

# The use of isiZulu language as the strategy towards developing numerical literacy in correctional centre classrooms

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## ABSTRACT

Education is used to complete the offender education program. Offender formal education has been discussed at a generic lens, without focusing on the role played by each learning area in the rehabilitation process. Languages used in the learning, teaching and assessment of offenders has also been overlooked. In this paper, researchers sought to examine the teaching, learning and assessment of numerical literacy and the impact thereof of using isiZulu language in correctional centre classrooms. From the pragmatic epistemological stance, researchers collected qualitative and quantitative data through pre-tests, post-tests and semi-structured interviews. The study was framed within the QUANT-QUAL

explanatory sequential mixed-methods design. The Andragogic theory was used to underpin the study. The findings revealed the statistically significant impact of isiZulu in the development of numerical literacy. Researchers discovered the role of isiZulu language in the development of mathematics understanding. IsiZulu language was further distinguished as the tool towards the decolonization of mathematics curriculum in correctional centre classrooms. Finally, researchers propose the use of learners' Home Language in adult correctional centre classrooms.

**Keywords:** quantitative literacy, correctional centre classrooms, isiZulu, language of learning and teaching

## CITATION

Mbatha, S., Khohliso, X., & Nsele, S. (2025). Ukusetshenziswa kolimi lwesiZulu njengesu lokuthuthukisa ulwazi lokubala kunzikandaweni wemfundo yasezikhungweni zokuhlunyeleliswa kwezimilo. *Journal for Language Teaching*, 59(1), Article 6660. <https://doi.org/10.56285/jltVol59iss1a6660>

# Ukusetshenziswa kolimi lwesiZulu njengesu lokuthuthukisa ulwazi lokubala kunzikandaweni wemfundo yasezikhungweni zokuhlunyeleliswa kwezimilo

## IQOQA

Imfundo isetshenziswa ukuphelelisa ukuhlunyeleliswa kwezimilo. Imfundo yeziboshwa iye yadingidwa akwangahlolisiswa iqhaza elibanjwa isifundo ngasinye ekuhlumeleliseni izimilo. Nolimi olusetshenziswa lapho kufundwa, kufundiswa noma kuhlolwa iziboshwa luye lwashaywa indiva. Kuleli phepha, abacwaningi bebehlolela umthelela wokusetshenziswa kolimi lwesiZulu lapho kufundwa, kufundiswa futhi kuhlolwa izibalo ezikhungweni zokuhlunyeleliswa kwezimilo. Kusetshenziswe indlelakubuka yokubheka ukwenzeka kwesenzeko simbe. Kuqoqwe ulwazi lobunjalo botho nolobungako botho ngamathuluzi amathathu; isivivinyo sangaphambi kocwaningo, isivivinyo sangemva kocwaningo kanye nenhlolovo esakuhleleka. Lo msebenzi uye wamiswa ngokomdwebomumo wocwaningo oluxube ubungako botho nobunjalo botho, kuqaliswa ngolwazi lobungako botho, kulandeliswa ngolwazi lobunjalo botho. Insizakuhlaziya ebheka isu lokufundiswa kwabantu abadala iye yasetshenziswa lapho kuhlaziywa ulwazi oluveze ukuthi ulimi lwesiZulu luthuthukisa ulwazi lokubala ngobungako obucacile uma luqhathaniswa nesiNgisi. Kuhlaluke iqhaza elidlalwa ulimi lwesiZulu ekuthuthukiseni ulwazi lokubala. Ulimi lwesiZulu luphinde lwahlonzwa njengethuluzi elinqanda ukuqonolwa kohlelo lwesifundo sezibalo. Abacwaningi baphakamisa ukusetshenziswa koLimi lwaseKhaya njengoLimi lokuFunda nokuFundisa konzikandaweni bokufundela ezikhungweni zokuhlunyeleliswa kwezimilo.

**Amagama anqala:** Ulwazi lokubala, izikhungo sokuhlunyeleliswa kwezimilo, isiZulu njengolimi lokuFunda nokuFundisa.

## 1. Isingeniso

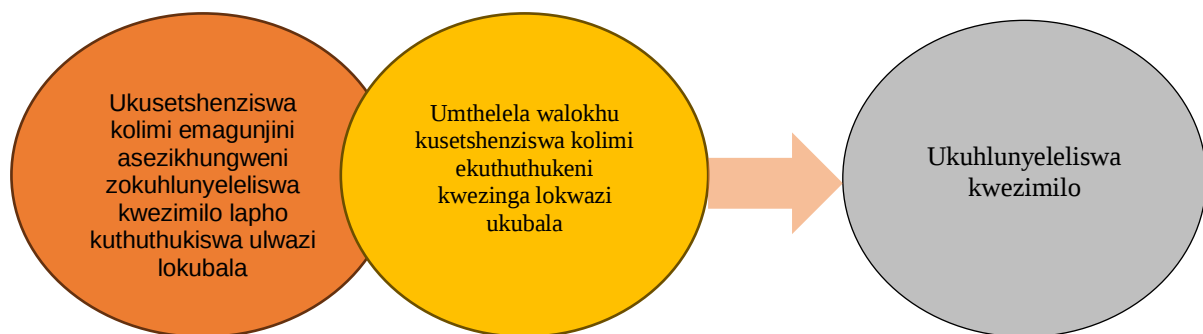
Izinga lolwazi lokubala selibe yisizinda semiqakuliswano eminingi egxile emfundweni eyisisekelo. Isibonelo, oSpaull noKotze (2015) baveza ukuthi bangamaphesenti ayishumi nesithupha kuphela abafundi bebanga lesithathu abanezinga lokubala elifanelekile ngokwaleli banga. Ngakolunye uhlangothi, uVenkat (2016) udalula ukuthi izinga lolwazi lokubala labafundi baseNingizimu Afrika liphansi ngegebe-kuqhelelana (*standard deviation*) elingaphansana kwelilodwa, uma liqhathaniswa nelabafundi bakwamanye amazwe. Nocwaningo olwendlelekile lwe*Trends in Mathematics and Science Study* lwangowezi-2019 oludingidwa nguGuhn nabanye (2024) luhlalukisa ukuthi iNingizimu Afrika isemsileni ngamaphesenti angama-31

ngokwezinga lokwazi ukubala uma iqhathaniswa namazwe asentshonalanga. Noma imiqakuliswano eyethulwa yilolu cwaningo ingeqhathanisa izinga lokubala nenkimbinkimbi yokwehluka kwamazinga ezomnotho phakathi kwezwe laseNingizimu Afrika nakwamanye amazwe, kusemqoka ukudingida izinga lolwazi lokubala ngokubheka eminye iminxa engaba nomthelela (ngandlela thize) kulona, okungaba ulimi olusetshenziswa lapho kufundiswa ukubala, inzikandaweni lapho ukufunda nokufundiswa kokubala kwenzeka khona kanye neminyaka yabahlanganyeli abasuke bekhethiwe kulolo cwaningo. Yingakho-ke leli phepha liye laphokophela ukubheka ukufundwa nokufundiswa kolwazi lokubala (a) ngolimi lwesiZulu, (b) kunzikandaweni wamagumbi okufundela asezikhungweni zokuhlunyeleliswa kwezimilo, (c) emfundweni ehlose ukuthuthukisa ulwazi lweziboshwa ezindlala ngokweminyaka. Ucwangingo olufuze lolu olwethulwa kulo msebenzi, ngokombono wabacwaningi, luyingqayizivele ngoba luthinta iminxa ebalulekile; okuwulimi nomthelela walo ekufundweni nasekufundisweni kweziboshwa. Okusempeleni, lumbalwa ucwaningo olubheka umunxa wokufundwa nokufundiswa kwezibalo ezikhungweni zokuhlunyeleliswa kwezimilo, ikakhulu ngoba imfundo yabathile “abavalelekile” ingazimele ngokwayo, kodwa ikhonze ngaphansi komthetho, ukulungiswa kwezimilo, ukuncishiswa kobugebengu, inhlalo yomphakathi kanye nenhlosomfezo kahulumeni yokubuye adidiyele labo abavalelwe emphakathini abaphuma kuyona (Mokoele, 2018; Vandala, 2019). Ngalezi zizathu ezibalwe ngenhla, kuyaye kube wumqansa ukuthatha igxathu lokucwaninga ngemfundo yeziboshwa, ikakhulu ethinta ulwazi lwazo lokubala. Noma-ke kungelula ukucwaninga ngemfundo yeziboshwa, kodwa kungeshalazelle ukuthi lolu hlobo locwaningo luyadingeka, futhi lungaba namagalelo angapheleli emfundweni, kodwa enabela ekulungisweni kwezimilo nasekudalekeni kwamathuba emisebenzi, ngoba, injongo yokufundiswa kwezibalo ezikhungweni zemfundo ephakeme ukuhlelemba iziboshwa, ukuze zilungele ukudidiyelwa emphakathini, futhi zibambe iqhaza ekufukuleni umnotho (Cai nabanye, 2023).

Ngakolunye uhlangothi, ulimi, noma kungelona lodwa olusemqoka ekufundisweni kolwazi lokubala, kodwa lubamba iqhaza ekuqinisekiseni ukuthuthuka kolwazi lokubala luye lufinyelele eqophelweni eliphezulu (Erickson noLanning, 2013). Empeleni, uma lo mqakuliswano ongenhla ubhekwa ngokwensizakuhlaziya kaVygotsky yowe-1978 ebuka ukuThuthukiswa kokuQonda kusetshenziswa ukuziMbandakanya ngengxoxo, kuyahlaluka ukuthi ulimi luyisikhali esingasetshenziswa ukwelekelela abafundi ukuthi baqonde amasu okubala kunzikandaweni wasemagunjini okufundela asezikhungweni zokuhlunyeleliswa kwezimilo. Noma le nsizakuhlaziya ingasetshenziswanga njengesibuko kuleli phepha, kodwa ihlalukisa ngandlela thize ubumqoka bolimi ekufundisweni nasekufundweni kolwazi lokubala konzikandaweni abehlukene. Ngaleso sizathu, uma kudingidwa

ukufundwa, ukufundiswa nokuhlolwa kolwazi lokubala kunzikandaweni wamagumbi okufundela asezikhungweni zokuhlunyelelwa kwezimilo, ulimi lungevalelwe ngaphandle. Ukusetshenziswa kolimi kuhambisana nonzikandaweni lapho lusetshenziswa khona, ngoba kwayilona ulimi luyisenzeko esiphakathi kwabantu abaqhamuka konzikandaweni abahlukene (Bax, 2003). Ngakho-ke, abacwaningi baye bakubona kusemqoka ukubheka ukusetshenziswa kolimi emagunjini asezikhungweni zokuhlunyelelwa kwezimilo lapho kufundiswa ukubala, umthelela walokhu kusetshenziswa kolimi ekuthuthukeni kwezinga lokwazi ukubala kanye nokuhlobana kwale minxa ehlalukiswe ngenhla ukuze kufinyelelwe emgomweni wokuhlunyelelwa kwezimilo (bheka umdwebo-sibonelo ochaza ngalokhu emfanekisweni wokuqala ngezansi).

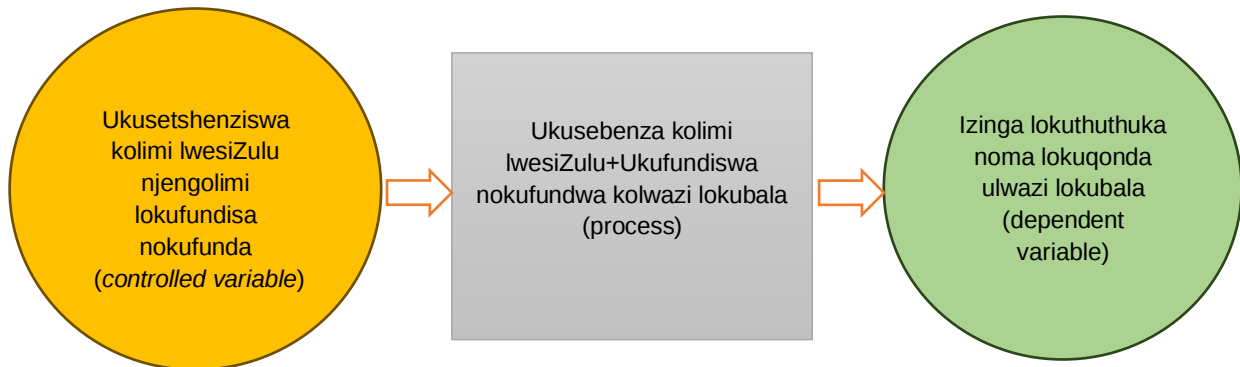
**Umfanekiso 1:** Ukusetshenziswa kolimi emagunjini asezikhungweni zokuhlunyelelwa kwezimilo, nokuhlobana kwakho (ukusetshenziswa kolimi) nezinga lokubala ukuze kuhlunyelelwe izimilo.



**Ukuphawula:** Umdwebo-sibonelo ukhombisa ukusetshenziswa kolimi emagunjini asezikhungweni zokuhlunyelelwa kwezimilo lapho kufundwa ukubala, umthelela wakho (ukusetshenziswa kolimi) kanye nokuthwaxana kwale minxa ekuhlunyelelweni kwezimilo.

Ucwaningo olwethulwa kuleli phepha lube ngokuxube ubunjalo botho nobungako botho. Engxenyeni yocwaningo ebheka ubunjalo botho, kuye kwasetshenziswa inhlolovo esakuhleleka ukuqoqa ulwazi ngezinga lokuqonda ukubala kubahlanganyeli abayiziboshwa abadala ngokweminyaka. Ngakolunye uhlangothi, ucwaningo lobungako botho beluphokophele ukuhlola ubudlelwano obuphakathi kweminxa emibili, okuwukusetshenziswa kwesiZulu njengolimi lokufunda nokufundisa kanye nezinga lokuqonda ulwazi lokubala kubahlanganyeli abangababoshwa. Ubudlelwano obuphakathi kwale minxa buzohlolwa kusetshenziswa isivivinyo se-*t-test* esibheka ubudlelwano phakathi kweminxa emibili (paired-samples *t-test*). Umunxa olawulwayo kulolu cwaningo ukusetshenziswa kolimi lwesiZulu njengolimi lokufunda nokufundisa, kanti umunxa oncikile izinga lokuqonda ulwazi lokubala (bheka umfanekiso wesibili ngezansi).

**Umfanekiso 2:** Umunxa olawulwayo, ukusetshenziswa kolimi lwesiZulu kanye nomunxa oncikile.



*Ukuphawula:* Umdwebosibonelo okhombisa iminxa emibili yalolu cwaningo (oncikile nolawulawo) kanye nokusetshenziswa kolimi lwesiZulu.

Lolu cwaningo-ke beluhlose ukuphendula lo mbuzo olandelayo wocwaningo, okuyiwona ongumgogodla walo msebenzi:

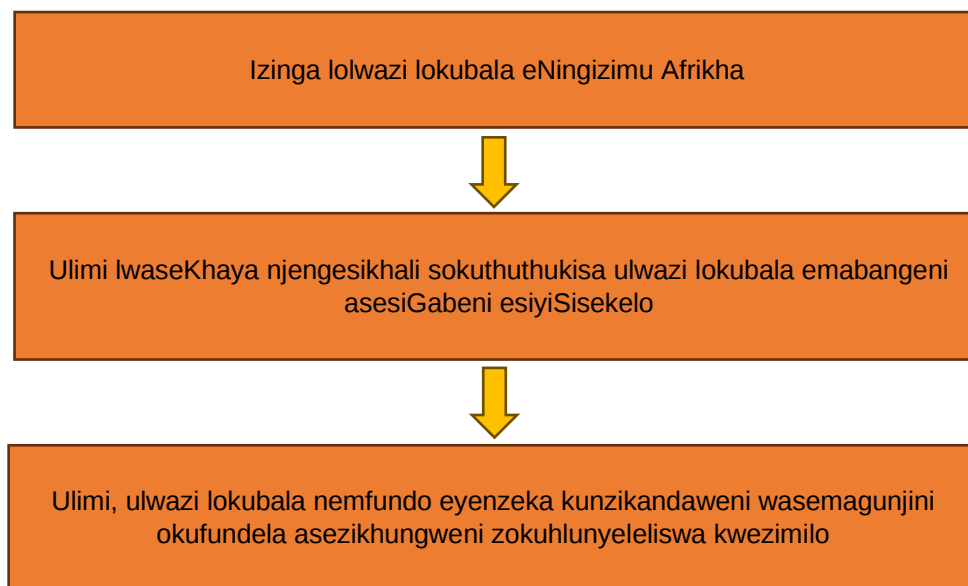
- Ngabe ukusetshenziswa kolimi lwesiZulu njengolimi lokuFundisa nokuFunda kunamthelela muni ekuthuthukiseni ulwazi lokubala emagunjini okufundela asezikhungweni zokuhlunyelelwa kwezimilo?

Okwenza ucwaningo olwethulwa kuleli phepha lwehluke kolunye ucwaningo olwandulele ukuthi lona lubheka ukusetshenziswa kolimi lwesiZulu njengolimi lokufundisa kunzikandaweni wasezikhungweni zokuhlunyelelwa kwezimilo. Likhona ucwaningo oluqakulisa ngokusetshenziswa kolimi lwesiZulu lapho kufundwa ukubala emabangeni asesiGabeni esiyiSisekelo (Mbatha, 2021), kanti futhi ikhona nemiqakuliswa egxile ekusetshenzisweni kolimi lwesiZulu njengolimi lokufunda nokucwaninga (Ndimande-Hlongwa, 2014; Nkosi, 2018; Ndebele & Zulu, 2017). Kodwa ukudingida ngokusebenza nokusetshenziswa kwesiZulu kunzikandaweni wasemagunjini okufundela asezikhungweni zokuhlunyelelwa kwezimilo kubukeka kusasilele. Okunye okungahlalukiswa njengokuhlulwa ucwaningo olwethulwa kuleli phepha kolunye ucwaningo olwandulele ukuthi imfundo yasezikhungweni zokuhlunyelelwa kwezimilo idingidwa ngokudidiyela zonke izifundo ezifundwayo (Mathebula, 2014; Mokoele, 2016; Moyo et al., 2022). Lumbalwa ucwaningo olugxile esifundweni sezibalo ngaphandle kokuthi sididiyelwe nezinye izifundo kulo nzikandaweni.

## 2. Ukubuyezwa kwemibhalo

Imibhalo kuleli phepha izobuyezwa ngokulandelanisa izingxenye ezibalulwe emdwebweni ongezansi. Noma kubukeka sengathi lezi zingxenye zehlukene, okusempeleni, kuningi ukhlobana okukhona phakathi kwazo, ikakhulu ekuqiniseni imiqakuliso ephathelene nolwazi lokubala nokusetshenziswa kolimi lwesiZulu (okuyizingxenye leli phepha ebelihlose ukuzihlobanisa nonzikandaweni wokufunda okwenzeka ezikhungweni zokuhlumelelisa izimilo).

**Umfanekiso 3:** Indlela elandeliwe ngesikhathi kubuyezwa imibhalo.



*Ukuphawula:* Umdwebo-sibonelo ukhombisa indlela imibhalo ebuyezwe ngayo kuleli phepha.

### 2.1 Izinga lolwazi lokubala eNingizimu Afrika

Ulwazi lokubala, ngokocwaningo, lusemqoka futhi luyisisekelo okwakhelwa phezu kwaso ukufundwa nokuqondwa kwesifundo sezibalo emabangeni alandela lawo asesiGabeni esiyiSisekelo. Ucwano olwenziwa ngu-Aunio nabanye (2015) lwahlalukisa ukuthi abafundi abanolwazi namakhono aphansana okubala ebangeni lokuqala nasebangeni elandulela elokuqala (Grade R), basilela emumva njalo esifundweni sezibalo, ezingeni lemfundo yabo yonke, kusukela ebangeni lokuqala kuya kwelesumi nambili. Noma lo mbono ungahlalukisiwe ngokuvamile ocwaningweni, kodwa ulwazi lokubala luwumhlalanyathuko, osetshenziswa ukhlawumbisela ukuthi umfundi lowo uzokwenza kanjani esifundweni sezibalo, nakwezinye izingxenye ezithinta ulwazi lwezimbongo, impilo yakhe yonke. Ngaleso sizathu-ke, oFeigenson nabanye (2004) baphakamisa ukuthi abafundi basesiGabeni esiyiSisekelo kufanele

banikezwe amathuba amahle okufunda ukubala, baphinde bahlonyiswe ngolwazi lokubala abazolusebenzisa emabangeni asezigabeni ezilandelayo (phinda ubheke nokushiwo nguDehaene, 2011).

Njengoba buhlaluka ngokusobala ubumqoka bolwazi lokubala emabangeni asesiGabeni esiyiSisekelo, kusemqoka ukubheka ukuthi ngabe izinga lokwazi ukubala labafundi baseNingizimu Afrika linjani, futhi limi kuphi uma liqhathaniswa nezinga labafundi bakwamanye amazwe. Ngaphambi kokuthi kubuyezwe ucwaningo oluveza izinga namakhono okubala abafundi baseNingizimu Afrika, kubalulekile ukuchaza ukuthi, noma ucwaningo olwethulwa kuleli phepha lugxile emfundweni yabantu abadala abayiziboshwa, kodwa kuzosetshenziswa ucwaningo oluveza ulwazi lokubala lwabafundi basesiGabeni esiyiSisekelo njengesihlawumbiselo solwazi lokubala lweziboshwa ngoba:

- Ulwazi lokubala lumbandakanya amakhono ayisisekelo okusebenza ngezinombolo, afundwa emabangeni aphantsi (Cappelli & Baten, 2021; Merkley et al., 2023).
- Lawo makhono, ayaye abizwe ngokuthi angamakhono olwazi lokusebenza ngokubalwayo (numerical literacy) uma sekufundiswa abantu abadala (Gal et al., 2020; Montshiwa & Botlhoko, 2023).
- Noma ulwazi lokubala nolwazi lokusebenza ngokubalwayo kungamakhono afanayo, kodwa lumfiliba ucwaningo oluchaza ngezinga-bunjalo lamakhono okubala kubantu abadala. Empeleni, ngokukaReder nabanye (2020) kuvela ukuthi:

*Historically, numeracy has tended to be forgotten and overlooked in adult education, especially compared to literacy. Yet evidence exists to show that numeracy should be made a priority for both children and adults. Furthermore, building the foundational numeracy skills of young people and adults is vital for their well-being in work and life in the 21st century (Reder nabanye, 2020, p. 2).*

*(Umlando uveza ukuthi ulwazi lokubala, kunzikandaweni wemfundo yabadala, luyashalazelwa luphinde lukhohlakale, ikakhulu uma luqhathaniswa nendlela okubhekwa ngayo ulwazi lokufunda ukufunda nokubhala. Nokho-ke, kunobufakazi obukhona obuhlalukisa ukuthi ulwazi lokubala kufanele lubekwe eqhulwini emfundweni yezingane nasemfundweni yabantu abadala. Ngaphezu kwalokho, ukwakha isisekelo samakhono olwazi lokubala ezinganeni nakubantu abadala kusemqoka kwinhlobo-bunjalo yabo yasekusebenzeni nasempilweni jikelele, kwikhulu-nyaka lamashumi amabili nanye) [Reder nabanye, 2020, p. 2].*

Lesi sicaphuno esingenhla sichaza ukuthi ulwazi lokubala lwabantu abadala luyingxenyan ebaluleke ngokulinganayo nolwazi lokufunda ukufunda nokubhala. Ngaphezu kwalokho, ulwazi lokubala lwabantu abadala lubaluleke ngokulinganayo

nolwazi lokubala lwezingane. Noma lesi sicaphuno sidalula amagebe phakathi kocwaningo olulinganisa ulwazi lokubala lwabadala nolwezingane, kodwa leli phepha liphokophele ukuba sekhaleni lalowo mqakuliswano. Futhi abacwaningi, kuleli phepha, abahlosile ukushaya indiva la magebe ocwaningo, kodwa ngenxa yokufiliza kocwaningo olugxile olwazini lokubala labadala, abacwaningi bakhethe ukubuyekeza ucwaningo oluthinta ulwazi lokubala lezingane, ngesihlawumbiselo sokuthi hleze okwenzeka lapho kufundiswa noma kufundwa ukubala kunzikandaweni wemfundo yezingane, kuyefana, noma kucishe kufane nokwenzeka uma kufundiswa ukubala kunzikandaweni wemfundo yabadala. Ngaleso sizathu, ulwazi lokubala lwezingane ezisemabangeni ayisiSekelo luzosetshenziswa lapho kubuyekezwa ucwaningo ngezinga-bunjalo lolwazi lokubala eNingizimu Afrika.

## **2.2 Inzukazikeyi yezinga lolwazi lokubala eliphansi emfundweni esesiGabení esiyisiSekelo eNingizimu Afrika**

Ngokocwaningo olugxile olwazini lokubala, ezibalweni nasezifundweni zesayensi, iNingizimu Afrika isilele emumva ekuthuthukeni kolwazi lokubala, ikakhulu ebangeni lokuqala. Ukuqinisa lo mqakuliswano, ucwaningo olwendlalekile, olucwaninga luphinde luhlaziye ulwazi lokubala emazweni ahlukeni ase-Afrika, olwaziwa ngokuthi yi*Southern and Eastern Africa Consortium for Monitoring Educational Quality* olwenziwa ngowezi-2014, njengoba luvezwa nguSumida noKawata (2015) lwaveza ukuthi kubafundi abayinkulungwane baseNingizimu Afrika bebanga lesithathu abahlanganyela esivivinyweni sikawonkewonke sezibalo, cishe bangamaphesenti angamashumi ayisishiyagalombili abakhombisa ukuthi abanawo amakhono okubala alindelekile ngokwaleli banga. Ngakolunye uhlangothi, ngokocwaningo lweSACMEQ lwangowezi-2017, njengoba luvezwa nguSumida noKawata (2021), kuvela ukuthi abafundi bebanga lesithathu abaphumelela ngamalengiso esifundweni sezibalo bambalwa kakhulu. Isibonelo, esifundazweni saKwaZulu-Natali, baba ngamaphesenti ayisi-5.1 kuphela abafundi abathola imiklomelo yamamaki aphakathi kwamaphesenti angamashumi ayisikhombisa kuya kwangamashumi ayisikhombisa nesishiyagalolunye (okungukuphumelela okusezingeni lesithupha). Ngakolunye uhlangothi, baba ngamaphesenti angama-38.3 abafundi abathola imiklomelo yamamaki aphakathi kwamaphesenti angamashumi amathathu kuya kwangamashumi amathathu nesishiyagalombili, okungukuphumelela okusezingeni lesibili (bheka ithebula elihlalukiswe emfanekisweni wesine ngezansi).

**Umfanekiso 4:** Ucwangingo lweSACMEQ lowezi-2017

| SACMEQ III   | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | Level 6 | Level 7 | Level 8 |
|--------------|---------|---------|---------|---------|---------|---------|---------|---------|
|              | %       | %       | %       | %       | %       | %       | %       | %       |
| EC           | 7.9     | 42.4    | 30.3    | 11.7    | 3.5     | 1.8     | 2.3     | 0       |
| FS           | 3.8     | 34.3    | 34.7    | 14.4    | 7.2     | 4.3     | 1.1     | 0.1     |
| GP           | 3.1     | 17.4    | 24.6    | 21.4    | 16.1    | 13.5    | 3.1     | 0.7     |
| KZN          | 5.7     | 38.3    | 29.6    | 14.5    | 5.1     | 5.1     | 1.3     | 0.4     |
| MPU          | 5.4     | 38.4    | 34.9    | 13.9    | 4.2     | 2.3     | 0.5     | 0.3     |
| NC           | 4.6     | 32.5    | 31.7    | 16.5    | 6.2     | 5.7     | 2       | 0.7     |
| LP           | 9.6     | 51      | 28.2    | 8.6     | 1.7     | 0.9     | 0       | 0       |
| NW           | 3.6     | 34.5    | 30.2    | 15.3    | 6       | 6.7     | 2.3     | 1.3     |
| WC           | 0.9     | 14.1    | 23.4    | 26.2    | 14.1    | 13.3    | 4.6     | 3.2     |
| South Africa | 5.5     | 34.7    | 29      | 15.4    | 7.1     | 5.9     | 1.9     | 0.6     |

*Ukuphawula:* Leli thebula likhombisa ukuphunyelelwa kwezibalo ngokwe-SACMEQ ngokwehlukana kwezifundazwe. Kucashunwe kususelwa ocwangingweni lukaSumida noKawata (2021)

Noma umbuzo wokuthi ngabe iyini imbangela yobuphansi bezinga lolwazi lokubala eNingizimu Afrika usalokhu uqhubeka nokuba yindida, kodwa kusemqoka ukuveza ukuthi ulimi ludlala indima, ngandlela thize, ebuphansini bezinga lolwazi lokubala eNingizimu Afrika. Ngokwesibonelo, ucwangingo olwenziwa ngu-Aunio nabanye (2015) olwaluhlose ukubheka izinga lokubala labafundi uma beqala ukungena isikole, kusetshenziswa isilinganiso esaziwa ngokuthi yi-ThinkMath Scale, lwaveza ukuthi kunomehluko omkhulu phakathi kwamakhono okubala abafundi bebanga lokuqala. Laba bacwaningi baqakulisa ngokuthi, lo mehluko udalwa futhi ungahlotshaniwa nolimi olusetshenziswa lapho kufundiswa ulwazi lokubala. Lo mqakuliswano ka-Aunio nabanye (2015) uphinde waqiniswa nguRobertson noGraven (2020), lapho beveza ukuthi:

*In South African situation, where, because English is widely perceived as the language of opportunity, it is, by grade 4, overwhelmingly the chosen language of learning and teaching. The epistemological and pedagogical consequences of this choice are evidenced in the poor performance of the country's students on national and international assessments of mathematical proficiency (Robertson noGraven, 2020).*

*ENingizimu Afrika, lapho isiNgisi sibukeka njengolimi oluvula amathuba, sona (isiNgisi), ikakhulu ebangeni lesine, siwulimi oluyaye lukhethelwe ukufunda nokufundisa. Imiphumela yalolu hlobo lokukhetha, ngokolwazi nangendlela yokufundisa, ihlaluka ngokuvamile lapho sekuvela ukuthi abafundi baseNingizimu Afrika baphumelela kabana ezivivinyweni zangaphakathi*

*nezangaphandle kwaleli lizwe ezisuke zihlose ukuhlola izinga lokuqonda izibalo*  
(Robertson noGraven, 2020)

Lesi sicaphuno esingenhla sichaza ukuthi kunzikandaweni waseNingizimu Afrika, lapho ulimi lwesiNgisi luthathwa njengoluvula amathuba, luphinde futhi lube yilona lulimi olukhethelwa ukufunda nokufundisa ebangeni lesine, umthelela wokusetshenziswa kwalo (ulimi lwesiNgisi) olwazini nasezindleleni-masu zokufundisa ubonakala uwumnyombo wobuphansi bezinga-bunjalo lezibalo, elihlaluka ngokuvamile emiphumeleni yabafundi ezivivinyweni zangaphakathi nangaphandle kwezwe laseNingizimu Afrika. Ngezinye izindlela, ukufundiswa kwezibalo kanye nolwazi lokubala kusetshenziswa ulimi lwesiNgisi, abafundi abangaluncelanga ebeleni, phakathi kwezinye izimbangela zezinga-bunjalo eliphansi lezibalo, kuseqhulwini, futhi akufanele kushalazelwe uma kuphokophelwe ukuthi kutholwe ukuthi izinga-bunjalo eliphansi lolwazi lokubala linyombulukaphi. Noma ubuphansi bezinga-bunjalo lokubala bungenakuhlotsaniswa nolimi kuphela (isibonelo, ngokukaGeary, 2022 noGeary, 2013, ukuhluka kwamazinga okuqonda phakathi kwabafundi, kanye nokufiliza kwamathuba anikezwa abafundi ukuze bafunde amakhono ezibalo nakho kuyimbangela), kodwa, eqinisweni, ngokwabacwaningi abethula lo msebenzi, ulimi luyimbangela-ngqangi, ehlobene kakhulu nezinga-bunjalo lolwazi lokubala. Ngokusebenzisa ucwaningo, kuzohlalukiswa izizathu ezenza abacwaningi babambelele kulo mbono odalulwe ngenhla.

### ***2.3 Ulimi lwaseKhaya njengesikhali sokuthuthukisa ulwazi lokubala emabangeni asesiGabenisi esiSisekelo***

NgokukaVukovic benoLesaux (2013), ukuthuthuka kolimi kanye nokusetshenziswa kolimi lapho kufundiswa, kungenye yeminyombo lapho ulwazi lokubala luphethuka khona. Noma lo mqakuliswano uzwakala uyingwijikhwebu ngoba ngokombono wabacwaningi abethula lo msebenzi, ulimi aluyona kuphela imbangela yokuthuthuka kolwazi lwezibalo, kodwa luphinde lube yimbangela yokufadabala nokungaqondwa kolwazi lokubala, cishe kuwona wonke amazinga. Ngaleso sizathu, abacwaningi babuka ulimi njengolayini omicibisholo-mibili, nganxanye okukhona ukuthuthuka kolwazi lokubala, bese kuthi nganxanye kube nokufadabala kolwazi lokubala. Ngezinye izindlela, ukuphunyelelwa nokungaphunyelelwa kwesifundo sezibalo kuxhantele olimini, kanti futhi, phakathi kwezingxenye ezithuthukisa ziphinde zifadabalise ukuqondwa kolwazi lokubala, kukhona nezingxenye zolimi. Lo mbono uphinde uqinise ngabacwaningi abangoPurpura nabanye (2011), ocwaningweni lwabo olwaluhlose ukubheka izingxenye eziwumxhantela wokuqondwa nokungaqondwa kolwazi lokubala, nalapho abahlalukisa khona ukuthi isilulu-magama, isayensi yamagama, kanye nesayensi yemisho (okuyizingxenye zolimi) kunomthelela

ongalinganiselwa emehlukweni-kuqhelelana (standard Deviation) omubili ngakunye ekuthuthukiseni ulwazi lokubala (bheka ithebula elivezwe emfanekisweni wesihlanu ngezansi).

**Umfanekiso 5:** Izingxenye eziwumxhantela wokuqondwa nokungaqondwa kolwazi lokubala

|                         | <i>M</i> | <i>SD</i> | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8 |
|-------------------------|----------|-----------|-----|-----|-----|-----|-----|-----|-----|---|
| 1. CELF                 | 13.16    | 3.81      | –   |     |     |     |     |     |     |   |
| 2. Vocabulary           | 9.09     | 2.32      | .51 | –   |     |     |     |     |     |   |
| 3. Morphology           | 8.64     | 2.34      | .43 | .44 | –   |     |     |     |     |   |
| 4. Syntax               | 8.51     | 2.49      | .38 | .40 | .52 | –   |     |     |     |   |
| 5. Attention            | 30.31    | 11.90     | .36 | .22 | .26 | .22 | –   |     |     |   |
| 6. Calculation          | 11.14    | 6.28      | .39 | .26 | .22 | .22 | .30 | –   |     |   |
| 7. Equivalence problems | 14.94    | 3.08      | .39 | .29 | .30 | .31 | .37 | .45 | –   |   |
| 8. Problem solving      | 9.51     | 5.22      | .45 | .27 | .28 | .31 | .40 | .60 | .71 | – |

*Ukuphawula:* Leli thebula likhombisa izingxenye eziwumxhantela wokuqondwa nokungaqondwa kwezibalo. Kucashunwe kususelwa emsebenzini kaPurpura nabanye (2011).

Umqakuliswano ovezwa nguPurpura nabanye (2011) ungaphinde uqiniseke ngokucaphuna okushiwo nguDowker (2021, p. 65)) uma ethi:

*There are six linguistic influences on mathematics, which can either influence mathematics performance and pedagogical practices positively or negatively. The six linguistic influences on mathematics learning are: (1) phonological (phonemic properties of language), (2) lexical composition of words, (3) semantic meaning, (4) syntactic (grammatical structures beyond word level influences), (5) conceptual properties of words (vocabulary) and (6) visuospatial (orthographic properties, including reading or writing direction)*

*[Ulimi lunemithelela emithathu esifundweni sezibalo. Le mithelela yomithathu ingathinta, kabi noma kahle, ukuphonyelelwa kwezibalo kanye nezindlela(su) zokufundisa izibalo. Leyo mithelela yilena: (1) Ukuzwakala kwemisindo, (2) ukuqondwa ngokuphelele kwezingcezwana zolimi ezakha igama limbe, (3) ukuqondwa nokuhunyushwa kwamagama nezimiso zemisho, (4) isayensi yemisho, (5) ubhalo-magama, (6) ukusetshenziswa kokuthile okubonwayo ekufundweni nasekubhalweni kolimi].*

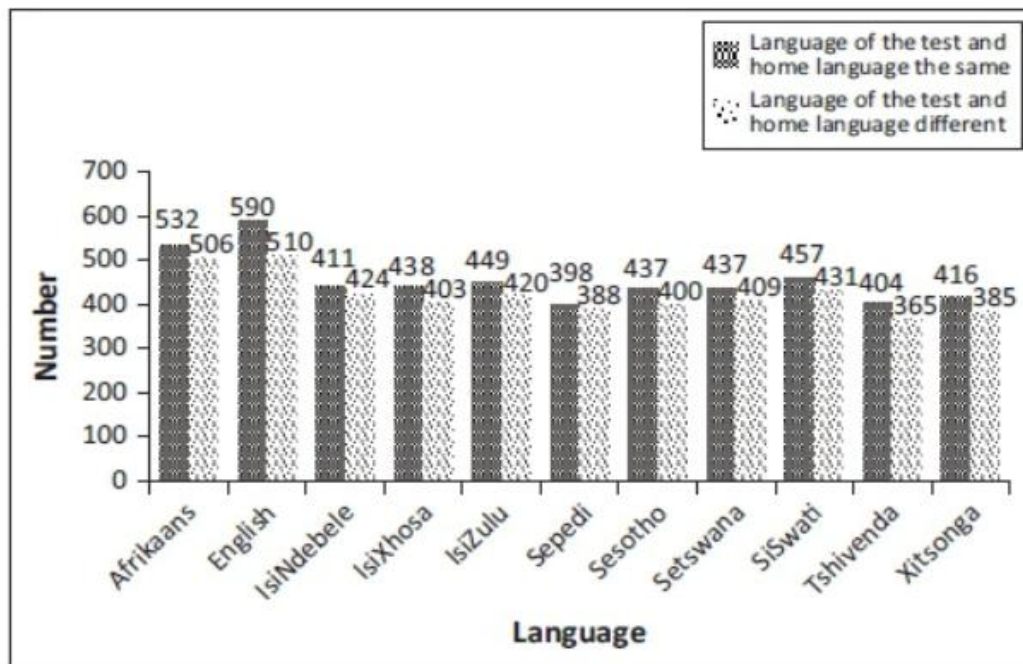
Lesi sicaphuno esingenhla sichaza ukuthi, ziyisithupha izingxenye zolimi ezinomthelela (ongaba muhle noma ube mubi) ekuphunyelelweni nasekufundisweni kwezibalo. Phakathi kwalezo zingxenye, uDowker (2021) ubalula ulwazi lwengcwengazinhlamvu, ulwazi lokuqondwa kolimi, ulwazi lokuqonda incazelo yamagama athize njengoba imiswe ezichazamazwini, isilulumagama kanye nokusebenza kolimi lapho kuqondwa noma kuhlanziywa ulwazimbe. Noma lo mcwaningi engakuhlalukisi ngokusobala ukuthi ingxenye nengxenye, kulezi ezibalulwe ngenhla, ihlobana kanjani nolwazi lokubala, kodwa okusemqoka ukuthi ulimi kanye nezibalo akunakuhlukaniswa. Eqinisweni, encazelweni enikezwa nguPeng nabanye (2020), izibalo ziqondwa njengolimi kwazona, kodwa, oluthe ukuhluka olimini olwejwayelekile ngoba zedlulisa umyalezo ngezimpawu, nangezinombolo ezithile. Lokhu kuchaza ukuthi, ukuhlobana phakathi kolimi nezibalo kusekutheni, yomibili le minxa iwulimi, futhi inezingxenyanana zolimi ezithize. Empeleni, oSpaull noHoadely (2018, p. 79) baveza indlela ulimi olusebenza luphinde luqondwe ngayo ezibalweni ngokuthi:

*Language in mathematics posits that we use language as a tool for communicating mathematics knowledge with others and building and retrieving representations of mathematics*

*(Insebenzo yolimi kunzikandaweni wezibalo iyinkomba yokusetshenziswa kolimi njengethuluzi ekwedluliseni imiyalezo ethile ngolwazi lwezibalo kwabanye. Le nsebenzo iphinde yakhe futhi inyamule izimiso-bunjalo zezibalo).*

Ngezinye izindlela, noma izibalo ziwulimi nazo ngokwazo, kodwa ziphinde futhi zifundiswe kusetshenziswa ulimi. Lolu lwazi-ke luveza ubumqoka bolimi, ikakhulu kunzikandaweni wokufundwa nokufundiswa kwezibalo. Njengoba nolimi luhlukene, kukhona ulimi lwaseKhaya noLimi lokuQala loKwengeza, umbuzo oseqhulwini ukuthi, ngabe ulimi lwaseKhaya lusemqoka futhi lwelekelela ekuthuthukiseni ulwazi lwezibalo ngendlela elinganayo yini noLimi lokuQala loKwengeza. Lo mbuzo ungaphendulwa ngokusebenzisa ucwaningo lukaVan Staden (2016), olukhombisa umehluko okhona phakathi kokuphunyelelwa kwezibalo nolimi ezisuke zifundiswa ngalo. Lolu cwaningo luveza ukuthi, abafundi basemabangeni asesiGabeni esiyiSisekelo abahlolwa ngokohlelo lwezivivinyo ze-Pre-PIRLS kusetshenziswa uLimi lwaseKhaya benza kangconywana kunalabo abahlolwa kusetshenziswa uLimi lokuQala loKwengeza (bheka igrafu eveza lo mehluko emfanekisweni wesithupha ngezansi).

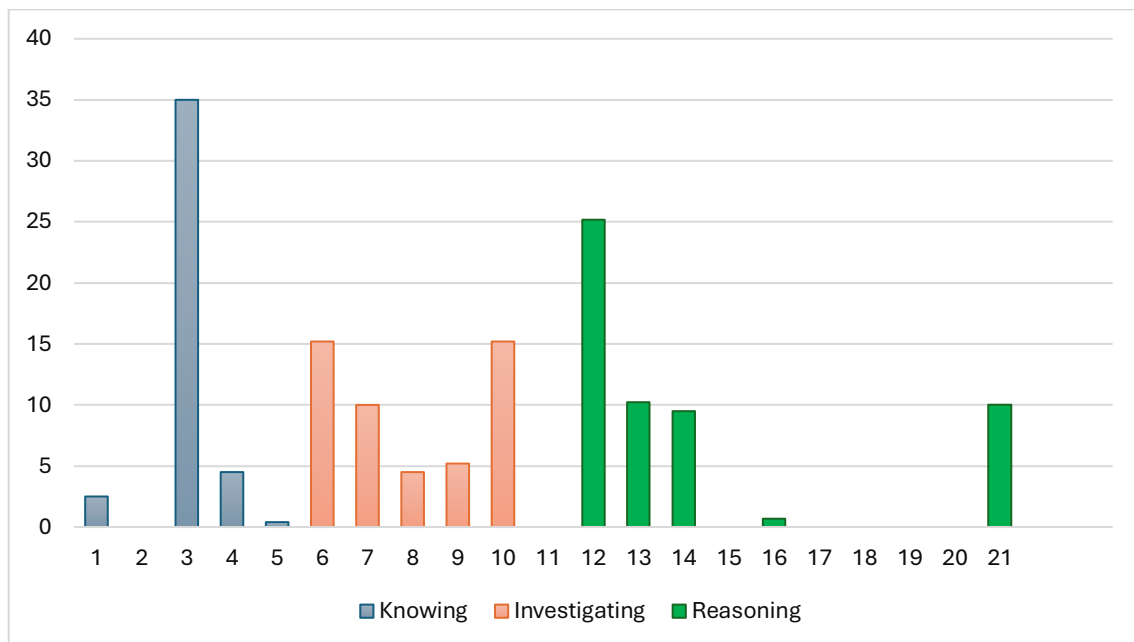
**Umfanekiso 6:** Umehluko phakathi kokuphunyelelwa kwezibalo nolimi ezisuke zifundiswa ngalo



*Ukuphawula:* Leli thebula likhombisa umehluko phakathi kokuphunyelelwa kwezibalo nolimi ezisuke zifundiswa ngalo. Kucashunwe kususelwa emsebenzini kaVan Staden (2016).

Ngezinye izindlela, ulimi lusemqoka, futhi, nokujula kwalo ekufundisweni nasekuhlolweni kwezibalo kusabalalela nasekutheni, ulimi lolo olusetshenziswa lapho befundiswa noma behlolwa luwulimi lwabo lwaseKhaya noma luwulimi lokuQala loKwengeza. Empeleni, kunobufakazi bokuthi abafundi abafundiswa izibalo ngolimi lwabo lwaseKhaya benza kangcono kunalabo abafundiswa ngolimi lwesiNgisi. Isibonelo, u-Phakeng (2016) uveza ukuthi, abafundi bebanga lesibili abafundiswa izibalo ngolimi lwaseKhaya, baba nolwazi oluthe thuthu lokwazi, lokuhlola, kanye nolokuhlaziyisisa ulwazimbe lwezibalo, kunalabo abafundiswa kusetshenziswa ulimi lwesiNgisi (bheka inombolo yesithathu, yeshumi kanye neyamashumi amabili nanye egrafini esemfanekisweni wesikhombisa ngezansi).

**Umfanekiso 7:** Ukuqonda izibalo kwabafundi bebanga lesibili abafundiswa ngolimi lwaseKhaya.



*Ukuphawula:* Leli thebula likhombisa ulwazi lwabafundi bebanga lesibili lokuhlola, lokuhlaziyisisa nolokwazi ulwazimbe lezibalo uma befundiswa ngoLimi lwaseKhaya. Kucashunwe kususelwa emsebenzini kaPhakeng no-Assien (2016).

Noma ubumqoka bokusebenzisa uLimi lwaseKhaya lapho kufundiswa noma kufundwa isifundo sezibalo kanye nolwazi lokubala buhlalukisiwe ngokubheka nokubuyekeza izingcwaningo ezigabeni ezingenhla, kodwa akucaci ngokwanele ukuthi ngabe ukusetshenziswa koLimi lwaseKhaya lapho kufundwa izibalo emfundweni yabadala, kunzikandaweni wasemagunjini okufundela asezikhungweni zokuhlunyeleliswa kwelekelela ababoshwa ngendlela efanayo naleyo abafundi bakonzikandaweni abajwayelekile abalekeleleka ngayo ekuqondeni ulwazi lokubala. Lo msebenzi-ke ubuhlose ukuvala leli gebe lezingcwaningo, elibonakala lihlahlekile ezingcwaningweni ezithinta ulimi kanye nolwazi lokubala.

## **2.4 Ulimi, ulwazi lokubala nemfundo eyenzeka kunzikandaweni wasemagunjini okufundela asezikhungweni zokuhlunyeleliswa kwezimilo**

Ulwazi lokubala kanye nokusetshenziswa kolimi emagunjini asezikhungweni zokuhlunyeleliswa kwezimilo akuchasiswa ngokuzimele, kodwa kudingidwa ngaphansi kukanzikandaweni wemfundo ephokophele ukuhlumelelisa isimilo (bheka ucwaningo oluhlaluka emsebenzini kaMathebula, 2014; Mokoele, 2016; Moyo nabanye, 2022; Mahlangu noMtshali, 2024; Gal, 2024). Empeleni, lumfiliba ucwaningo olubheka ukuthi, noma imfundo yasezikhungweni zokuhlumelelisa izimilo ihlose

ukulungisa isimilo seziboshwa, kodwa ngabe isifundo nesifundo selekelela kanjani ekucijeni isiboshwa ngamakhono athile, nasekulungiseni isimilo neso-kubuka umhlaba laso. Isibonelo, OMurhula noSingh (2020) babheka badidiyela yonke iminxa yemfundo ehlose ukulungisa izimilo, bayidingide kunzikandaweni wendilinga yokuphelelisa umbhidlango wokuhlunyeleliswa kwezimilo (*Offender-rehabilitation cycle*). Kodwa, nguMbatha (2024) kuphela osabheke isifundo sezibalo ngeso lokuthi, ngabe sona sibacija kanjani ababoshwa ngokwamakhono alindelekile abangawasebenzisa uma sebebphumele ngaphandle, futhi selekelela kanjani ekuhlumeleliseni izimilo nasekugwemeni isithilathila sokuphinda amacala abebekade bethweswe wona (*recidivism*). Noma ucwaningo lukaMbatha (2024) lukuveza lokhu okubalulwe ngenhla, kodwa kuvela kamfiliba ukuthi ulimi lungena kanjani futhi lusetshenziswa kanjani uma kufundiswa isifundo sezibalo. Lo msebenzi-ke uhlose ukuvala lelo gebe ngokuhlobanisa ukusetshenziswa kolimi lwesiZulu nokufundiswa nokufundwa kolwazi lokubala.

### 3. Uhlaka lwensizakuhlaziya

Insizakuhlaziya esetshenziswe njengesibuko kulo msebenzi yileyo ebheka isu lokufundiswa kwabantu abadala eyaziwa ngokuthi yi-*Andragogic Theory*. Le nsizakuhlaziya yabunjwa ngusonjulalwazi uMalcolm Knowles ngowe-1984, emva kocwaningo oluyingwijikhwebu, nolumbandakanya ukungqubuzana kwemibono mayelana nokuthi ngabe abantu abadala bayakwazi yini ukufunda noma qha.

UKnowles (1984) phakathi kweminye imibono aqhamuka nayo nayisebenzisa ukubumba le nsizakuhlaziya, ngumbono wokuthi imfundo yabadala inezisekelo eziyisithupha. Lo mcwaningi wabe eseqakulisa ngokuthi, lezi zisekelo eziyisithupha ziyinsika nomthombo lapho kuphethuka khona imfundo yabadala, ngakho-ke, kufanele ziqikelelwe futhi zibe ngumhlahlandlela wemfundo yabadala yonke. Lezo zisekelo yilezi: yiqhaza elidlalwa ukadebona wabafundi abadala, isizathu esenza abafundi abadala baphokophele ukuthola imfundo, ukulungela kwabafundi abadala ukuthola imfundo, ukwazi kwabafundi abadala ukuzilawula nokulawula abakufundayo, ukulumbanisa imfundo etholiwe nokuthile, kanye nofuqufuqu lokufunda, oluphethuka ngaphakathi kwabafundi abadala (Hartree, 1984; Loeng, 2018; McGrath, 2009). Lezi zisekelo, ngokukaKnowles (1984), zihlobene futhi asikho isisekelo esihamba ngasodwana, kodwa yilesi naleso [sisekelo] kufanele siqikelelwe ngokulinganayo nezinye izisekelo ukuze imfundo yabadala ithuthuke, futhi baphinde [abantu abadala] bakhuphukele olwazini oluphezulu lokuqonda okufundwayo (bheka umdwebosibonelo osemfanekisweni wesishiyagalombili ngezansi).

**Umfanekiso 8:** Izisekelo zensizakuhlaziya i-Andragogic theory

*Ukuphawula:* Lo mdwebo ukhombisa izisekelo zensizakuhlaziya i-Andragogic theory njengoba zicashunwe ocwaningweni lukaKnowles (1984).

### **3.1 Iqhaza elibanjwa ukadebona wabafundi abadala, isizathu esenza abafundi abadala baphokophele ukuthola imfundo**

NgokukaKnowles (1984), abantu abadala bafika nokadebona obanzi emagunjini okufundela, ngakho-ke lowo kadebona uba yisiphethu sokufunda ulwazi olusha. Ukadebona wabafundi abadala uphinde ube yisitebhisi, esikhuphulela umfundi omdala olwazini oluthe thuthu. Ngakolunye uhlangothi, abantu abadala banezizathu, okuyizona ezenza baphokophele ukufunda, futhi lezo zizathu zithombuluka kukadebona wabo (Purwati et al., 2022). Ngakho-ke, kusemqoka ukubabeka eqhulwini, nokuqondisisa ukuthi banomthombo wokadebona, futhi bayazi ukuthi kungani befunda (Hartree, 1984).

### **3.2 Ukwazi kwabafundi abadala ukuzilawula nokulawula abakufundayo**

Abantu abadala bayakwazi ukuzilawula nokuzithathela izinqumo. Ngakho-ke, indlela abafundiswa ngayo, ulimi olusetshenziswa lapho befundiswa kanye nesu

elisetshenziswa lapho behlolwa kufanele kubabeke eqhulwini, futhi kuqinisekise ukuthi yibona ababa ngabalawuli balokho okufundwayo (Forrest III & Peterson, 2006).

### **3.3 Ukulungela kwabafundi abadala ukuthola imfundo nofuqufuqu lokufunda, oluphethuka ngaphakathi kwabafundi abadala**

Abafundi abadala banofuqufuqu oluphethuka ngaphakathi kwabo, okuyilona olwenza babe nempokophelo yokufunda. Ngalezo zindlela, bafika emagunjini okufundela sebekulungele vele ukufunda ngoba nabogqozi oluthile, olubadudulela ekutheni bazuze ulwazi olusha. Ngakho-ke, ulimi olusetshenziswayo kufanele luhambisane nemvelaphi yabo, ukuze ugqozi lwabo lokufunda luthombuluke (El-Amin, 2020).

### **3.4 Ukulumbanisa imfundo etholiwe nokuthile**

Uma kufundiswa abantu abadala, kufanele kuqinisekise ukuthi imfundo yabo ilunjaniswa nokuthile, ukuze bezobona ubumqoka bempilweni yabo yempela (Hanson, 2013). Ulwazi oluthile olufundwayo kufanele lwethulwe ngendlela ezwakalayo ukuze abantu abadala bezosebenzisa lolo lwazi ukuxazulula izinkinga zasemhlabeni wangempela (Hanson, 2013).

NgokukaKnowles (1984), abafundi abadala, ngokuqikelela nokubeka eqhulwini lezi zisekelo ezibalulwe ngenhla, bayaye balekelelwe ezingxenyeni ezithile ukuze bazuze ulwazi olusha noluthile thuthu. Ngezinye izindlela, bafika nolwazi oluthile, kodwa obafundisayo kufanele abalekelele ekutheni basebenzise lolo lwazi abafika nalo ukuze bakhuphukele olwazini oluthile thuthu (Machynska & Boiko, 2020). Indlela-ke yokubalekelela ukuchaza ngandlela thize ezingxenyeni zokufundwayo ngolimi abaluncele ebeleni (Mbatha, 2024).

Le nsizakuhlaziya iye yelekelela abacwaningi ngokuthi babheke ulimi lwesiZulu njengesikhali nensiza, eyelekelela abafundi abadala ukuze bazuze, baqonde futhi bathuthukise ulwazi lwabo lokubala.

## **4. Unzikandaweni wocwaningo**

Lolu cwaningo lwenziwe esikhungweni sokuhlunyelelwa kwezimilo esikhethiwe, esisesifundazweni saKwaZulu-Natali, lapho iningi leziboshwa lingelikhuluma ulimi lwesiZulu njengoLimi lweBele. Kulo nzikandaweni, kuqinisekisiwe ukuthi abahlanganyeli basesigabeni sokufunda ulwazi lokubala, oluhlelwe lwadidiyelwa nohlelo lokufundiswa nokuqeqeshwa kwabantu abadala (Adult Education and Training Programme) olwethulwa nguMnyango wezokuHlunyelelwa kweZimilo njengesu lokuhlumelelisa izimilo zeziboshwa ngokwezemfundo. Kuye kwaqinisekiswa futhi

ukuthi uhlobo lwamacala enziwe yiziboshwa, izinkolelo namasiko azo, izinga-bunjalo lemvelaphi yazo, kanye nenani-bungako lezigwebo zazo akwenziwa kube yisithiyongesikhathi kuqoqwa ulwazi.

## 5. Izindlela zokuqhuba ucwaningo

Abacwaningi, kulo msebenzi, baye basebenzisa isayensi yolwazi eyesekwe endleleni-kubuka yokubheka ukwenzeka kwesenzeko simbe (*pragmatic paradigm*) njengosikompilo lwemicabango (*philosophical tradition*) ukuqonda umthelela wokusetshenziswa kolimi lwesiZulu njengoLimi lokuFundisa nokuFunda ulwazi lokubala emagunjini okufundela asezikhungweni zokuhlunyeleliswa kwezimilo. Njengoba abacwaningi ababuka umhlaba ngeso lindlela-kubuka ebheka ukwenzeka kwesenzeko simbe bekholelwa ukuthi ubuqiniso botho buhlungwa ngokubheka ukwenzeka kwesenzeko okubonakalayo (*practical application*) ngokuthile (Rescher, 2016), kuye kwabhekwa ukusebenza kolimi lwesiZulu nomphumela obonakalayo walokho kusebenza olwazini lokubala lweziboshwa. Njengoba le ndlela-kubuka isetshenziswa ngabacwaningi bocwaningo oluxube ubunjalo botho nobungako botho, kuye kwaqoqwa ulwazi lobungako botho ngezivivinyo ezimbili (esangaphambi nesangemva kocwaningo), kwaphinde kwaqoqwa ulwazi lobunjalo botho ngethuluzi lenhlobo esakuhleleka kubahlanganyeli abayiziboshwa abayishumi nanhlano abebekhethwe ngenhlobo. Ulwazi-ke oluye lwaphethuka lapho luye lwahlaziywa ngendlela yokuhlaziya ngezindikimba, nangokusebenzisa ithuluzi lokuhlaziya le-SPSS. Umsebenzi uye wamiswa ngomdwebo-mumo wocwaningo oluxube ubunjalo-botho nobungako botho, kwaqaliswa ngolwazi lobungako botho, kwathi ulwazi lobunjalo botho lwasetshenziselwa ukuchaza ulwazi lobungako botho (*explanatory sequential mixed methods research design*). Ngesikhathi sekudingidwa okutholakele, kuye kwasetshenziswa insizakuhlaziya ebheka isu lokufundiswa kwabantu abadala. Ulwazi-ke olutholakele luye lwaholela ekutheni kuphenduleke umbuzo-ngqangi wocwaningo othi: **Ngabe ukusetshenziswa kolimi lwesiZulu njengoLimi lokuFundisa nokuFunda kunamthelela muni ekuthuthukiseni ulwazi lokubala emagunjini okufundela asezikhungweni zokuhlunyeleliswa kwezimilo?**

Noma ulwazi olutholakele luye lwaphendule umbuzo-ngqangi wocwaningo obalulwe ngenhla, kusemqoka ukuveza ukuthi izivivinyo (esangaphambi kocwaningo nesangemva kocwaningo) azihloliswanga, kwabhekwa ukukholakala kwazo ngokwezimiso zikaCronbach (Cronbach alpha). Ngakho-ke, kungenzeka ukuthi ukusetshenziswa kwezivivinyo ezihlolwe kulandelwa izimiso zikaCronbach kuveze ulwazi olwehlukile kulolu olwethulwa kule nzikandaweni. Nokho, kuye kwasetshenziswa ulwazi lobunjalo botho ukuqinisekisa ukuthi lobu buthaka abubi namthelela olwazini olwethulwa kule nzikandaweni.

## 6. Ukwethulwa kokutholakele nokudingida

Kule nzikandaweni, kwethulwa okwatholakala ocwaningweni lobungako botho nolobunjalo botho.

### 6.1 Okutholakale ocwaningweni lobungako botho

Ukuhlaziywa kolwazi olwatholakala ocwaningweni lobungako botho kuzokwandulelwa imiphumela yesivivinyo sobunjalo-kuqhelelana kolwazi.

#### 6.1.1 Isivivinyo sobunjalo-kuqhelelana kolwazi (data normality test)

Ngokuka-Oztuna nabanye (2006), uma ulwazi lungahambisani nezihlawumbiselo zobunjalo-kuqhelelana kolwazi, kuye kube nzima ukufinyelela esiphethweni esinobuqiniso ngobunjalo bolwazi. Kulo msebenzi, kuye kwasetshenziswa isivivinyo se*Shapiro Wilk* ukuhlola ukuthi ngabe ulwazi lobungako botho belunokuqhelelana yini noma qha. Isivivinyo se*Shapiro Wilk* siphinde sasetshenziselwa ukuthola ukuthi ngabe isivivinyo ebesifanele ulwazi lobungako botho bekufanele sibe ngesepharamethrikhi noma qha (*parametric or non-parametric test*).

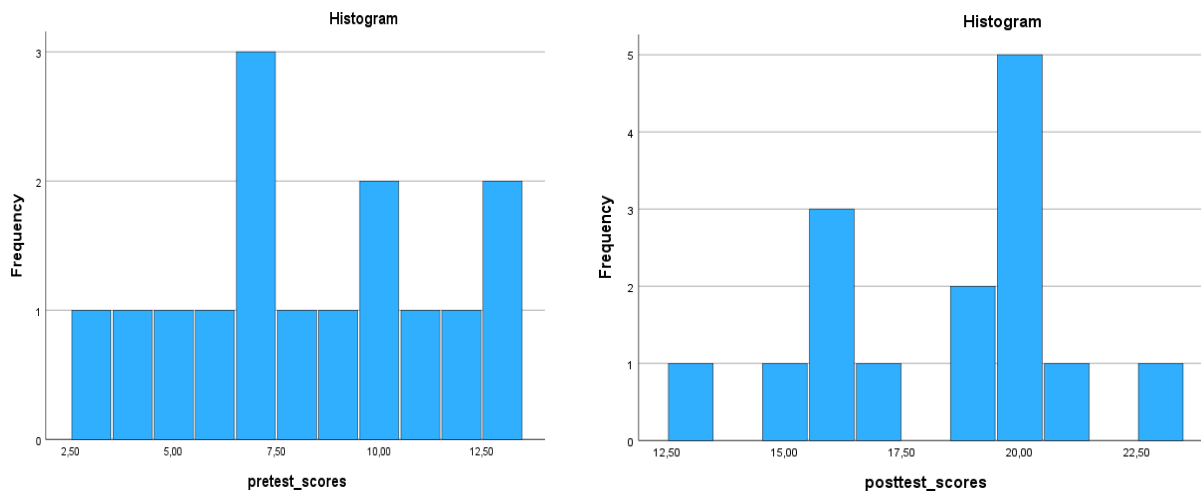
Ngokwesivivinyo se*Saphiro Wilk*, ithuluzi-kuhlola (*determinant*) lobunjalo-kuqhelelana kolwazi kuyaye kube yisilinganingo sika-*alpha* esingaphezudlwana kuka-0.05 ( $p > .05$ ). Isilinganiso sika-*alpha*, esivezwe ethebuleni elingezansi siye sasetshenziselwa ukuhlola ubunjalo-kuqhelelana kolwazi, kanye nokuhlalukisa ukuthi ngabe kufanele yini isihlawumbiselo sokuthi ulwazi lunobunjalo-kuqhelelana okuyikho (*null hypothesis: H<sub>0</sub>*) samukelwe ngaphezu kwesihlawumbiselo sokuthi ulwazi alunabo ubunjalo-kuqhelelana (*Alternative hypothesis: H<sub>1</sub>*).

**Ithebula 1:** Isifinyezo solwazi ngokobungako babahlanganyeli

|                         | Valid |         | Missing |         | Total |         |
|-------------------------|-------|---------|---------|---------|-------|---------|
|                         | N     | Percent | N       | Percent | N     | Percent |
| <b>Pre-test scores</b>  | 15    | 100,0%  | 0       | 0,0%    | 15    | 100,0%  |
| <b>Post-test scores</b> | 15    | 100,0%  | 0       | 0,0%    | 15    | 100,0%  |

**Ithebula 2:** Ithebula lobunjalo-kuqhelelana kolwazi

|                  | Kolmogorov-Smirnov <sup>a</sup> |    |       | Shapiro-Wilk |    |      |
|------------------|---------------------------------|----|-------|--------------|----|------|
|                  | Statistic                       | Df | Sig.  | Statistic    | Df | Sig. |
| <b>Pretest</b>   | ,130                            | 15 | ,200* | ,960         | 15 | ,699 |
| <b>Post-test</b> | ,199                            | 15 | ,114  | ,935         | 15 | ,321 |

**Umfanekiso 9:** Ubunjalo-kuqhelelana kolwazi ngokwegrafu eyi-histogram.

Ngokwemiphumela yesivivinyo sobunjalo-kuqhelelana, ulwazi olunyombuluke ezivivinyweni ezimbili lunokuqhelelana okufanelekile. Ngokwethebula lesibili, isilinganiso sika-*alpha* esivivinyweni sangaphambi kocwaningo singu-0.699, kanti esesivivinyo sangemuva kocwaningo singu-0.321. Zombili lezi zilinganiso zingaphezulu kuka-0.05.

$0.699 > 0.05$  (isivivinyo sangaphambi kocwaningo)

$0.321 > 0.05$  (isivivinyo sangemva kocwaningo)

Ukweseka ulwazi olwethulwe ngezinombolo, ulwazi olubonakalayo luveza ukuthi amagrafu ehistogramu (kuzona zombili izivivinyo) amise okwensimbi (*bell-shaped*), okuchaza ukuthi ulwazi lunokuqhelelana okufanelekile. Ngakho-ke, kufanelekile ukuthi kusetshenziswe isivivinyo se-*paired sample t-test*, (okuyisivivinyo sepharametrikhi) ukuhlola umthelela wokusebenzisa ulimi lwesiZulu lapho kufundiswa ulwazi lokubala eziboshweni kunzikandaweni wasemagunjini okufundela asesikhungweni sokuhlumelelisa izimilo.

### 6.1.2 Isivivinyo i-paired samples t-test

Izihlawumbiselo zesivivinyo i-*paired samples t-test* bezimi kanje:

**Isihlawumbiselo esithi awukho umehluko (*null hypothesis*):** Ngokwalesi sihlawumbiselo, awukho umehluko wamamini (*mean difference*) phakathi kwesivivinyo sangemuva kocwaningo nesivivinyo sangaphambi kocwaningo. Ngezinye izindlela, ukusebenzisa ulimi lwesiZulu, ngokwalesi sihlawumbiselo, akwenzanga mehluko olwazini lokubala lweziboshwa.

**Isihlawumbiselo esithi ukhona umehluko (*alternative hypothesis*):** Ngokwalesi sihlawumbiselo, ukhona umehluko wamamini phakathi kwesivivinyo sangemva kocwaningo nesangaphambi kocwaningo. Ngezinye izindlela, ukusebenzisa ulimi lwesiZulu kube nomthelela ekuthuthukiseni ulwazi lokubala lwababoshwa ngoba amamaki abawathole ngemva kocwaningo aphezulu kunalawo abebewathole ngaphambi kocwaningo.

Lesi sivivinyo esingezansi siye sasetshenziswa ukuhlola umthelela wokusetshenziswa kolimi lwesiZulu olwazini lokubala.

**Ithebula 3::** Imiphumela yesivivinyo *i-paired samples t-test*

|           |                        | Paired Differences |                   |                       |                                                |          | T       | Df | Significance    |                 |
|-----------|------------------------|--------------------|-------------------|-----------------------|------------------------------------------------|----------|---------|----|-----------------|-----------------|
|           |                        | Mean               | Std.<br>deviation | Std.<br>error<br>mean | 95% Confidence<br>intervalof the<br>difference |          |         |    | One-<br>sided p | Two-<br>sided p |
|           |                        |                    |                   |                       | Lower                                          | Upper    |         |    |                 |                 |
| Pair<br>1 | Pretest –<br>Post-test | -10,00000          | 300000            | ,77460                | -11,66134                                      | -8,33866 | -12,910 | 14 | <.001           | <.001           |

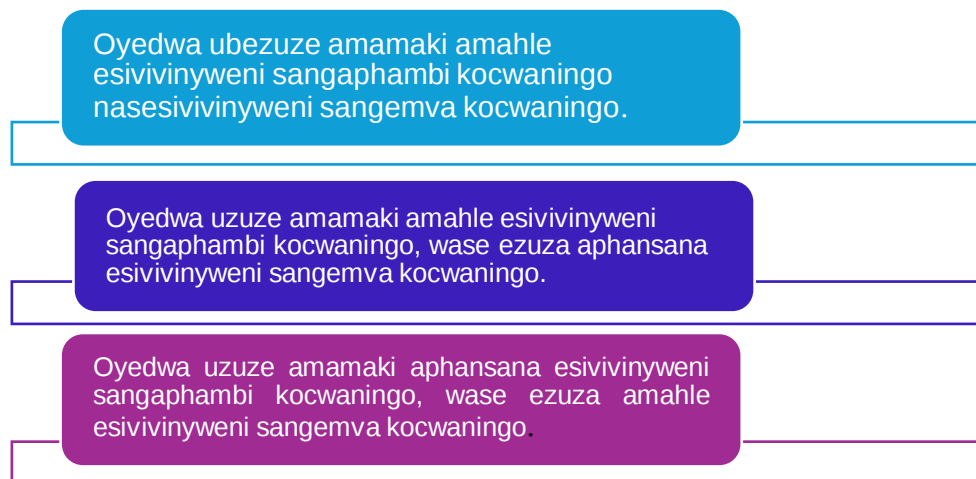
Ithebula lesithathu liveza ukuthi umehluko phakathi kwamamini esivivinyo sangaphambi kocwaningo nesangemva kocwaningo unophawu lokususa, okuchaza ukuthi amamaki atholwe yiziboshwa ngemva kokusetshenziswa kwesiZulu lapho kufundiswa ukubala angaphezu kwamamaki ebeziwathole ngaphambi kokuthi kusetshenziswe ulimi lwesiZulu. Ukunyombulula ukuthi empeleni, ngabe mkhulu yini umehluko owenziwe ukusetshenziswa kolimi lwesiZulu olwazini lokubala, *i-t-value* ingaphezulu kakhulu kwe-*critical value* engu-2,045 (bheka ithebula elingenhla).

$$12.91 > 2.045$$

## 6.2 Okutholakale ocwaningweni lobunjalo botho

Izindikimba ezihlalukiswe zaphinde zadingidwa ngezansi ziye zavela ngesikhathi kuhlaziywa ulwazi olunyombuluke kubahlanganyeli abathathu, abakhethwe ngenhloso yokuxuba ulwazi lobunjalo botho (*maximum variation purposive sampling for qualitative data purposes*), besuselwa kulabo abayishumi nanhlanu abebeyingxanye yabahlanganyeli bocwaningo lobungako botho. Laba bahlanganyeli abathathu bakhethwe ngoba bebeyingcosana, ebimele amaqeqebana amathathu ahlukene, iqeqebana okungabonakala mehluko kulona; iqeqebana okubonakale umehluko omuhle kulona; iqeqebana okubonakale umehluko ongemuhle kulona. Lokhu kukhethwa kwabahlanganyeli kwenziwe njengoba kuvezwe emdwebweni osemfanekisweni weshumi ngezansi.

**Umfanekiso 10:** Ukukhethwa kwabahlanganyeli engxenyeni yocwaningo lobunjalo botho.



*Ukuphawula:* Lo mdwebho ukhombisa ukukhethwa kwabahlanganyeli bengxenyeni yocwaningo lobunjalo botho.

Inhloso-ngqangi yokukhetha laba bahlanganyeli ukuthi abacwaningi bebehlose ukuthola izimvo (ngomthelela wokusetshenziswa kolimi lwesiZulu) ezehlukene, ezingenakuchema, futhi ezimele abahlanganyeli abanamazinga ahlukeni okuqonda (*various cognitive levels*).

Izindikimba eziye zanyombuluka, noma kubukeka sengathi azinabuhlobo, kodwa kuningi ukuhlobana okukhona phakathi kwazo, ikakhulu ngoba zonke beziphokophele ukuphendula umbuzo-ngqangi wocwaningo. Ngaleso sizathu-ke, abacwaningi baye baveza ubuhlobo obuphakathi kwalezi zindikimba ngokusebenzisa umdwebho osemfanekisweni weshumi nanye ngezansi.

**Umfanekiso 11:** Ukuhlobana okuphakathi kwezindikimba



*Ukuphawula:* Lo mdwebho ukhombisa ukuhlobana nokuthwaxana phakathi kwezindikimba.

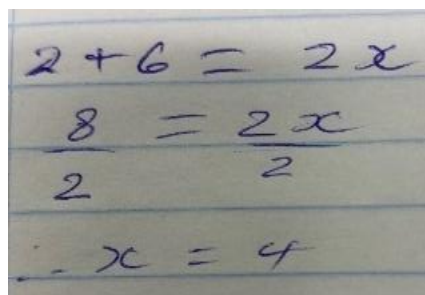
### 6.2.1 Ukusetshenziswa kolimi lwesiZulu kunzikandaweni wamagumbi okufundela ulwazi lokubala njengesu elithuthukisa ulwazi lolimi nhlangothi zombili

Ulwazi luye lwaveza ukuthi ukusetshenziswa kolimi lwesiZulu kuyithuluzi elimqoka, nelithuthukisa ulwazi lolimi lwesiZulu nolwazi lolimi lokubala (*mathematical register*) kanye kanye. **Umhlanganyeli oyisiboshwa A** uye waveza ukuthi ngokusetshenziswa kolimi lwesiZulu njengolimi lokuFunda nokuFundisa, ulwazi lwakhe lolimi lwezibalo luye lwathuthuka, kanti futhi nolwazi lwakhe lolimi lwesiZulu luye lwathuthuka. Amazwi alo mhlanganyeli alokothiswe ngezansi:

*Siyasiza sona isiZulu ngoba ekugcineni, uyakwazi ukuthola ukuthi amagama athile emaths aqonde ukuthini, futhi, uma unikezwa isibalo esithile ungasenza kanjani. Uyabona nje, bengingazi ukuthi ukuthola umehluko kuchaza ukuthini. Uma kuthiwa mhlampe “what is the difference between 7 and 25” mina bengingaphendula ngithi, enye inamba inezinamba ezimbili, enye ineyodwa. Kodwa, ngokolimi lwezibalo, lokhu kuchaza ukuthi uma uthatha okuyisikhombisa kokungamashumi amabili nanhlanu, kahle kahle, kusala okungakanani (okungumehluko). Uma futhi kuzothiwa: simplify.*

$$2+6=2x$$

*Mina bengingavele ngithi, kuthiwa angeze kube lula, ngakho angisuse u2x kusale u-2+6, bese-ke i-answer kuba wu-8. Kodwa lokhu kuchaza ukuthi (ngokolimi lwezibalo), kufanele kutholakale ukuthi u-x umele yiphi inumber.*



$$\begin{array}{rcl} 2 + 6 & = & 2x \\ 8 & = & 2x \\ \frac{8}{2} & = & \frac{2x}{2} \\ x & = & 4 \end{array}$$

Ngakolunye uhlangothi, **umhlanganyeli oyisiboshwa B** uveze ukuthi ukusetshenziswa kolimi lwesiZulu akumlekelelanga kuphela ekutheni aqonde ulimi lwezibalo, kodwa ugcine eseqonda nolimi lwesiZulu. Amazwi **omhlanganyeli oyisiboshwa B** alokothiswe ngezansi.

*Ngigcine sengiqonda nokuthi amagama athile esiZulu abhalwa aphinde aphinyiswa kanjani. Ukusetshenziswa kolimi lwesiZulu ngesikhathi kufundiswa izibalo kungisize kabili. Ngiqonde izibalo kangcono [ulimi lwezibalo], ngaphinde ngakwazi futhi ukubhala nokufunda isiZulu.*

Amazwi abahlanganyeli abacashunwe ngenhla aveza ukuthi ukusetshenziswa kolimi lwesiZulu kunzikandaweni wokufunda ukubala emagunjini okufundela kudlala izindima ezimbili, eyokuthuthukisa ulwazi lolimi lwesiZulu kanye neyokuthuthukisa ulwazi lolimi lwezibalo. Njengoba uPhakeng no-Essien (2016) beqakulisa, izibalo ziwulimi nazo ngokwazo ngoba zisebenzisa izinombolo, izinkomba kanye namagama athile, aqondwa kuphela abafundi nothisha bezibalo. Ngaleso sizathu-ke, othisha bezibalo babhekene nomsebenzi ombaxambili (*dual task*), wokuthuthukisa ulwazi lolimi lwezibalo kanye nolwazi lolimi izibalo ezifundiswa ngalo (Phakeng et al., 2018; Planas & Setati-Phakeng, 2014). Ngokwalolu cwaningo, lo msebenzi ombaxambili uyay ubelula uma izibalo zifundiswa ngolimi lwesiZulu. Okusempeleni, ukuthuthuka kolwazi lolimi lwesiZulu nolwazi lolimi lwezibalo kuhlalukisa (ngandlela thize) ukusebenza kolimi (lwesiZulu kule nzikandaweni), njengesikhali (Planas & Setati-Phakeng, 2014) ngaphezu kokuthi lona (ulimi lwesiZulu) lube yinkinga. OPlanas noSetati-Phakeng (2014) bathi, lolu guquko lomqondo oluphundula ulimi njengenkinga lube wulimi njengesikhali kusemqoka ukuthi lwenzeke ekufundisweni kwezibalo. Lolucwaningo-ke luveze ukuthi, lolu guquko lwenzeka lapho ulimi lwesiZulu lusebenza ngokumbaxambili, njengegqokekisi lokuthuthukisa ulimi lwesiZulu nanjengegqokekisi lokuthuthukisa ulimi lwezibalo. Ukusebenza kolimi ngokumbaxambili kube nomthelela wokuthi abafundi abayiziboshwa benze kangcono esivivinyweni sangemva kocwaningo. Ngezinye izindlela, isiphawulo esilawulayo (controlling variable) esiholele ekuthuthukeni kwezinga lokuqonda nokwenza kangcono ezibalweni (okubonakale esivivinyweni sangemva kocwaningo) kube ukusetshenziswa kolimi lwesiZulu.

### 6.2.2 Ulimi lwesiZulu njengegqokekisi lokunqanda ukuqonela kohlelo lwesifundo sezibalo emagunjini asezikhungweni zokuhlunyeleliswa kwezimilo

Lolucwaningo luye lwaveza ukuthi ukusetshenziswa kolimi lwesiZulu kuyithuluzi elisemqoka, elingasetshenziselwa ukunqanda ukuqonela ohlelweni lwesifundo sezibalo emagunjini asezikhungweni zokuhlunyeleliswa kwezimilo. **Umhlanganyeli oyisiboshwa C** uveze ukuthi ngokusetshenziswa kolimi lwesiZulu, useyaqonda ukuthi ulwazi lokubala lunyombuluka e-Afrika, futhi lungasetshenziselwa ukuxazulula izinkinga ezikhungethe unzikandaweni wase-Afrika. Amazwi **omhlanganyeli oyisiboshwa C** acashunwe ngezansi.

*Ekupheleni, ngangicabanga ukuthi izibalo ziyinto yabelungu, engenakulumbana nempilo yethu. Kodwa, ngokusetshenziswa kolimi lwesiZulu uma kufundiswa izibalo, sengiyaqonda ukuthi izibalo ziyingxenye yempilo yethu, futhi zingasetshenziswa ukuxazulula izinkinga esibhekana nazo imihla ngemihla.*

Ngokwalo mhlanganyeli, ulimi lwesiZulu ludlala indima enkulu ekunqandeni ukuqonelwa kohlelo lwesifundo sezibalo. Noma lukhona ucwaningo oluveza ubumqoka neqhaza elidlalwa yizilimi zomdabu ekuqikeleleni ukunqandeka kokuqonelwa kohlelo lwezifundo, kodwa lumfiliba oludalula iqhaza lolimi lwesiZulu ngokukhethekile kulo mshikashika wokunqandwa kokuqonela. Isibonelo, abacwaningi abangoPhyak noDe Costa (2021, p.293) bathi:

*Indigenous languages are keys in understanding and in establishing how best can curriculum be culturally appropriate, particularly in the African context. In fact, indigenous languages are instrumental in decolonising the curriculum (Phyak noDe Costa, 2021, p. 293).*

*(Izilimi zomdabu ziwukhiye ekuqondeni nasekunyombululeni ukuthi uhlelo lwezifundo lungahambisana kanjani namasiko, ikakhulu kunzikandaweni wase-Afrika. Okusempeleni, izilimi zomdabu zisemqoka ekunqandeni ukuqonelwa kohlelo lwezifundo).*

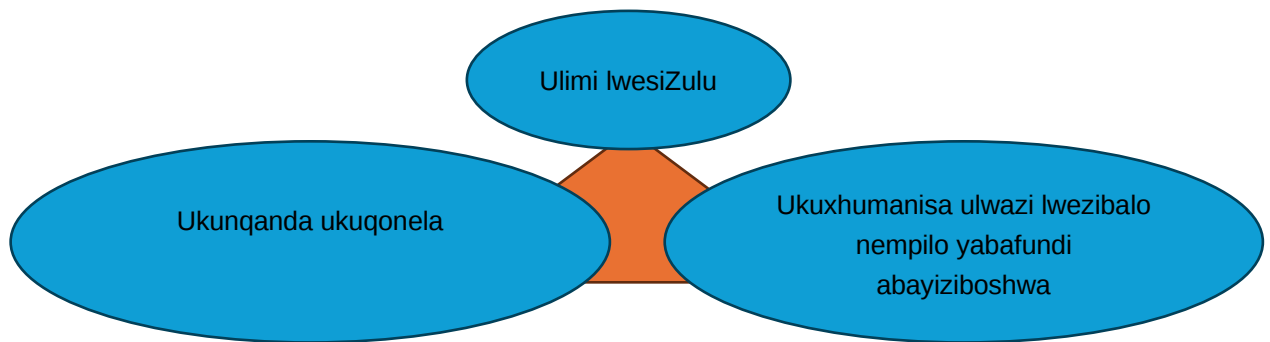
Lesi sicaphuno esingenhla sichaza ukuthi izilimi zomdabu ziyisihluthulelo esivula iminyango yokuqonda ulwazi oluthile (olwethulwayo), neselekelela ekuhlobaniseni amasiko nohlelo lwezifundo kunzikandaweni wase-Afrika. Ngokwalesi sicaphuno esingenhla, izilimi zomdabu zibamba iqhaza elisemqoka ekunqandeni ukuqonela ohlelweni lwezifundo.

Noma lo mqakuliswano ongenhla udalula ubumqoka bezilimi zomdabu ekunqandeni ukuqonela, kodwa abacwaningi abakuhlalukisi ukuthi ngabe yiziphi izilimi zomdabu eziseqhulwini kulo mshikashika. Ngaphezu kwalokho, lesi sicaphuno esingenhla asidaluli ukuthi ngabe ukunqandeka kokuqonela kwaluphi uhlelo lwezifundo okubonakala ngokuvamile lapho kusetshenziswa izilimi zomdabu njengezilimi zokufunda nokufundisa. Lolu cwaningo-ke luveze ukuthi ulimi lwesiZulu, uma lusetshenziswa njengolimi lokufunda nokufundisa ulwazi lokubala kunzikandaweni wasemagunjini okufundela, luyelekelela ekunqandeni ukuqonela. Ithuluzi nesiboniso esisemqoka sokunqandeka kokuqonela ukuthuthuka kwezinga-kwenza labafundi. Yingakho-ke, kulolu cwaningo, kuye kwavela ukuthi imiphumela yesivivinyo sangemva kocwaningo ingaphezulu kwemiphumela yangaphambi kocwaningo, futhi umehluko phakathi kwamamini (mean difference) alezi zivivinyo ungobonakalayo.

Umbono wensizakuhlaziya kaKnowles (1984) wokulumbanisa imfundo etholiwe nokuthile ungasetshenziswa njengesibuko kule nzikandaweni ngoba, ngokusetshenziswa kolimi lwesiZulu njengolimi lokuFunda nokuFundisa, iziboshwa ziye zathuthuka olwazini lokulumbanisa ulwazi lwezibalo nezinkinga ezibhekene nazo. Okuseqinisweni, ukusetshenziswa kolimi lwezibalo kwenze umsebenzi ombaxambili,

okungukunqanda ukuqonela nokuxhumanisa ulwazi lwezibalo nempilo yabafundi abayiziboshwa yemihla ngemihla. Lokhu-ke, abacwaningi baye bakubiza ngonxantathu wokusetshenziswa kolimi lwesiZulu njengolimi lokuFunda nokuFundisa (bheka umdwebo ohlalukiswe emfanekisweni weshumi nambili ngezansi).

**Umfanekiso 12:** Unxantathu wokusetshenziswa kolimi lwesiZulu njengoLimi lokuFunda nokuFundisa



*Ukuphawula:* Lo mdwebo ukhombisa lokhu abacwaningi abakubize ngonxantathu wokusetshenziswa kolimi lwesiZulu njengoLimi lokuFunda nokuFundisa.

### 6.2.3 Iqhaza elibanjwa ulimi lwesiZulu ekuthuthukiseni ulwazi lokubala ngokuqonda okudephile.

Ngokwalolu cwaningo, kuye kwavela ukuthi ukusetshenziswa kwamagama ezinombolo ngolimi lwesiZulu kuthuthukisa ulwazi lokubala nokuqonda okudephile ngobunjalo bezinombolo. **Umhlanganyeli oyisiboshwa C** uye waveza ukuthi, ukusetshenziswa kwamagama ezinombolo ngolimi lwesiZulu kumelekelelile ekuqondeni ngokudephile ubunjalo-kuhleleka (place values) kwezinombolo. Amazwi **omhlanganyeli oyisiboshwa C** acashunwe ngezansi.

*Bengingawazi amaplace-values, kodwa ukusetshenziswa kolimi lwesiZulu kungelekelele ukuqonda ukuthi empeleni, amagama ezinombolo esiZulu aqanjwa ngokwama-place values akhona. Isibonelo enombolweni yamashumi amabili, mabili kunama-tens amabili, nama-units ayisihlanu. Kanjalo nasemakhulwini ayisikhombisa namashumi ayisithupha nesihlanu, amakhulu ayisikhombisa angaphansi kwamakhulu, amashumi ayisithupha angaphansi kwamashumi, bese kuthi isihlanu singaphansi kwama-units. Uma-ke sekuhlanganiswa, kungasetshenziswa lolu lwazi ukuhlela izinamba ngegrouning.*

$$\begin{array}{r}
 750 + 220 \\
 200 + 50 + 200 + 20 \\
 (700 + 50) + (200 + 20) \\
 900 + 70 \\
 900 \\
 \quad 70 \\
 \hline
 970
 \end{array}$$

**Ngokomhlanganyeli oyisiboshwa C**, ulimi lwesiZulu lube yithuluzi nesikhali sokuqonda izinombolo ngokudephile, lwaphinde futhi (ulimi lwesiZulu) lwaba yisikhali esisemqoka ekwelekeleleni ukuqondwa okudephile kolwazi lokuhlanganisa. Lesi kungaba yisizathu esenza iziboshwa zenze kangcono esivivinyweni sangemva kocwaningo, lapho ebezikade sezifundiswe khona kusetshenziswa ulimi lwesiZulu. Ukusebenza kolimi njengethuluzi lokuthuthukisa ulwazi oludephile kuye kwadingidwa ocwaningweni oluhlola ubudlelwano obuphakathi kokuthuthuka kolwazi oludephile ngesifundo simbe nolimi (Erickson noLanning, 2013; Giddens nabanye., 2012). Nokho, lolu cwaningo aluhlalukisanga ukuthi ngabe uLimi lwaseKhaya yini noma uLimi lokuQala loKwengeza olusiza ekuthuthukiseni ulwazi oludephile. Lolu cwaningo luvezile ukuthi, empeleni, uLimi lwaseKhaya ludlala indima emqoka ekuthuthuthukiseni ulwazi oludephile, ikakhulu esifundweni sokubala, kunzikadaweni wasezikhungweni zokuhlunyeleliswa kwezimilo.

Ngokwensizakuhlaziya kaKnowles yowe-1984, abantu abadala banezizathu ezibenza baphokophele ukuthola imfundo. Lolu cwaningo luye lwakuhlalukisa ukuthi isizathu esinqala esenza abantu abadala baphokophele ukuthola imfundo ukuthola izixazululo zezinkinga ababhekene nazo kanye nokuthola ulwazi oludephile nolujulile ngesifundo simbe abasuke besifunda. Isibonelo, umhlanganyeli obalulwe ngenhla ufunde izibalo ngesizathu sokuthola ulwazi oludephile ngezinombolo nangokuhleleka kwazo. Lolo lwazi luye lwamelekelela ukuqonda enye yezindlela zokuhlanganisa, noma ebengayifundiswanga. Lolu lwazi lungamsiza futhi ekuxazululeni izinkinga zasempilweni yangempela, engaphandle kukanzikandaweni wegumbi lokufundela.

## 7. Iziphakamiso nesiphetho

Abacwaningi baye bakuthola ukuthi ukusetshenziswa kolimi lwesiZulu kwenza umehluko obonakalayo ekuthuthukeni kolwazi lwezibalo emagunjini okufundela asezikhungweni zokuhlunyeleliswa kwezimilo. Kuye kwahlaluka futhi ukuthi lowo mehluko obonakalayo ungayamaniswa neqhaza elimbaxambili elidlalwa ukusetshenziswa kolimi lwesiZulu, okuwukuthuthukisa ulwazi lolimi lwesiZulu kanye nokuthuthukisa ulwazi lolimi lwezibalo. Lolu cwaningo luye lwakuveza futhi ukuthi ulimi lwesiZulu luyisikhali nethuluzi elisemqoka ekuthuthukiseni ulwazi oludephile lokubala nasekunqandeni ukuqonelwa kohlelo lwesifundo sezibalo. Abacwaningi baphakamisa ukuthi ukusetshenziswa koLimi lwaseKhaya njengoLimi lokuFunda nokuFundisa kungagcini kuphela emabangeni asesiGabeni esiyisiSekelo, kodwa kusabalalele nasemfundweni yabadala abafundi bekunzikandaweni wamagumbi okufundela asezikhungweni zokuhlunyeleliswa kwezimilo.

## 8. Isifungo ngokulandelwa kwenkambiso elungileyo nenqubonhle yocwaningo

Abacwaningi baye bathola incwadi ebagunyaza ukuthi baqoqe ulwazi, evela esikhungweni socwaningi wokuqala kuleli phepha ngaphambi kokuthi baqoqe ulwazi.

Amagama abahlanganyeli aye afihlwa, kanti (abahlanganyeli) baye bachazelwa ngamalungelo abo, kwaqinisekiswa futhi nokuthi bayakuqonda ukuthi banelungelo lokuhoxa noma yinini kulolu cwaningo. Njengoba lolu cwaningo belugxile kunzikandaweni wasesikhungweni sokuhlunyeleliswa kwezimilo, kuye kwaqinisekiswa ukuthi incwadi egunyaza ukuqoqwa kolwazi, evela emnyangweni kaZwelonke wokuHlunyeleliswa Kwezimilo iyazuzwa, ngaphambi kokuqoqwa kolwazi.

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