prison.

The ANC Research Unit in London, under Frene Ginwala, also investigated apartheid South Africa's nuclear weapons programme at this time, using Renfrew Christie to do academic research in South Africa. Christie was sent to South Africa in 1979 and spied on South Africa's nuclear programme. Three months after Christie's arrival, he was arrested under the Terrorism Act. He was interrogated and tortured by the Security Branch of the South African Police. On 6 June 1980, Christie was sentenced to ten years' imprisonment, with four other sentences of five years each to run concurrently. In Christie's so-called 'confession', he put down all his recommendations to the ANC. The judge read his confession into the official record, which aided in his recommendations to be printed and spread, via the hands of democratic lawyers, to the ANC in London (SA History Online, 2025). One of his recommendations to the ANC had been to bomb Koeberg just before they put uranium in it. "Rodney (Wilkinson) bombed Koeberg in 1982; two and a half years after I was in prison. Frankly, when I heard of it, it made being in prison much easier to tolerate", explained Christie in an interview during the Conference on Anti-Nuclear Activism in Africa, 3 April 2023 (The Thinker, 2024:205). This topic is unpacked in the Grade 12 curriculum.

Post-script – Klaus Fuchs's own reflective evaluation of his choices, and Renfrew Christie comments on the bombing of a nuclear facility, both in the context of the Cold War

In 1983, Klaus Fucks was interviewed, where he gave his own simple moral reckoning, his own reflective evaluation as to what he had done (Thorndike Greenspan, 2021:353):

"There have been things in my life that I would do differently. Looking back at those 72 years I have lived, I can see all the mistakes I made and those I could have avoided. But I am deeply convinced that, despite all the mistakes and their negligent behaviour, if the line of your life still took you towards the goal you had set once and for all; if you were able to reach that goal, or at least get closer to it, if going in that direction you did not lose yourself, nor squander your strength, committed anything contemptible, humiliated yourself, climbed over dead bodies, not harmed others to get there, if you were able to maintain the moral course within your soul which in every language is called conscience, you can consider your life is a success."

Renfrew Christie comments, in relation to the bombing of a nuclear facility in the context of the Cold War, that, on 9 June 1981, eighteen months before Rodney (Wilkinson) went in and bombed Koeberg, the Israelis bombed a Soviet built nuclear reactor in Iraq; Sadam Husain's atomic reactor, Osirak. That was a staggering occurrence worldwide, because nuclear reactors in general, are off-limits and off-target, and the Israelis did this for their own reasons. I am, however, sure they got American permission. But did the Soviet Union say 'yes' to the bombing of Koeberg as a reprisal for the bombing of Osirak? Was that bombing in the minds of the 'Cold Warriors'? The Cold War was a hot war, of course, quite often. There were proxy wars all over the place, and the anti-apartheid war was a proxy war. But did the decision to bomb Koeberg on the part of the ANC get permission from the Soviet Union? I am prepared to bet it did.[1] (The Thinker, 2024:111).

References:

Grajewski, N 2025. *The most significant long term consequences of the US Strike on Iran*. Emissary.

SA History Online 2025. *Renfrew Leslie Christie*.

The Thinker 2024. Excerpts from a conversation with Renfrew Christie and Rodney Wilkinson. *The Thinker,* 100(3):105.

Thorndike Greenspan, N 2021. *Atomic spy.* Penguin Books.

Van Aswegen, H & Swanepoel, P 2025. *The daisy spy ring.* Naledi.

[1] Excerpts from a conversation with Renfrew Christie and Rodney Wilkinson (The Thinker, 2024:111).

CONFERENCE REPORTS

THE 39TH SOUTH AFRICAN SOCIETY FOR HISTORY TEACHING (SASHT) CONFERENCE 10–11 OCTOBER 2025

Venue: Wynberg Girls' High School

Organisers: Kirstin Kukard (Herzlia High School) Sjaene van Wyk (Wynberg Girls' High School) Gill Sutton (Curro Schools)
Report: Kirsten Kukard (Herzlia High School)

DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a11

The 39th South African Society for History Teaching (SASHT) conference welcomed delegates from across South Africa, as well as international institutions, on 10–11 October 2025. History teachers and teacher educators continue to grapple with what it means to teach in contexts that seem uncertain, but have the possibility of new opportunities alongside the challenges. The unique partnership between the African Association for History Education (AHE)-Afrika and SASHT enables a discussion about the challenges of teaching meaningful history during times of change in South Africa and across the continent. The SASHT conference, therefore, plays a crucial role in fostering partnerships and dialogue among all stakeholders in history education in both our national and regional contexts.

This year's conference had the theme "History Teaching in a Time of Change" History practitioners (scholars, teachers, students and museum practitioners) presented papers focusing on the following sub-themes:

- History teaching in the present-day context, using primary sources in the Grade 10 history classroom, pedagogies of personal history in teacher-training.
- Indigenous knowledge, museums as sites of teaching and learning, and issues of language.
- Issues in history pre-service teacher pedagogy, curriculum narratives and women's history.
- AI and history education, missing voices and spaces in the curriculum, pedagogy of local history.

- Using foodways as a pedagogy, factors impacting interest in history.
- Open papers on many other aspects of history education.

The conference was attended by 50 participants, ranging from preservice teachers to curriculum designers, postgraduate students, university lecturers, and historians from across South Africa and the world. A total of 35 presentations took place over the two-day conference.

The keynote address by Jeremy Vearey opened the conference with an exploration of the often-missing history of the *Bondelswarts* (historical name for a Nama ethnic group in Southern Namibia). His keynote, titled *"Novelising History: The Story of the Bondelswarts and their Armed Struggle Against Colonialism"*, covered the fascinating history of this community of fighters as well as the issues on turning that history into historical fiction. Veary's novel, "*Crimson Sands"*, is set in Namaland—from German-South-West Africa to the Cape Colony. The story covers the history of the community from 1904–1922, when thousands of *Bondelswarts* were shot down by Jan Smuts's fighter planes. Jeremy Vearey conjured an intriguing story full of rich characters. The keynote sparked interesting discussions about the curriculum links to eugenics and pseudo-scientific racism as it is taught in the classroom.

During the parallel sessions that took place over the two days, papers were delivered focusing on one of the themes mentioned above, allowing presenters twenty minutes each to present and ten minutes for questions and answers. The presentations allowed for discussions across papers of a similar theme. This allowed for a mutually learning environment for both the audience and the presenters themselves, as insights were shared from different perspectives and contexts.

On Friday evening, a book launch was held for Xolisa Guzula and Athambile Masola's new book, "*Together Apart: The Story of Living in Apartheid"*. The book is a thematic exploration of the impact of segregation in South Africa's history, told in an engaging visual manner; key questions are framed through a conversation between a *makhulu* and a group of children. It is aimed at a young readership and serves as a valuable resource for use in the history classroom, particularly in primary school or the GET phase. Gill Sutton interviewed Athambile Masola on the process of writing the book and discussed some of the ways it could be used to help young people engage with this complex history.

It was wonderful to have students from Stellenbosch University and the University of the Witwatersrand presenting their experiences alongside their lecturers. Several sessions

were also workshop-based, fostering discussions about the practical application of history teaching in the classroom. The final session was a helpful panel discussion about the practice of history education pedagogy at universities for pre-service teachers.

Below is some of the feedback from attendees:

"Good collaboration with guests and presenters."

"Sessions are becoming very informative and scholarly every year. Experiences shared are very valuable."

"I appreciate the opportunity to learn from others' research and writing."

"Meeting everyone and presentations on AI."

"The practical application of the sessions."

There are always areas for improvement, and involvement from all stakeholders is welcome in the history education sector, both nationally and regionally, to help shape the future of SASHT. As there is a new Executive for SASHT, feedback from the conference will be taken on board to shape future events organised by SASHT.

In addition to the formal elements of the conference, there were opportunities for socialising and networking in a more informal setting. Delegates attended a pre-conference dinner, which ran late into the evening and on the Friday, delegates had the opportunity to go on a walking tour of the nearby historic Chelsea Village. Some delegates also visited Groot Constantia on Saturday afternoon. These opportunities allowed for relaxed engagement and enabled the formation of new relationships and connections.

We thank everyone who attended for making this year's conference a success, and we look forward to having even more engagement at the 2026 conference.

6th Ahe-Afrika History Education Conference

Looking back, looking forward: the future(s) of History Education in Africa

Venue: University of Buea, Cameroon

Organiser: Roland Ndille (University of Buea, Cameroon)
Report: Tasleemah Hazarvi (University of Pretoria, South Africa)

DOI: http://dx.doi.org/10.17159/2223-0386/2025/n35a12

The African Association for History Education (AHE-Afrika) recently hosted its 6th conference on August 27–29 2025, at the University of Buea in Cameroon. Scholars, researchers, teachers and policymakers from across Africa attended the conference to critically engage with the prospects and trajectories of history education in Africa. The theme of the conference was *"Looking Back, Looking Forward: The Future(s) of History Education in Africa"*.

The 2025 conference was inspired by the Akan Sankofa concept— "to go back and fetch it"—and embodied a dual orientation. This allowed the past to be critically reflected on while imagining the future of history education in Africa. In the context of Africa's rapidly changing demographic and educational landscape, the focus of this conference is particularly relevant, given UNICEF projections that by 2030, one in five people worldwide will be African. By 2050, a third of the world's children will be African. History education plays a vital role in shaping young minds and encourages conversations that foster hope and transformation.

Hosted by the Department of History in the Faculty of Arts in Buea, the conference proved to be a vibrant intellectual gathering for the exchange of ideas and experiences related to the teaching and learning of history in Africa. Over the past decade, AHE-Afrika has hosted six successful conferences, each contributing towards a growing body of knowledge and scholarship on African history education.

Conference themes and scope

The conference's sub-themes are wide-ranging and inclusive, reflecting the dynamic and diverse scholarship on history education in Africa. The themes included:

- History education in Cameroon
- The history and politics of history education in Africa
- Curriculum, syllabus and textbook development
- Classroom practices and pedagogical innovation
- Assessment and evaluation approaches
- History teacher education and professional development
- History education in, about and for Africa
- Learner motivation and engagement in history
- History education and citizenship
- African history education in a global context

By bringing together researchers and practitioners from across the continent and beyond, the project aimed to strengthen networks of collaboration, share innovative pedagogical approaches and deepen the theoretical understanding of history education in Africa.

The University of Buea, founded in 1993, is a hub for innovation, scholarly excellence and community engagement in the historic town of Buea, which is the former capital of German Kamerun and later the capital of the federated State of West Cameroon. This added to the rich historical symbolism for hosting a conference dedicated to history education.

The 2025 AHE-Afrika conference provided a platform for presenting new research and reimagining what it means to teach and learn history in, about and for Africa in the twenty-first century. AHE-Afrika remains vital to scholarly engagement and pedagogical innovation in history education. The conference attracted a diverse array of participants from across Africa and beyond, thereby reaffirming AHE-Afrika's role in networking for history education scholarship in Africa. Through scholarly rigour, reflective dialogue and forward-looking vision, the conference contributed to the theory and practice of history education in Africa.

BOOK REVIEWS

History for beginners

Author: Andy Prentice and Tom Mumbray
Year: 2024
Publisher: Usborne Publishing Limited
ISBN: 9781474998857

Reviewed by
Amogelang Mogotsi
University of Pretoria
Pretoria, South Africa
amogelang.mogotsi@up.ac.za
Orcid: https://orcid.org/0000-0002-6275-5172
DOI: http://dx.doi.org/10.17159/2025/n35a13

Introduction

History can be taught in a way that excites curiosity rather than passively learning history through memorisation. This is a statement that the '*History for Beginners'* educational book breaks down by simplifying the subject content through creative images, explanations and storytelling. *'History for Beginners'* written by Andy Prentice and Tom Mumbray in collaboration with Paul Boston for illustration, Jamie Ball and Samuel Gorham in designing the book and history experts such as Dr Vanda Wilcox and Dr Samraghni Bonnerjee. The educational book was published in 2024 by Usborne Publishing Limited. Usborne Publishing Limited is one of the world's leading independent children's book publishers. It was founded in 1973 by Peter Usborne and has over 3000 children's books in print.

Layout of the book

The book consists of seven chapters, which is also notable, considering it is intended for beginners in history. Throughout the various chapters, the authors demonstrate how historical knowledge can be effectively taught to learners without prior background knowledge of academic history, without overwhelming or confusing them. A glossary page is included to explain terminology used throughout the book. Additionally, the glossary page offers more detailed information about specific historical events and time periods.

The book also features an index, allowing readers to locate specific information quickly.

Contents in the textbook

The book's cover is quite appealing to the eye and grabs one's attention. The cover provides insights into what to expect when reading the book through intriguing key questions and colourful, meaningful images. The images and texts evoke a sense of curiosity in the reader's mind, prompting them to explore the content of the book further, as revealed on the cover page. Additionally, the images and texts on the cover page emphasise the inclusion of the 'BIG SIX' concepts stated by Peter Seixas when teaching history knowledge. A practical example of one of the images on the cover page is the clock, which symbolises 'time and chronology' as a concept in history education. The images on the cover page serve as a foundation for the numerous images and graphics within the book. However, it is uncertain whether the images can be viewed as historical evidence, whether they are primary or secondary sources, and the level of accuracy and reliability they possess. It can also be noted that the images' format, layout and design do not resemble one constructed within a South African context or perspective.

The book's contents focus on academic historical knowledge, such as 'defining history', which lays the foundation for the addition of new knowledge and enhances prior knowledge, providing the lens through which historical knowledge should be viewed. Furthermore, it also focuses on historical knowledge, including tools and resources for historians, which equips learners with skills to investigate proposed evidence and narratives within it, as well as how to utilise multiple sources effectively. The third chapter focused on different approaches in teaching history, which resembles a crucial stage in acquiring history knowledge. A of these approaches include social history, which explains the causes and meaning of historical events, compresses the history using timescales and makes comparisons. A history teacher must be flexible in using various methodologies to convey historical knowledge without diluting its significance. We aim to equip potential future history teachers with the ability to use different methods to teach history in a fun, engaging and meaningful manner. Using various approaches is beneficial, as it incorporates different learning styles and theories. Therefore, this chapter is informative for teaching, learning and professional development. Including content such as histories for whom, in Chapter Four, is interesting, as it creates a question of identity and whether the elaboration of this piece of content is relevant and significant within a South African history education context. One's position, given shape by the context of history, and how that position came about,

examining economic history, political history, women's history, and disability history. This aligns with the concept of change and continuity in the second-order perspective. The importance of this concept lies in reflecting on and examining the evolution of history and the possibilities of the future. The second-to-last chapter of the contents explores the significance and reasons for learning about historical events. Exploring the importance entails investigating the evidence of the time, who and what were involved, and how relevant it is to be examined in the current context, considering the construction of views on how history shapes one's thoughts and feelings. However, in this chapter, the historical icons investigated and the events they were involved in are predominantly focused on, as the study of Asia and Middle East history is referred to as 'Orientalism' in the book. This kind of content may seem far-fetched for use in a South African history classroom; however, it can help contextualise the relevance and importance of South African history. The images and textual elaborations on historical events, such as wars, are creative, as they effectively represent what the text mentions. The speech bubbles highlighting the animated characters make it easier to comprehend the information. The idea of including religion as part of the history of why, could have been more inclusive of other faiths, rather than focusing solely on Christianity, especially when teaching this content to a classroom with diverse cultures and religions. Learners might get the impression that one religion's principles and evolution are more critical than those of another, which limits the development of multi-perspectivity and historical thinking skills and reasoning.

The last chapter focuses on everyday history, which views history not just as an academic subject, but as an inescapable, everyday part of our lives. The authors compare different narratives on a singular aspect, which shows the power of history in its relatability to everyday life. An example from the book is George Washington, the United States' first president, being described as "a great general who secured America's independence from Britain" or "the owner of over a hundred enslaved people". Every day, history reminds us that everything currently in existence has been developed or created from somewhere. One of the interesting examples to show the practicality of everyday history is the image of a child climbing a tree. The question concerning this text is whether children have always liked climbing trees. This is an activity that children are exposed to daily, allowing them to interact with and have fun learning about history. The graphics in this chapter resemble the South African landscape to some extent, which can be an effective way to scaffold learners into everyday history. Exposure to everyday history is also described as fun, as previously mentioned. One can have fun with history in several ways, both consciously and subconsciously, through gaming, documentaries, historical monument objects such

as statues and field trips. The authors finish the contents with an intriguing open-ended question: Is there an end to history? This prompts the reader to revisit the definition of history and what constitutes it.

Conclusion

The educational book 'History for Beginners' is quite informative and has excellent, practical knowledge that one can use for teaching and learning history, as well as for professional development. The colourful images and simplified explanations in the texts make it engaging for learners. The content is not overwhelming for learners or individuals without prior knowledge of history. Although the book explores major themes such as history education, including colonialism, slavery, the Holocaust, and the Industrial Revolution, the content appears significantly limited in terms of its inclusion of South African history. It, therefore, creates a gap in maintaining a balanced level of knowledge acquisition of both local and international history in a South African history classroom. The authors also refer to the history of religions; however, the content on religion is selective and does not include other common faiths that might be important for making the classroom inclusive and promoting the development of historical thinking skills and multi-perspectivity.