

Exploring Teaching Perspectives Embraced by Teachers in Teaching Agricultural Sciences in Secondary Schools in South Africa



Nonhlanhla Fortunate Nduku¹ 

¹ University of the Free State, Department of Curriculum Studies, Phuthaditjhaba, South Africa.

ABSTRACT

The South African Curriculum Assessment Policy Statement (CAPS) document stipulates that in teaching Agricultural Sciences (AGRIS), teachers should cement their pedagogical practices in three aspects: knowledge, skill, and values/attitudes. The statement contends for the interwoven prescriptive (knowledge), communal (skills), and habitual (values/attitudes) perspectives, which are apropos of balancing three aspects of teaching AGRIS. The study, therefore, explored teachers' perspectives¹ when teaching AGRIS in secondary schools. The study was grounded in the Cultural Historical Activity Theory (CHAT), shaped by Vygotsky. From the critical paradigm, the study employed reflective activities, interviews, observations, and focus groups as data generation methods through action research. Six participants were purposefully selected to bring an in-depth understanding of the phenomenon. The findings exhibited that teachers embrace the prescriptive perspective when teaching AGRIS in secondary schools. On the one hand, teachers impart content knowledge during AGRIS teaching. On the other hand, the CAPS document is silent about how teachers should instill skills and values/attitudes in learners. It is recommended that the AGRIS curriculum developers amend the enactment of skills and values/attitudes driven by communal and habitual perspectives. Nonetheless, the researcher calls for aligning prescriptive, communal, and habitual perspectives for teachers to impart knowledge, skill, and values/attitudes successfully. This alignment may balance the quality of the AGRIS South African curriculum.

Correspondence

Nonhlanhla Fortunate Nduku
Email: NdukuNF@ufs.ac.za

Publication History

Received:
16th July, 2024
Accepted:
26th November, 2024
Published online:
20th December, 2024

Keywords: *Perspective, Prescriptive, Communal, Habitual*

INTRODUCTION

The workforce demands learners who are well-equipped with the subject matter knowledge, learning experiences, and crucial skills relevant to the job market.¹ This suggests that South African AGRIS teachers should intertwine the three aspects (knowledge, skill, and values/attitudes) when teaching AGRIS. The question, however, of how the three aspects are to be interlinked has been bedeviling teachers for years. Nonetheless, scholars like Lupion-Cobos, and Celik and Zehir Topkaya claim that any

¹ J Joey Blackburn, J Shane Robinson, and Harry Field, "Preservice Agriculture Teachers' Perceived Level of Readiness in an Agricultural Mechanics Course.," *Journal of Agricultural Education* 56, no. 1 (2015): 172–88.

curriculum is declared balanced when it incorporates all three aspects.² In contrast, the South African CAPS curriculum document is silent on how teachers should enact the two pivotal perspectives for teaching AGRIS: communal (skills) and habitual (attitudes) practices. Moreover, the curriculum rules and the policies of the prescriptive perspective (knowledge) arguably create an enigma regarding the curriculum concepts of AGRIS. The CAPS document discusses the South African AGRIS teachers' ability to expose learners to principles at a much-limited scale, which further creates room for scholarly discussions around this phenomenon.

Curriculum developers and the personnel responsible for policy development have short-sightedly discussed how teachers should enact the 'how' and the 'why' during the formation of the South African AGRIS CAPS.³ This is evident, even though not ostensibly so, in the scholarly work of Nkohla, which sought to explore reflections of AGRIS teachers on their practice as provided by CAPS.⁴ Nkohla's study concluded that teachers are oblivious to factors that frame their teaching practices and lack knowledge and understanding of the theories underpinning the AGRIS CAPS. On the other hand, Bantwini's scholarly work confirms the conundrums teachers face in enacting skills, values, and attitudes within CAPS, which are amongst many pedagogical and social knowledge.⁵

The latter suggests that teachers may fail to produce learners with adequate agricultural skills and values/attitudes. Therefore, the researcher suggests that teachers be capacitated to provide learners with pertinent content knowledge accompanied by learning experiences and practical knowledge by utilising prescriptive, habitual, and societal perspectives. Consequently, learners with competent knowledge, skills, and values/attitudes may be produced. Thus, the South African AGRIS curriculum seems unbalanced and inclined towards a prescriptive perspective. However, the communal and habitual perspectives are critical gaps in the South African AGRIS curriculum. As a result, the researcher concurs with the assertion that Curriculum development (prescriptive perspective) should be in connection with ideologies (habitual perspective) and must accommodate individual differences, including the pronouncements of teachers, learners, and stakeholders (communal perspective).

All three perspectives should promote the alignment between the curriculum concepts, such as goals, content, resources, assessment, teacher roles, teaching activities, and teaching environment. This has led to exploring the curriculum concepts teachers use in teaching AGRIS. The findings are presented subsequently.

LITERATURE REVIEW

Prescriptive perspective in Agricultural Sciences as a subject

The South African AGRIS curriculum is rooted in a prescriptive perspective. The AGRIS curricular delivery is one-sided, based on inculcating scientific knowledge into learners. It is characterised by rote learning, memorisation of facts, and reproducing knowledge during examinations.⁶ The researcher believes that teachers driven by a prescriptive perspective tend to lack practical dynamics of the subject. These teachers may produce learners with no practical skills in initiating and operating agricultural businesses for society upliftment. A significant concern is that a prescriptive perspective results in

² Teresa Lupión-Cobos, Jesús Ramón Girón-Gamero, and Cristina García-Ruiz, "Building STEM Inquiry-Based Teaching Proposal through Collaborations between Schools and Research Centres: Students' and Teachers' Perceptions.," 2022; Handan Çelik and Ece Zehir Topkaya, "Preservice English Teachers' Preparedness to Teach: Stakeholders' Perceptions in Teaching Practicum," *Journal of Teacher Education* 75, no. 1 (2024): 92–106.

³ L Le Grange, "Decolonising the University Curriculum," *South African Journal of Higher Education* 30, no. 2 (2016): 1–12; Yusef Waghid and Nuraan Davids, "Educational Leadership as Action: Towards an Opening of Rhythm," *South African Journal of Higher Education* 30, no. 1 (2016): 123–37; Lupión-Cobos, Girón-Gamero, and García-Ruiz, "Building STEM Inquiry-Based Teaching Proposal through Collaborations between Schools and Research Centres: Students' and Teachers' Perceptions.," Çelik and Zehir Topkaya, "Preservice English Teachers' Preparedness to Teach: Stakeholders' Perceptions in Teaching Practicum."

⁴ M. S. Nkohla, "Educators' Reflections on Their Practices of Agricultural Sciences Curriculum and Assessment Policy Statement." (University of KwaZulu-Natal, 2017).

⁵ Bongani D Bantwini, "Analysis of the State of Collaboration between Natural Science School District Officials and Primary School Science Teachers in South Africa," *Journal of Baltic Science Education* 14, no. 5 (2015): 586–98.

⁶ Brendon P Hyndman and Shane Pill, "The Influences on Teaching Perspectives of Australian Physical Education Teacher Education Students: The First-Year Influences on Teaching Perspectives Exploratory (FIT-PE) Study," *Australian Journal of Teacher Education (Online)* 41, no. 5 (2016): 99–118; Georgia Rotidi et al., "Using the Teaching Perspectives Inventory (TPI) to Examine the Relationship between Teaching Perspectives and Disciplines in Higher Education," *Journal of Further and Higher Education* 41, no. 5 (2017): 611–24.

teaching practice that does not integrate subject needs with existing learners' needs and reality. Nevertheless, it is within the researcher's belief that solely using this perspective in AGRIS cannot accomplish the necessary socio-economic transformation among communities for successful sustainable development with a concomitant decrease in poverty.

It is not teachers' fault that the AGRIS curriculum is intended and demands adherence to stipulated rules and regulations.⁷ However, it seems the South African AGRIS curriculum has been conceptualised without any structured needs analysis for South Africa. For instance, scholars argue that Curriculum development (prescriptive perspective) should be in connection with ideologies (habitual perspective) and must accommodate individual differences, including the pronouncements of teachers, learners, and stakeholders (communal perspective).⁸ Thus, it is unresponsive to socio-economic, physical, and environmental changes in the agricultural industry and is inappropriate for the country. Teachers cannot escape from a prescriptive perspective because AGRIS in South Africa is planned and controlled by a national education structure, and teachers are expected to implement it as is to meet the norms and standards stipulated at the national level. However, the significant concern is that the AGRIS curriculum emphasises what to teach (content knowledge) rather than how to teach (skills) and why teachers teach (values/attitudes), which poses challenges to the practice. Relying on a prescriptive perspective in teaching South African AGRIS results in a curriculum that fails to address the needs of the agriculture industry, which demands a combination of skills, knowledge, and practice.⁹ In today's world of work, the evolution of skills is required to balance the prescribed content knowledge. Entrepreneurs are expected to be paramount in developing the South African economy. Skills must be identified as essential complements to AGRIS content knowledge. The AGRIS curriculum should include other perspectives (communal and habitual) to meet the requirements of the agricultural industry and societies where learners inhabit.

Communal perspective in Agricultural Sciences as a subject

This perspective may aid AGRIS teachers in equipping learners with skills pertinent to balancing knowledge and practice. The researcher believes that the world of work and the community demands skills-knowledge-practice components to improve the country's economy. Customarily, indigenous knowledge dominated life rather than scientific knowledge during the olden days. In other words, people had the skills to farm crops and livestock and use herbs and indigenous knowledge to solve human, plant, and livestock problems. No medical doctors or veterinarians saw humans and livestock. They were not engulfed by poverty and hunger. Indigenous knowledge (communal perspective) in AGRIS practice should be respected and adhered to. The studies conducted by Mothwa emphasise Indigenous Knowledge (IK) 's role in teaching AGRIS.¹⁰ They argue that IK or cultural knowledge provides skills that elicit the understanding of scientific concepts. However, Mothwa conducted a study exploring teachers' experiences incorporating IK into their teaching.¹¹ The results showed that teachers possess inadequate pedagogical knowledge of infusing IK into their practice. For this reason, the researcher suggests including a communal perspective in the South African AGRIS curriculum.

The country's unemployment and population rates have increased; poverty and hunger follow. The researcher believes a well-structured AGRIS curriculum that accommodates/includes skills and how teachers should enact those skills may be a solution. The AGRIS content utilised for teaching has been accepted/implemented without sufficient contextualisation and modification to best suit local environments. For instance, the South African AGRIS curriculum seems as if it was designed without consulting and establishing farming communities that teachers may interact with to enrich their teaching

⁷ U Hoadley and J Jansen, *Curriculum: Organizing Knowledge for the Classroom* (OUP Southern Africa, 2009), https://books.google.com.gh/books?id=DX_9nQEACAAJ; Moraig Peden, "Education for Sustainable Agriculture: The Old and New Curricula for Agricultural Sciences in South African Schools," *Journal of Education*, no. 60 (2015): 63–100.

⁸ Simon Bheki Khoza, "Can Turnitin Come to the Rescue: From Teachers' Reflections?," *South African Journal of Education* 35, no. 4 (2015).

⁹ Blackburn, Robinson, and Field, "Preservice Agriculture Teachers' Perceived Level of Readiness in an Agricultural Mechanics Course."

¹⁰ Melida Modiane Mothwa, *Teachers' Experiences of Incorporating Indigenous Knowledge in the Life Sciences Classroom* (University of Johannesburg (South Africa), 2011).

¹¹ Mothwa, *Teachers' Experiences of Incorporating Indigenous Knowledge in the Life Sciences Classroom*.

process. The AGRIS current curriculum does not align with the literature articulating that the prescriptive, communal, and habitual perspectives should drive AGRIS teaching.¹² The AGRIS curriculum in South Africa is overly theoretical, and the Practical Assessment Task (PAT) is not considered. AGRIS is pivotal for economic evolution, food security, poverty alleviation, and social development.

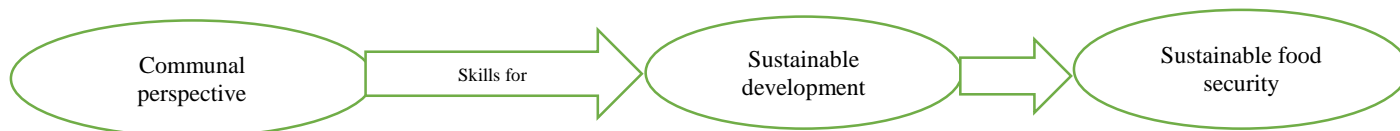


Figure 1: The significant role of a communal perspective

(The diagram explains how the communal perspective contributes to developing skills to ensure community development and food security).

Food security and National sustainability rely on effective Agricultural Sciences teaching and learning. Modebelu and Nwakpadolu conducted a study on effective Agricultural Sciences teaching and learning for food security and national stability.¹³ They recommend that the teaching of AGRIS develops learners' skills, exposes them to opportunities in agriculture, and prepares them for employment in agriculture. The achievement of these recommendations depends on teachers' pedagogical approaches, which can bring the quality impact of agricultural skills for learners' self-reliance.

During the researcher's years of teaching AGRIS, the researcher has observed that AGRIS learners who have completed their secondary school education lack the required practical skills to venture into basic agricultural practices, making it difficult for them to involve themselves in agricultural enterprises successfully. However, AGRIS, as a subject, can provide learners with an advantage in obtaining practical skills, leading to self-reliance and agripreneurship [people involved in agricultural businesses] after completing secondary school education. Nonetheless, the country misses out on entrepreneurs who can contribute profoundly to food security issues. For this to happen in schools, practical agricultural knowledge must be entrenched in the South African AGRIS curriculum. It is, therefore, imperative to infuse the communal perspective into the CAPS curriculum in South Africa to accommodate intensive and practical experiences that provide robust support to agricultural concepts taught within the classrooms. This aligns with what Baptista and Monolisa-Andraden aver that knowledge obtained by a learner without adequate structure to bind it together is the knowledge that a learner can easily forget.¹⁴ By contrast, practical aspects enable learners to transfer knowledge gained

¹² Kehdinga George Fomunyan, "Curriculum Theorizing and Individualism: An Exploration of the Curriculum's Relation to the Social, Personal and Political Dimensions of Schooling," *Mevlana International Journal of Education (MIJE)* 4, no. 2 (2014): 122–31; K. G. Fomunyan, "The Ideological Ware as Key to Improve Learner Performance," *Journal of Education* 16, no. 1 (2017): 108–25; Simon Bhekumuzi Khoza, "Lecturers' Reflections on Curricular Spider Web Concepts as Transformation Strategies," in *Transformation of Higher Education Institutions in Post-Apartheid South Africa* (Routledge, 2019), 15–26; Cedric Bheki Mpungose, "Exploring Lecturers' Reflections on the Use of Moodle to Teach Physical Science Modules at a South African University" (2017); Cedric B. Mpungose, "Is Moodle a Platform to Decolonise the University Curriculum? Lecturers' Reflections," *Africa Education Review* 17, no. 1 (January 2, 2020): 100–115, <https://doi.org/10.1080/18146627.2018.1479645>; C. Mpungose, "Digital Divide in Rural South African Schools: An Empirical Study," *South African Journal of Education*, 2020; Simon Bheki Khoza and Audrey Thabile Biyela, "Decolonising Technological Pedagogical Content Knowledge of First Year Mathematics Students," *Education and Information Technologies* 25, no. 4 (July 18, 2020): 2665–79, <https://doi.org/10.1007/s10639-019-10084-4>; Geilsa Costa Santos Baptista and Adela Molina-Andrade, "Science Teachers' Conceptions about the Importance of Teaching and How to Teach Western Science to Students from Traditional Communities," *Human Arenas* 6, no. 4 (2023): 704–31; Çelik and Zehir Topkaya, "Preservice English Teachers' Preparedness to Teach: Stakeholders' Perceptions in Teaching Practicum."

¹³ M N Modebelu and G M Nwakpadolu, "Effective Teaching and Learning of Agricultural Science for Food Security and National Sustainability," *Journal of Educational and Social Research* 3, no. 4 (2013): 161–70.

¹⁴ Baptista and Molina-Andrade, "Science Teachers' Conceptions about the Importance of Teaching and How to Teach Western Science to Students from Traditional Communities."

from theory to real-world situations.¹⁵ As such, integrating the communal perspective can make the AGRIS curriculum more efficient while improving the skills of agriculture learners in South Africa.

Habitual perspective in Agricultural Sciences as a subject

The researcher believes that teaching without developing interest results in futility. For instance, teaching learners how to grow a tree is inadequate without teaching the value of a tree. Incomplete teaching would fail to develop learners' interest in growing trees. This is attested to by those who posit that interest/attitude is a fundamental factor in a person's intent to perform a specific performance and behaviour. During the apartheid regime, agriculture was perceived as a punishment subject. Even nowadays, learners perceive agriculture as a non-valuable subject meant for people who wear gumboots and overalls.¹⁶ The study revealed that learners had a negative attitude towards AGRIS. Jamil et.al., argue that AGRIS teachers cause negative attitudes towards AGRIS by failing to develop learners' interest in the subject. However, teachers driven by a habitual perspective can remedy the situation by developing learners' interest in the subject and are capable of developing learners' critical thinking Jamil et al.¹⁷ Exploring the perspectives embraced by teachers in teaching AGRIS revealed the gaps in the South African AGRIS curriculum.

Furthermore, in South Africa, scholars have conducted various studies on how curriculum developers should balance the curriculum in higher institutions.¹⁸ For instance, they emphasise that education should embed vertical, horizontal, and diagonal knowledge. This emphasis emanates from their notion that three aspects (knowledge, skills, and values/attitudes/interests) should always drive teaching practice. However, the researchers argue that effectively inculcating and disseminating all three aspects requires integrating prescriptive, communal, and habitual perspectives. The researcher has not come across studies on how AGRIS teachers should impart knowledge, skills, values/attitudes in their classrooms (a gap). The researcher contends that this study may bridge this gap by bringing in factors underpinning AGRIS, grounded by a prescriptive, communal, and habitual perspective.

The SA AGRIS Curriculum Gaps

The gaps in the AGRIS curriculum arise from various stages of curriculum design and development. There seems to be no connection between colleges/universities offering agricultural education, the Department of Education, school governing bodies (SGBs), and industries. AGRIS teachers provide a curriculum that does not teach learners for life, a curriculum that does not prepare learners for employment. This shows a lack of collaboration with relevant stakeholders to ameliorate the plight of affected stakeholders. This is attested to by Biswas et.al., who note that researchers should focus on various reforms in agricultural education.¹⁹ Curriculum developers should develop the AGRIS curriculum in collaboration with the agricultural industry and government educational agencies. There appears to be a curriculum gap in schools' agricultural curriculum development and practice. Nonetheless, AGRIS lacks appropriate sources of information about the workforce or real-life job demands in the framework of globalisation. This article may assist in bringing about a balanced curriculum to address the needs of the current curriculum and meet industry needs while enhancing self-

¹⁵ Nicole Garner, Antje Siol, and Ingo Eilks, "The Potential of Non-Formal Laboratory Environments for Innovating the Chemistry Curriculum and Promoting Secondary School Level Students Education for Sustainability," *Sustainability* 7, no. 2 (2015): 1798–1818; Ronald G Pourdavood, "Perspectives on Teaching Mathematics and Science in Historical and Cultural Contexts.," *North American Chapter of the International Group for the Psychology of Mathematics Education*, 2016.

¹⁶ Nqobile Faith Dlamini, "Factors influencing the choice of Agriculture as a study discipline by undergraduates: A case study of a distance university's Agriculture Department." *Unpublished Thesis, University of South Africa* (2017).

¹⁷ Muhammad Jamil, Maria Anwar, and Muhammad Jafar Ali, "Developing Critical Thinking Skills In English Classrooms At The Secondary Level: Teachers' perspective," *Journal of Social Sciences Development* 3, no. 1 (2024): 76–85.

¹⁸ Simon Bheki Khoza, "Master of Education Students' Reflections: Which Curriculum Reasons Are Promoted or Limited by Skype Resources?," *Progressio* 39, no. 2 (2017): 19-pages; Khoza, "Lecturers' Reflections on Curricular Spider Web Concepts as Transformation Strategies"; Khoza and Biyela, "Decolonising Technological Pedagogical Content Knowledge of First Year Mathematics Students"; Mpungose, "Exploring Lecturers' Reflections on the Use of Moodle to Teach Physical Science Modules at a South African University"; Mpungose, "Is Moodle a Platform to Decolonise the University Curriculum? Lecturers' Reflections"; Mpungose, "Digital Divide in Rural South African Schools: An Empirical Study."

¹⁹ Nupur Biswas, Kalyan Ghadei, and Nirupam Biswas, "Perception of Students and Teachers towards Reforms on Agricultural Education Subject Matter," *Journal of Pharmacognosy and Phytochemistry* 9, no. 2 (2020): 322–25.

employment. The dynamics of the gaps displayed by the South African CAPS curriculum are depicted in Figure 2 below.

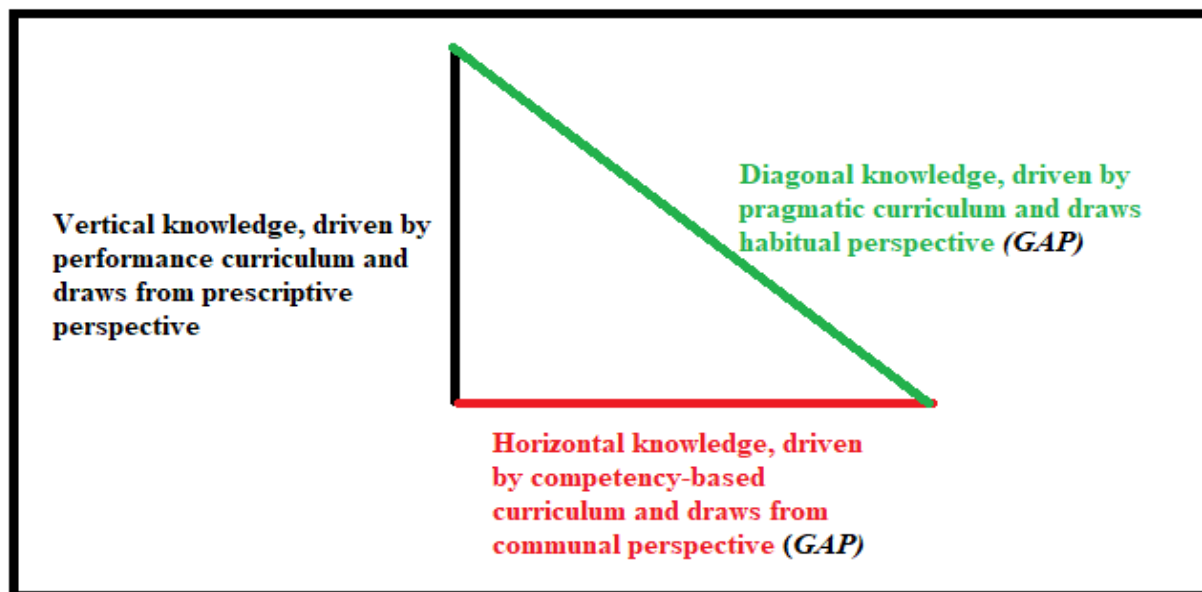


Figure 2: Gap in the SA AGRIS CAPS curriculum adapted from (Khoza, 2019)

The diagram denotes the gap between the South African AGRIS curriculum and the South African AGRIS curriculum. The prescriptive curriculum drives the GRIS curriculum and capacitates learners with adequate knowledge while neglecting the development of skills and values/attitudes'

The diagram signifies that the SA AGRIS curriculum is rooted in a performance-based curriculum in which vertical knowledge dominates from a prescriptive perspective. By contrast, the competency-based (horizontal knowledge) and pragmatic-based curriculum (diagonal knowledge) are neglected. The current AGRIS curriculum in South Africa produces learners with knowledge (prescriptive perspective) that may never be utilised in the workforce because it is devoid of attitudes (habitual perspective) and skills (communal perspective). For this reason, teachers need to discuss each perspective to understand the effect of the gaps in the South African AGRIS curriculum.

THEORETICAL FRAMEWORKS

CHAT interrogates teachers' instructional activity by defining *subjects* (Agricultural Sciences teachers). *Objects* (the focus of the learning activities). *Mediating tools* (lesson plans, lesson objectives, instructional activities, teaching resources). *Division of labour* (what teachers and learners do during teaching and learning). *Community* (curriculum developers, Subject Specialists, teachers, and other stakeholders) should be involved in forming *rules*, which is the CAPS document in this study. This theory is instrumental in analysing complications of instructional procedures by considering: the teachers' role before, during, and after teaching and learning; tools teachers employ before, during, and after teaching and learning; plan of teaching activities; and learners' involvement during learning activities. Teachers are the leaders during instruction as they share their discernment of instructional content with learners and plan activities that elicit learners' thinking. However, teachers should not neglect learners' contributions, as they co-construct knowledge within social, cultural, and historical dimensions. Furthermore, CHAT is a profound theory that emphasises that tools mediate people's goal-oriented actions and are shaped by the sociocultural norms, rules, and division of labour within a community. This suggests that effective instruction is influenced by teachers' actions informed by their goals, tools, the rules and roles of the community, and the community members' actions. Therefore, there is a need for teachers to comprehend the interrelationship between socially available (communal), personally accessible (habitual), and professional development (prescriptive). CHAT may provide a lens for

understanding perspectives embraced by teachers when teaching Agricultural Sciences in schools. According to CHAT, certain concepts should underpin each perspective to ensure effective teaching and learning. This suggests a study exploring teachers' use of curriculum concepts underpinning a prescriptive perspective.

METHODOLOGY

This study employed a critical paradigm and sourced qualitative data to generate teachers' perspectives. Critical paradigm aims to explore, critique, and bring about transformations, thereby freeing participants from habits that oppress them within their settings. In other words, this paradigm can interrogate teachers' perspectives (phenomenon) in effecting change in AGRIS practice. This paradigm may transform how AGRIS teachers view the curriculum and thus take informed action to improve society.

Purposive and convenience sampling methods were used to select the six most familiar participants who were available and accessible to contribute rich information on teachers' perspectives. Reflective activity, one-on-one semi-structured interviews, observation, and focus group discussions were the study's data generation methods to discern teachers' perspectives in-depth. The six selected participants addressed one research question of the study: What are the perspectives teachers embrace when teaching agricultural sciences in schools? Trustworthiness was addressed with credibility, confirmability, dependability, and transferability. The limitation of the study was the commencement of quarterly exams, which compelled the study to change how the data-generation methods were to be conducted. Zoom meetings and Skype platforms were employed, though some participants were digital immigrants. The researcher selected participants with over three years of experience teaching Grade 10-12 AGRIS in secondary schools within three districts. Most participants were digital immigrants; thus, using digital platforms contributed to teachers' transformation and practice improvement. The study utilised Thematic Analysis (TA) to look for themes that develop from the significant description of teachers' perspectives.

PRESENTATION OF FINDINGS

The findings below directly answer the following research questions: What perspectives do teachers embrace when teaching agricultural sciences in schools?

Phase One

Hloni: *"I have had a passion for agricultural sciences since high school. I enjoy the subject and want learners to be entrepreneurs. I'm very much acquainted with the curriculum itself.....Yeah.....that makes me produce passing learners."*

Saneh: *".....I never wanted to be a teacher. I did Agric at Mangosuthu Technicon because I wanted to work for Agri Industry..... [However], due to lack of labour, I decided to do PGCE.....I teach according to ATP..... Now I am a good teacher whom ATP and CAPS document guide."*

Tumelo: *"..... I combine information from textbooks and learners to come up with something solid. Because of my love for this subject, I decided [to] be an Agric teacher to provide learners with all relevant information about Agric careers. Beyond that, I wanted to equip learners to become better citizens capacitated with knowledge."*

Njinji: *".....I decided that when I grow up, I want to be an Agric teacher because I wanted to instill a love for Agric in learners so that they can survive in their communities. I teach Agric because it plays a major role in the life of all the people; they can't live without it."*

Phase Two

Popi: *"I have passion for this subject because it is from it that we can guarantee our food security and growing economy. I love Agric very much; this love was instilled by my family a long time ago..... In the way that I have a better understanding of plants and animal life. Truly speaking, it is not easy as a*

teacher to fulfill your aims in AGRIS because you must ensure that you complete all the topics listed in the CAPS document and ATP for learners to pass their exams.”

Ralph: *“I teach Agric to increase job opportunities for learners and encourage them to practice subsistence farming so that the Gross Domestic Product (GDP) will sustain the [country’s food security] I have a passion [for] it. As a result, I want to motivate my learners to have an interest and love for it. I want to ensure they show interest in the subject and pursue any career involving Agric. But there is no time to provide practical skills because there is a CAPS document and ATP that I must always follow.”*

Hloni: *“I am qualified to teach Agriculture, and [much] experience enables me to understand the content very well. I enjoy teaching Agric because I’ve been teaching it for a long time..... I’m aware of its content, although it is too muchto much as it is, I always use the ATP and the CAPS document like my bible.”*

Saneh: *“PGCE assisted me in understanding and using teaching methods. I teach Agric to assist learners in passing. Though I was not happy to become an Agric teacher, now I enjoy it.”*

Tumelo: *“I love and enjoy teaching Agric because it provides life to everyone. Teaching Agric makes me happy because I am helping learners to understand the importance of Agric in life. I teach this subject because I want my learners to pass it with flying colours yearly”.*

Njinji: *“I always teach this subject to assist learners to [in giving] back to their communities by practicing to their fullest, and I am a qualified teacher with experience. I am teaching Agric because I want learners to understand that Agric provides food for their communities. Therefore, they need skills that can enable them to practice it in their communities. I teach my learners in order for them to give back to their communities, but the information that I read from the documents sent to us clearly states that the use of set policies, textbooks, and CAPS documents addresses the needs of the subject..... Guys, it looks like the department should assist us more with our teaching.”*

Participants exhibited a passion for the subject in both phases and good intentions of seeing learners contributing to their societies. However, they are oblivious to how and when to assist learners in acquiring values and skills. AGRIS is driven by standardised guidelines (prescriptive perspective). This aligns with teachers’ responses that they must adhere to the CAPS document and the ATP for learners to pass. As a result, teachers ignored their passion and community involvement, being only conscious that AGRIS requires them to follow set policies. This was evident during classroom observations; all participants introduced their lessons by asking questions based on the previous content and used the lecture method during their teaching. Some provided learners with questions seeking learners to recapitulate knowledge taught during the previous lesson. Some teachers used activities from learners’ textbooks to determine whether they understood the content. This suggests that the teaching of AGRIS is rooted in the prescriptive perspective; thus, qualified teachers must place the subject's needs at the centre of teaching to cascade vertical knowledge. The study's findings on exploring the perspectives teachers embrace when teaching AGRIS in secondary schools showed that AGRIS teachers used the prescriptive perspective (knowledge) during their practice and lacked knowledge on how to enact communal (skills) and habitual values/interests.

DISCUSSION

The findings from the data generated indicated that the impetus for teaching AGRIS draws from a prescriptive perspective. Habitual and communal rationale prevailed among some teachers but did not influence the decisions made during the teaching of AGRIS. During the teaching of AGRIS, teachers followed the annual teaching plan (ATP) and AGRIS CAPS document to the latter; thus, teaching

considered the subject's needs.²⁰ Textbooks and previous provincial and national question papers followed this.²¹ It is like the prescriptive perspective that teachers place professional experiences at the centre of teaching. Teachers are responsible for developing learners' cognition through vertical knowledge.²² The use of prescribed documents and textbooks promotes a vertical discourse, which involves conceptual teaching (specific concepts) and objectivity (specific language and grammar).²³ This suggests that teachers should be qualified and proficient in the subject.

The subject known as AGRIS is driven by a prescriptive perspective, which requires teachers to adhere to the professional dynamics of teaching. Teachers place the subject's needs at the core, using the performance-based curriculum as the systematic structure.²⁴ The performance-based curriculum prioritises examinations and tests of content knowledge while accentuating the specific standards for achievement.²⁵ Teachers act as mere technicians to cascade planned content knowledge.²⁶ The performance-based curriculum generates the prescriptive perspective to enhance knowledge and planned content rather than to develop comprehension and critical thinking. Teachers caught up in this perspective make vigorous efforts to inculcate knowledge, coercing learners to pass with good grades. These teachers may be producing learners who have impractical knowledge, causing them to remain dependent for life. For instance, teachers may produce learners dependent on being employed who cannot establish their businesses due to a lack of application skills. Learners may know that livestock is categorised into ruminants and non-ruminants. Learners may know how to feed ruminants, but not know the value of livestock and the relevant skills that encourage independence. Such learners may come to rely on industries for employment. The prescriptive perspective tends to disempower teachers, as they must disregard learners' and social needs and adhere to subject needs.

RECOMMENDATIONS

Curriculum developers are recommended to review the AGRIS curriculum. For instance, the curriculum design should involve teachers, learners, and external stakeholders such as farmers, agro-industry, businesspersons, government, and civil society. In the same light, the reviewed curriculum should emphasise the importance of entrepreneurial skills, including real-life experiences, in designing and operating a profitable enterprise. This would prepare learners for careers in the private sector, particularly as independent entrepreneurs. AGRIS teachers should possess solid practical experience that is critical to developing confidence, which would assist learners in thinking critically about solving problems they may encounter in the workforce. The Department of Education should ensure that AGRIS teachers are life-long researchers capable of acquiring new information. Life-long researchers would produce learners with strong leadership and strong interpersonal and communication skills, capable of effective utilisation of international business language and information technology.

CONCLUSION

The study has documented teachers' perspectives on teaching AGRIS in South African secondary education. The study revealed that, per the South African AGRIS CAPS curriculum developers' intentions, the teaching of AGRIS should be ubiquitous across the three fundamental aspects (i.e. content knowledge, skills, and values/attitudes). The secondary schools' AGRIS curricular delivery should not be solely based on teaching content knowledge. It should incorporate teachers' and learners' experiences and knowledge from the societies where learners are situated. The study, within the context of the present

²⁰ Hyndman and Pill. "The Influences on Teaching Perspectives of Australian Physical Education Teacher Education Students."

²¹ Peden, "Education for Sustainable Agriculture: The Old and New Curricula for Agricultural Sciences in South African Schools,"

²² J. Berkvens, J. van den Akker, and M. Brugman, Addressing the quality challenge: Reflections on the post-2015 UNESCO education agenda. *Netherlands National Commission for UNESCO* (2014).

²³ Hoadley and Jansen, *Curriculum: Organizing Knowledge for the Classroom*; J. Hoadley, and J. Muller, *J. Codes, pedagogy and knowledge Advances in Bernstein sociology of education: Routledge*. (2009).

²⁴ L. Czerniewicz, and C. Brown, "The habitus and technological practices of rural students: a case study." *South African Journal of Education*, 34(1), (2014); 1-14.

²⁵ Hyndman and Pill, "The Influences on Teaching Perspectives of Australian Physical Education Teacher Education Students: The First-Year Influences on Teaching Perspectives Exploratory (FIT-PE) Study"; Hoadley and Jansen, *Curriculum: Organizing Knowledge for the Classroom*.

²⁶ Peden, "Education for Sustainable Agriculture: The Old and New Curricula for Agricultural Sciences in South African Schools."

intellectual piece, argues that communal and habitual perspectives are fundamental, and worthy of action, particularly as far as the process of addressing the skills and values/attitudes needed to produce competent learners is concerned.

BIBLIOGRAPHY

- Bantwini, Bongani D. "Analysis of the State of Collaboration between Natural Science School District Officials and Primary School Science Teachers in South Africa." *Journal of Baltic Science Education* 14, no. 5 (2015): 586–98.
- Baptista, Geilsa Costa Santos, and Adela Molina-Andrade. "Science Teachers' Conceptions about the Importance of Teaching and How to Teach Western Science to Students from Traditional Communities." *Human Arenas* 6, no. 4 (2023): 704–31.
- Berkvens, J., van den Akker, J., & Brugman, M. Addressing the quality challenge: Reflections on the post-2015 UNESCO education agenda. *Netherlands National Commission for UNESCO*(2014).
- Biswas, Nupur, Kalyan Ghadei, and Nirupam Biswas. "Perception of Students and Teachers towards Reforms on Agricultural Education Subject Matter." *Journal of Pharmacognosy and Phytochemistry* 9, no. 2 (2020): 322–25.
- Blackburn, J Joey, J Shane Robinson, and Harry Field. "Preservice Agriculture Teachers' Perceived Level of Readiness in an Agricultural Mechanics Course." *Journal of Agricultural Education* 56, no. 1 (2015): 172–88.
- Çelik, Handan, and Ece Zehir Topkaya. "Preservice English Teachers' Preparedness to Teach: Stakeholders' Perceptions in Teaching Practicum." *Journal of Teacher Education* 75, no. 1 (2024): 92–106.
- Czerniewicz, L., & Brown, C. "The habitus and technological practices of rural students: a case study." *South African Journal of Education*, 34(1), (2014).1-14.
- Dlamini, Nqobile Faith. "Factors influencing the choice of Agriculture as a study discipline by undergraduates: A case study of a distance university's Agriculture Department." *Unpublished Thesis, University of South Africa* (2017).
- Fomunyan, Kehdinga George. "Curriculum Theorizing and Individualism: An Exploration of the Curriculum's Relation to the Social, Personal and Political Dimensions of Schooling." *Mevlana International Journal of Education (MIJE)* 4, no. 2 (2014): 122–31.
- Fomunyan, K. G. "The Ideological Ware as Key to Improve Learner Performance." *Journal of Education* 16, no. 1 (2017): 108–25.
- Garner, Nicole, Antje Siol, and Ingo Eilks. "The Potential of Non-Formal Laboratory Environments for Innovating the Chemistry Curriculum and Promoting Secondary School Level Students Education for Sustainability." *Sustainability* 7, no. 2 (2015): 1798–1818.
- Grange, L Le. "Decolonising the University Curriculum." *South African Journal of Higher Education* 30, no. 2 (2016): 1–12.
- Hoadley, U, and J Jansen. *Curriculum: Organizing Knowledge for the Classroom*. OUP Southern Africa, 2009. https://books.google.com.gh/books?id=DX_9nQEACAAJ.
- Hoadley, & Muller, J. *Codes, pedagogy and knowledge Advances in Bernstein sociology of education*: Routledge. (2009).
- Hyndman, Brendon P, and Shane Pill. "The Influences on Teaching Perspectives of Australian Physical Education Teacher Education Students: The First-Year Influences on Teaching Perspectives Exploratory (FIT-PE) Study." *Australian Journal of Teacher Education (Online)* 41, no. 5 (2016): 99–118.
- Jamil, Muhammad, Maria Anwar, and Muhammad Jafar Ali. "Developing Critical Thinking Skills In English Classrooms At The Secondary Level: Teachers'perspective." *Journal of Social Sciences Development* 3, no. 1 (2024): 76–85.
- Khoza, Simon Bheki. "Can Turnitin Come to the Rescue: From Teachers' Reflections?" *South African Journal of Education* 35, no. 4 (2015).
- . "Master of Education Students' Reflections: Which Curriculum Reasons Are Promoted or Limited by Skype Resources?" *Progressio* 39, no. 2 (2017): 19-pages.

- Khoza, Simon Bheki, and Audrey Thabile Biyela. "Decolonising Technological Pedagogical Content Knowledge of First Year Mathematics Students." *Education and Information Technologies* 25, no. 4 (July 18, 2020): 2665–79. <https://doi.org/10.1007/s10639-019-10084-4>.
- Khoza, Simon Bhekimuzi. "Lecturers' Reflections on Curricular Spider Web Concepts as Transformation Strategies." In *Transformation of Higher Education Institutions in Post-Apartheid South Africa*, 15–26. Routledge, 2019.
- Khoza, S. B. "Student teachers' reflections on their practices of Curriculum and Assessment Policy Statement." *South African Journal of Higher Education*, 29(4), (2015b). 179-197.
- Khoza, S. B. "Can curriculum managers' reflections produce new strategies through Moodle visions and resources?" *South African Journal of Education*, 36(4), (2016a). 1- 9.
- Khoza, S. B. "Is Teaching without Understanding Curriculum Visions and Goals a High Risk?" *South African Journal of Higher Education*, 30(5), (2016b). 104-119.
- Lupi3n-Cobos, Teresa, Jes3s Ram3n Gir3n-Gambero, and Cristina Garc3a-Ruiz. "Building STEM Inquiry-Based Teaching Proposal through Collaborations between Schools and Research Centres: Students' and Teachers' Perceptions.," 2022.
- Modebelu, M N, and G M Nwakpadolu. "Effective Teaching and Learning of Agricultural Science for Food Security and National Sustainability." *Journal of Educational and Social Research* 3, no. 4 (2013): 161–70.
- Mothwa, Melida Modiane. *Teachers' Experiences of Incorporating Indigenous Knowledge in the Life Sciences Classroom*. University of Johannesburg (South Africa), 2011.
- Mpungose, C. "Digital Divide in Rural South African Schools: An Empirical Study." *South African Journal of Education.*, 2020.
- Mpungose, Cedric B. "Is Moodle a Platform to Decolonise the University Curriculum? Lecturers' Reflections." *Africa Education Review* 17, no. 1 (January 2, 2020): 100–115. <https://doi.org/10.1080/18146627.2018.1479645>.
- Mpungose, Cedric Bheki. "Exploring Lecturers' Reflections on the Use of Moodle to Teach Physical Science Modules at a South African University," 2017.
- Nkohla, M. S. "Educators' Reflections on Their Practices of Agricultural Sciences Curriculum and Assessment Policy Statement. ." University of KwaZulu-Natal, 2017.
- Peden, Moraig. "Education for Sustainable Agriculture: The Old and New Curricula for Agricultural Sciences in South African Schools." *Journal of Education*, no. 60 (2015): 63–100.
- Pourdavood, Ronald G. "Perspectives on Teaching Mathematics and Science in Historical and Cultural Contexts." *North American Chapter of the International Group for the Psychology of Mathematics Education*, 2016.
- Rotidi, Georgia, John B Collins, Thanassis Karalis, and Konstantinos Lavidas. "Using the Teaching Perspectives Inventory (TPI) to Examine the Relationship between Teaching Perspectives and Disciplines in Higher Education." *Journal of Further and Higher Education* 41, no. 5 (2017): 611–24.
- Waghid, Yusef, and Nuraan Davids. "Educational Leadership as Action: Towards an Opening of Rhythm." *South African Journal of Higher Education* 30, no. 1 (2016): 123–37.

ABOUT AUTHOR

Dr Nonhlanhla Nduku is a lecturer at the University of the Free State, South Africa. Her research interests lie within the teaching and learning of Agricultural Sciences. She also explores the role of professional teacher development in Agricultural Sciences' pedagogical practices in the Further Education and Training phase.