

SADiLaR

INCWADINDABA YESINDEBELE

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ISINGATHWE YI:



NORTH-WEST UNIVERSITY
NOORDWES-UNIVERSITEIT
YUNIBESITHI YA BOKONE-BOPHIRIMA

ABASEBENZISANI:





UKUHLANGANISA ISIKHATHI SAKADE NESIKHATHI SANJE: ISIFUNDOBANDULO SOKWENZA IDIJITHALI ERHOLWENI LEMAZISI KUNENE

- **Rooweither Mabuya**

Esikhathini sanje lapho idijithali ikhula khona, ukubulungwa kanye nokufinyeleleka kweembunjwa ezitshwaya umlando kanye nemitlolo etlolwe ngesandla kube yinto eqakatheke khulu kwamambala. I-South African Centre for Digital Language Resources (SADiLaR), mhlapha nje ihlele isifundobandulo esiphathelene nedijithali ebesibanjelwe eRholweni leMazisi Kunene e-Durban. Isifundobandulwesi besidoswa phambili ngu-Rooweither Mabuya kanye no-Andiswa Bukula, ekubarhubhululi bedijithali yobuntu, kanye no-Juan Steyn, omNqophisi wezemiSebenzi kwa-SADiLaR. Umnqopho wesifundobandulwesi bekunikela abasebenzi berholweli kanye nabasebenzisani babo, umhlahlandlela ekambisweni yoke yokwenza imitlolwabo etlolwe ngesandla ngendlela yedijithali.

FUNDA NGANAKHU OKULANDELAKO:

Ukuhlanganisa isikhathi sakade nesikhathi sanje: Isifundobandulo sokwenza idijithali eRholweni leMazisi Kunene

Isilululwazi Seensizakusebenza Zelimi Sakwa-SADiLaR Sinikela Irhubululo Lelimi Amandla

SADiLaR— ihlelo lokufundisa ngamabizelo le-UJ liveza amabizelo akhona emkhakheni wedijithali yobuntu

Irhubululo lakwa-SADiLaR elisekelwe ngeemali lisekela abantwana abangakghoni ukukhuluma kuhle ilimi leSepedi

I-SADiLaR igidinga ipumulelo yesi-4 yesifundobandulo se-RAIL e-Croatia

Irhubululo leziqo ze-PhD libeka i-SADiLaR ebalazweni lephasi loke

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IRholo leMazisi Kunene iliziko lamasiko elizinikelele khulu ekukhumbuleni iimpilo kanye nemisebenzi yeembongi neyaloyo owayesisazi sefilosofi, uMazisi Kunene. Irholweli ilikhaya lapho kutholakala khona ibuthelelo elinengi khulu lemitlolo etlolwe ngesandla eligugu kanye neembunjwa eziletha umbono wesikhumbuzo kanye nokunotha komlando wamasiko eSewula Afrika. Yeke-ke, imitlolo le kanye neembunjwezi, ezisebujameni bokonakala lula bezisengozini yokurhwahlaphala kanye nokungasafinyeleleki lula ngebanga lobujamo ebezikibo nangendlela ebezibumbeke ngayo.

Ukuzwisisa ukuqakatheka kokubulunga amagugu atshwaya umlando la ngokuwabulungela isizukulwana esizako, abadosiphambili besifundobandulwesi, uMabuya, uBukula kanye no-*Steyn*, balethe umqondo wokwenza kwedijithali. Batjengise bonyana ubutlharhatlharha bamva nje bungabubuyisa njani ubujamo bemitlolo yakade etlolwe ngesandla begodu benze nokobana imitlolo le ifinyeleleke lula ebantwini boke ephasini zombebele.

Abadosiphambilaba banikele abazibandakanyileko kusifundobandulwesi umhlahlandlela wokobana ihlelo ledijithali lisebenza

njani ngokubahlahlela igadango ngalinye. Batjengise bonyana imitlolo etlolwe ngesandla le kufanele iphathwe njani, babuye godu baveza isidingo sokobana imitlolo le iphethwe ngesineke nangokutjheja okukhulu lokha nasele iskenwa. Abakhambele isifundobandulwesi bafunde ngesakhiwo samafayili, ukuhlelwa kweensombululo, kanye nokulawulwa kwe-metadata. Koke lokhu kwenziwe ngomnqopho wokutlama idijithali enabileko yeenlululwazi.

Ihlelo ledijithali likhuthaza ukuhlanganyela kanye nokwabelana kwelwazi ngendlela yokunikelana amametheriyali enziwe ngedijithali hlangana kwamanye amarholo namaziko. Lokhu kubuye godu kuqinise ukufinyeleleka lula kwamametheriyali ngokuvumela abarhubhululi, abafundi, kanye nabathandi bemisebenzi le abavela ephasini zombebele bonyana bafunde begodu bathabele imisebenzi le yomlando bakude.

Ukubulunga igugu lamasiko ngendlela yobutlharhatlharha bamva nje

Okuqakatheke khulu kwamambala mayelana nalokho

Sithinta:





okwenzeke kusifundobandulwesi kube kunikelwa komtjhini wokuskena, ekuyi-IRIScan Desk 5 Pro kanye nomtjhinengqondo. linsetjenziswezi zizokusebenza nje njengethulusi eliqakatheke khulu ekambisweni le yedijithali. linsetjenziswezi zizokubuye godu zisize irholweli bonyana litjhugulule imitlolwalo etlolwe ngesandla; iyitjhugululele esakhiweni sedijithali ngendlela yokobana ibumbeke ngendlela eseqophelweni eliphezulu. Izici zeskena sabo zinabile, okufaka hlangana ukuphendlwa kwephepha okuzenzakalelako kanye nokuletha umkhanyo omuhle wesithombe. Zoke lezizici zeskena zizokuqinisekisa ukubulungeka kwemitlolo etlolwe ngesandla yendabuko ukwenzela bonyana ziyinikele isithunzi begodu ziyinikele ubujamo nesibumbeko esinembako.

Ukuphawula okuvela eRholweni leMazisi Kunene okuya ehlelweni ledijithali kuletha ithemba elikhulu lokubulungeka kanye nokufinyeleleka kwamagugu wesiko. Abazibandakanyileko kusifundobandulwesi bagcugcuzelwe bonyana baragele phambili ngehlelo ledijithali nanyana sele umnyanya ungasekho ukuze kuqinisekiswe ukusimama

okunabileko kwesilululwazi sedijithali. IRholweli lihlele ukuzibandakanya ekuhlanganyeleni ukuze likhulise ilwazi lalo ledijithali kanye nokwenza iindlela ezitja zokutlama ukuze libandakanye abantu ebuthelweni lalo ledijithali.

Isifundobandulwesi sedijithali eRholweni leMazisi Kunene sibe yitshwayamlendo ekhambeni lokubulungula kanye nokukhuthaza amagugu wesiko ngendlela yobutlharhatlharha bamva nje. Ngokudoswa phambili zizazi kanye nehlelo lokubonelelwa ngeensetjenziswa ezithuthukileko, abasebenzi berholweli kanye nalabo abadlala indima bahlonyiswe ngeenkhalo zokuqalana nekhambo labo lokutjhuguluka kwezinto esele zizokwenzeka ngendlela yedijithali.



Sithinta:





ISILULULWAZI SEENSIZAKUSEBENZA ZELIMI SAKWA-SADILAR SINIKELA IRHUBULULO LELIMI AMANDLA

- Birgit Ottermann

Ukutjhejwa, ukusatjalaliswa kanye nokugcinwa kwemitlolo yedijithali engasetjenziswa kabutjha kanye neensizakusebenza ezisiza ukukhuluma zamalimi asemthethweni weSewula Afrika kulitjhejo eliqakatheke khulu naziza eendabeni zerhubhululo kanye nokuthuthukisa emkhakheni lo wobutlharhatlharha belimi. Ilwazeli alikaqakatheki kwaphela ekuthuthukisweni kwamathulusi lawo enza kube lula ukuthintana hlangana kwamalimi ahlukahlukeneko, kodwana liqakatheke khulu ekunikeleni amalimi wekhayapha amandla ukuze akghone ukusebenziseka ehlelweni lokuthintana lamva nje. I-South African Centre for Digital Language Resources (SADiLaR), ithethe igadangweli ngokusebenzisa Isilululwazi Seensizakusebenza Zelimi. Bekube kunamhlanjisi, isilulwazesi simumethe izinto ezinengi khulu emalimini amanengi begodu koke lokhu kuyatholakala emphakathini ngokungena ekundleni evulekileko ukuze abantu bathole koke abakufunako.

“IsiLululwazi seenSizakusebenza zeLimi sakwa-SADiLaR sinamarekhodi angehla kwama-400 wezinto eziphathelene nelimi emalimini amanengi, ngitjho nemalimini ambalwa avela ngaphandle kweSewula Afrika”, kutjho uDorh. Friedel Wolff, omPhathi wobuThekniki kwa-SADiLaR. “Ezinye zalezizinto eziphathelene nelimi zihlathulula isisetjenziswa esibulum-inengi, ukunikela isibonelo, i-software esekela amalimi amanengana. Ingasi ukuthi soke isisetjenziswa esitholakala elimini lakho uzokuba nekareko kiso, kodwana kuzakuba ngilokho abarhubhululi abanye namkha abosonjinyere bama-software abadinga ukukwakhela into ekarisako yelimi lakho.”

Ukunikela iinsizakusebenza ubujamo basafuthi

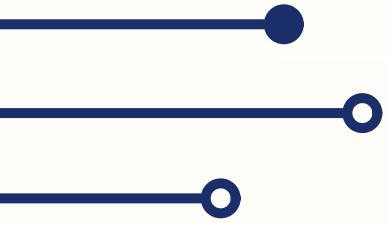
Imihlobo le ehlukahlukeneko ekhona yeensizakusebenza ithoma ukusuka emitlolweni esebenzisa igezi kanye nelwazi eliphathelene nekulumo (njengesizinda sebuthelole lemitlolo ethileko, irhelo lamagama, iinhlathululimagama, ukutjhugululwa kwemitlolo yeenkhumbuzo kanye nebuthelole lemitlolo etlolwe ngamalimi amanengi beyahlaliswa kuhle) ukuya eendleleni ezinengi zokusebenzisa iinsizakusebenza namathulusi kanye neenkundla ezisekela ihlelokambiso lelwazi kanye

nokuthuthukiswa kobutlharhatlharha obutjha.”

Ngokuya kuka-Wolff, ilwazi lerhubhululo elibulungwe esilulwini sakwa-SADiLaR kulilwazi eliqakatheke khulu kwambala ebarhubhululini. “Ilwazi elinengi lerhubhululo elisesilulwini lithethe isikhathi esinengi khulu bonyana lenziwe. Elinye ilwazi belidinga umuntu osisazi kilelo lwazi namkha ilwazi lobutjhiningqondo ekukulapho sithole khona bonyana balidlanzana khulu kithi abantu abanalo ilwazelo,” uyaphawula. “Isilululwazesi senza bonyana ilwazeli libe khona komunye nomunye umuntu olidingako nonekareko kilo. Okhunye godu mayelana nesilulwesi kukuthi umbono wakhona uhlose bonyana kube silulu esiphakamisa isihloko esinye nesinye esithileko esikhambelana nekareko lomrhubhululi namkha silethe ukukhula emkhakheni lo — ngamanye amagama, isilulwesi silinga ukunikela iinsazakusebenzezi ubujamo basafuthi. Ukubonelela ngobujamobu basafuthi kungenzeka bonyana kuyinto ebudisi khulu kwamabala nedondisako kubatlami abanengi begodu kuyinto engasilula ukuziphendulela ngaso

Sithinta:





soke isikhathi emisebenzinabo abasebenza kiyo. Lokhu kuletha ukufinyeleleka kwelwazi okulula khulu ngaphandle kokuzama ukungathuleli ingwani abantu abasebenza ngamandla ukutlama iinsizakusebenzezi," uyahlathulula.

Ukufinyeleleka okulula

UDorh. Benito Trollip, omrhubhululi wedijithali yobuntu kwa-SADiLaR, abuye godu abe msebenzisi othabileko nofake isandla kusilululwazi, uveza ukuphawula kwakhe ngehla. "Isilululwazi seenSizakusenza zeLimi sakwa-SADiLaR sibonelela ngokomgomo ikundla yasafuthi yokuletha ilwazi lelimi emphakathini ngokunabileko, ingasi kubarhubhululi kwaphela. Lokhu kufuna umuntu onerhuluphelo lokuzihlomisa ngelwazi ukuze abone bonyana yini ekhona zombebele emalimini lawo aziwa kancani bese athome enze ubutlharhatlharha obungasetjenziswa," kutjho u-Trollip.

Naziza kusilululwazi esifinyeleleka lula, u-Trollip ugandelela indaba yokobana kungaba budisi kangangani ukusebenzisa umthombo welwazi welimi esele ukhona namkha nangabe imininingwana ekhona mayelana nomthombo loyo welwazi usebujameni obuqokemeko, ilwazi elinjengalelo angekhe litholakale kusilululwazi.

"Kuthethe isikhathi esinengi khulu kanye nokusebenza ngamandla okukhulu ukuthola nokubuthelela ilwazeli. Ngewami umbono, kufanele singabi nomkhumbulo wokuba banikazi, ukuthuthukisa kanye nokusebenzisa ilwazi ngomnqopho wokobana sihlomule thina emisebenzinethu kanye nokuhlomula kwezeemali, kufanele sigijimele ekubeni nomkhumbulo wokusabalalisa nokwabelana ngelwazi emphakathini ukuze umphakathi uthole amandla," kuphetha u-Trollip.

Amathulusi aqakathekileko

UDorh. Lauretta Marais, omphathi wegatja lekulumo kwa-SADiLaR eMkhandlwini wobuSayensi neRhubhululo lomKhakha ekuyi-Council for Scientific Industrial

Research i-(CSIR) ngokurhunyeyizweko, kanye nesiqhema sakhe bathole okuhle kodwa kusilululwazi sakwa-SADiLaR njengabasebenzisi baso isilululwazesi kanye nabantu abafake isandla kiso. Babelane nabanye abantu iinsizakusebenza zabo eziqakathekileko, ekuyinto eyenze bonyana kube netuthuko emikhizweni ethengiswako, begodu bahlomule khulu ngokufinyelela iinsizakusebenza abangazange bazitlame bona ngokwabo.

"Erhubhululweni lePhimbo lobuTjhinengqondo lakwa-CSIR, elaziwa nge-Speech node of SADiLaR, isiseTjenziswa sesiLululwazi sibe lithulusi eliqakatheke khulu ekuhlelweni kanye nekwethuleni kwehlelo lethu lerhubhululo, kokubili njengendawo ethembekileko yokwabelana ngelwazi esilibuthelelako nesilikhizako, godu njengegandango lokuthoma lokha nasidinga iinsizakusebenza zelimi kuphrojekthethu. Ukufaka kwethu isandla kusilululwazesi kulethe ilwazi lekulumo eliseqophelweni eliphezulu, ekulilwazi elivela kuphrojekthethu yeLwazi 3, ekuyiphrojekthi esiyisebenzisele ukwenza ama-commercial suit yethu ye-TTS voice ebizwa nge-Qfrenzy," kutjho u-Marais.

"Esikhathini esidlulileko sifake isandla ekuletheni ilwazi lekulumo elinqophe ukubandula ihlelo lokudobha ikulumo, begodu lokho sisakwenza nanje. Ukungezelela kilokho, isilululwazesi sisebenze njengomthombo welwazi oqakatheke khulu lokha nasidinga ilwazi lomtlole elivela kwelinye nelinye ilimi elikhona eSewula Afrika. Ngikholelwa ekutheni omunye nomunye umfundi namkha umrhubhululi elimini eliphathelene nobutlharhatlharha eSewula Afrika kufanele azihlobanise nesilululwazesi begodu aqale lokho okunikelwa ngilesisilululwazi, khulukhulu nasitjheja ubujamo bokutlhayela kweensizakusebenza emaliminethu."

Sithinta:





Umlando omfitjhani

Ngokarisako, isilululwazesi sibe khona ngaphambi kokuba khona kwe-SADiLaR. Kusilululwazi esahlonywa ngomnyaka wee-2012 liZiko lobuTlharhatlharha bemiTlolo e-North-West University njengeHlangano yezokuLawulwa kweRhubhululo i-Research Management Agency (RMA) ngokuthola ukusekelwa ngeemali okuvela emNyangweni wobuKghwari namaSiko okusekelwe liZiko eliLawula iLimi loBuntu eliphathelene nobuTlharhatlharha ePhasini Loke. I-SADiLaR nayihlonywako ngomnyaka wee-2019 ngokusekelwa mNyango weSayensi nokuTlama (kulandela ukukhoselwa kanye nesigaba setuthuko ukusuka ngomnyaka wee-2016), i-RMA beyifakwa hlangana kusiLululwazi seenSizakusebenza seLimi. I-SADiLaR-ke yathatha iintambo ngomnqopho wokutjheja kanye nokugcinwa kwesilululwazi.

Letha isisetjenziswa sakho kithi

Nangabe wenze isisetjenziswa selimi begodu unesifiso sokobana isisetjenziswe namkha sitholakale, isilululwazi sakwa-SADiLaR kulapho ungakhetha khona bonyana isisetjenziswa sakho sitholakale khona. Kuyindawo ephiphileko begodu nenelayisense yehlelokambiso elungele omunye nomunye onelwazi alirhubhululileko emkhakheni welimi, wobuntu kanye nemkhakheni wesayensi yobuntu. Ukuthola imininingwana engeneleleko ngokuthi ungasiletha njani isisetjenziswa sakho, vakatjhela ekhasini [le-SADiLaR Resource Guide](#).



SADILAR— IHLELO LOKUFUNDISA NGAMABIZELO LE-UJ LIVEZA AMABIZELO AKHONA EMKHAKHENI WEDIJITHALI YOBUNTU

- **Birgit Ottermann**

Sithinta:



Isiqhema sabafundi abafundela ibizelo eliphathelene nezelimi esivela e-University of Johannesburg (UJ) sikhambele isifundobandulo ebesisingethwe ngehlelo lethungelelwano lapho bekunabasebenzi be-South African Centre for Digital Language Resources (SADiLaR) ukuze isiqhemesi sabafundi sifunde ngokunabileko ngamabizelo akhona emkhakheni lo wedijithali yobuntu. Ihlelo lokufundisa ngamabizelweli lithethe ilanga elilodwa lenzeke mhlazana amalanga ali-14 kuMgwengweni emnyakeni wee-2023 ngehlelo lethungelelwano lomkayi. Isifundobandulwesi sinikele abafundi umbono owehlukileko mayelana nemihlobo yamabizelo abangayilandela nasele baphothule iziqu zabo.



“Ihloswethu ekulu bekukubonelela abafundi ngesifundo esifitjhezana ukuze bafunde mayelana nedijithali yobuntu ebujameni bokusebenza kanye nokuthuthukiswa kwelimi,” kutjho uDorh. Benito Trollip, omrhubhululi wedijithali yobuntu elimini le-Afrikaans khona kwa-SADiLaR abuye godu abe mhleli wesifundwesi. “Sikwenze koke lokhu ngokwazisa abafundi bonyana iyini i-SADiLaR kanye nokubazisa ngama-nodes ahlukahlukene; sabuye sabatjengisa amanye wamathulusi esiwasebenzisako ukuhlaziya, ukuhlathulula ngokwemitlolo, ukutjhugulula imitlolo nokuthintana nelimi emkhakheni lo wedijithali. Nabasebenzi bakwa-SADiLaR bahlathulula imisebenzabo abayenzako khonapha kwa-SADiLaR.”

Umbono wesifundwesi uze lokha u-*Laurinda van Tonder*, ongulektjehara esiFundweni esiphathele nezeLimi emNyangweni wamaLimi, iimFundo zamaSiko nokuFundwa kwamaLimi e-*UJ* nakathintana no-*Trollip* ukuze athole bonyana isifundo sokufundisa ngamabizelo sizokukghonakala na bonyana sibanjelwe kwa-SADiLaR lapho kuzokufundiswa khona abafundi abenza umnyakabo wokugcina ebizelweni leemfundo eziphathelele nokusebenza ngelimi.

“U-*Laurinda* ungihlathululele bonyana abafundi vane babe nomsetjenzana welanga elilodwa abanikelwa wona emazikweni njengemabulungelweni weemali kanye nema-ofisini wombuso anzinze emphakathini (ekukulapho abosolimi basebenza khona), kodwana ucabange bonyana ukuletha abafundaba kwa-SADiLaR kuzokuqinisa indlela ababona ngayo amabizelo akhona emkhakheni lo welimi,” kukhumbula u-*Trollip*. “Ubuye godu wafanele bonyana angihlathululele bonyana siyini isifundwesi sokufundisa ngamabizelo — ekumsebenzi owenzisa ngehlelo lethungelelwano,” uyangezelela.

Isifundwesi siyazisa begodu siterhulula imicabango

Ngokuya kuka-*Trollip*, isifundo sokuthoma sokufundisa ngamabizelo se-SADiLaR sibe yipumelelo ekulu

khulu. “Sithole umbiko obuyako omuhle khulu ovela kilabo eebazibandakanyileko kanye nesiqhemeni sakwa-SADiLaR ekungileso esibe yingcenyane. Abafundi bazibandakanye khulu begodu ngiyakuzwelela ukuthintana kwabo phakathi kwesiqhema sakwa-SADiLaR kanye nabo. Ukuthintana kwabo kube ngilokho okuvamileko, okunelwazi elinengi kanye nalokho okuterhulula imikhumbulo.

“Sibe nesikhahi esinengi khulu kuthungelelwano begodu sitjengisa nabafundi bonyana balithola njani ilwazi, iinsizakusebenza kanye namathulusi abangawadinga. Iimfundo esizenzileko mayelana namathulusi ahlukahlukene zitjengisa abafundi bonyana yini ekhona begodu lokho okukhona kungabalekelela njani emisebenzinabo kanye nesikolweni emkhakheni ehlukehlukeneko yokusebenza ngelimi abaphezu kwayo namkha abahlela ukuyilandela,” utjho njalo. “Amathulusi amabili la avuse irhuluphelo nokuhlanganyela kwabafundi. Ithulusi lokuthoma kube mtjhini wokutjhugulula imitlolo i-Autshumato (ekumtjhini otjhugulula umutjho ukusuka esiNgisini ukuya esiZulwini) kanye nokuzuma amagama kuphuthali yekhophasi.”

Ngokuya kuka-Rooweither Mabuya, omrhubhululi wedijithali yobuntu elimini lesiZulu kwa-SADiLaR, nohlanganyele esifundwenesi kusetjhini yantambama, uthe abafundi babe nerhuluphelo lokufunda ngokungeneleleko ngerhubhululo elenzeka kwa-SADiLaR. “Ngabelane nabafundi umsebenzi werhubhululo lami begodu ngihlathululele bonyana ngingene njani emkhakheni lo wedijithali yobuntu kanye nakumfundaze wedijithali lokha nangiza kwa-SADiLaR. Ngibuye ngaveza godu bonyana ukukhambela iimfundobandulo kanye namathuba engibe nawo wokubandulwa kungisize njani ukuze ngizwisise iDijithali yoBuntu erhubhululweni lami.” UMabuya, omfundi weziqu ze-PhD, uthabe

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khulu lokha umfundi omunye nakambawa bonyana ababele amathulusi awasebenzisako erhubhululweni lakhe. Omunye wabarhubhululi bedijithali yobuntu kwa-SADiLaR, uMmasibidi Seteka (osebenza ngelimi leSesotho), uthabe khulu ngendlela abafundi ebezibandakanya ngayo. "Babuze imibuzo eminengi ephathelene nalokhu esikwenza la kwa-SADiLaR. Njengombana idijithali yobuntu kumkhakha osakhasako eSewula Afrika, babe nerhuluphelo lokufunda ngokungeneleleko ngomsebenzi esiwenzako wokutlama iinsizakusebenza zelimi kanye nokuzibeka ebujameni bedijithali emalimini alitjhami nanye asemthethweni. Ngibuye godu ngabelana nabo bonyana sizisingatha njani iimfundobandulo ukuze sabelane ilwazi esilitholileko nabanye. Nasiqala ipumelelo yesifundwesi, ngingathanda bonyana sisinabisele kwamanye amaziko aphakemeko wefundo."

Umbiko obuyako ongenzasi lo uyazikhulumela begodu ezinye iimfundo ezifuze lesi zizokulandela ngokuzako:

"Sithokoza khulu bakwethu. Koke lokhu kusilethele ilwazi. Ragelani phambili ngokusingatha iimfundobandulo ezinengi ezifuze lesi. Nabanye abantu bangakuthabela lokhu."

"Ngithanda ukuthi ngiyathokoza kini noke siqhema sakwa-SADiLaR ngokusilethela isifundwesi namhlanjesi, begodu sikhuthazekile bonyana sinabe emkhakheni lo. Mhlamunye ngelinye ilanga sizakusebenza nani noke. Woke umuntu ube noMoya omuhle khulu."



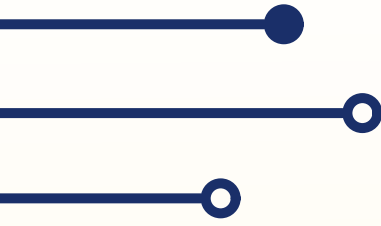
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IRHUBHULULO LAKWA-SADILAR
ELISEKELWE NGEEMALI LISEKELA
ABANTWANA ABANGAKGHONI
UKUKHULUMA KUHLE ILIMI LESEPEDI

- Birgit Ottermann

Ukuhlonywa kweendlela ezihlukahlukene zokukhuluma ebantwaneni abasengakabi nefundo - khulukhulu labo abanemiraro yokukhuluma kudinga ihlelo lokusebenzisa iinthombe ukuze bakghone ukudlulisa ikulumabo - kube mmongo oqathekileko kaSolwazi Kerstin Tonsing ekwenzeni irhubhululwakhe.



“Abantwana abadinga ihlelo elinjengaleli esikhathini esinengi baba nokukhubazeka ngokomzimba ekuyinto ebona bonyana bangakghoni ukusebenzisa ilimi lamatshwayo,” kutjho u-Tonsing, ongudorhodere osebenza ngokubandulwa kwekulumo nosisazi sokuzwa abuye godu abe nguSolwazi eYunevesithi yePitori eZikweni leKulumo eYandiswako noKhunye. “Sibabonelela ngehlelo elisebenzisa iinthombe ezijamele amagama abangawakhomba namkha bawaterhulule esisetjenzisweni ukuze badlulise umlayezwabo,” uyahlathulula.

Nanyana ihlelweleli likhe lasetjenziswa ngokunabileko emkhakheni wekulumo eyandisako nokhunye *i-augmentative and alternative communication (AAC)* ngomnqopho wokusiza labo abangakghoni ukusebenzisa ikghono labo lokukhuluma ababelethwe nalo, kunamagama ahluahlunekeneko akhambisana neenthombe akhona enzelwe amalimi ahluahlunekeneko. Amalimi aneensizakusebenza ezitlhayelako atjhiyeke ngaphandle. Ukutlhayela kweensizakusebenza kukhona emalimini amanengi weSewula Afrika, okufaka hlangana ilimi leSepedi.

“Ngibe nokuwurubejeka okukhulu ukubona bonyana ihlelo elinjengaleli eSewula Afrika silenza ngelimi lesiNgisi ebantwaneni ilimi labo lendabuko ekungasilo ilimi lesiNgisi,” kukhumbula u-Tonsing. “Sihlala enarheni enobuliminengi begodu abantwana kufanele bakghone ukubeka ikulumo ngokusebenzisa ilimi labo lendabuko - lokhu kufaka hlangana abafundi abadinga ihlelo elisebenzisa iinthombe le-ACC ukwethula ikulumo. Umbuzo okhona ngothi thina ngikuphi esikwenzako ukukhulisa woke amalimi la wabantwana?”

Siyathokoza kusekelo leemali elivela kebakwa-South African Centre for Digital Language Resources (SADiLaR). Lokhu kuzokuletha itjhuguluko ebantwaneni abakhuluma iSepedi. U-Tonsing nesiqhema sakhe babe nephrojekthi

abasebenzela phezu kwayo yokwenza ihlelo lerhubhululo kanye nehlelo elisebenzisana ne-AAC ekulihlelo elingasebenzisi igezi elimini leSepedi. Umnqopho kutlamba ihlelo elizwisisekako elinamagama amanengi azokwenza bonyana ilimi lithuthuke liye phambili.

Ikululuma yelimi lebele

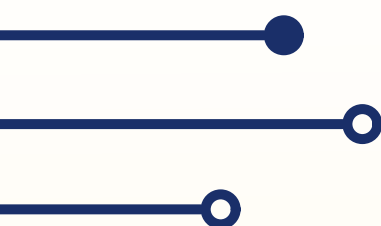
“Ikululuma yabantwana abangakwaziko ukufunda nokutlola abakhuluma ilimi leSepedi (ekusiSotho sa Ledwaba) ilimeli liyabambezeleka ngombana alinalo ihlelo le-AAC elikhona elenzelwe ilimi labo. Isilinganiso see-80 000 zabafundi abakhuluma ilimeli leSepedi bathintekile. Ihlelweleli elisebenzisa iinthombe le-AAC elivumela bonyana abafundi bakghone ukubeka ikululuma ezwakalako ngelimi leSepedi liqakatheke khulu begodu liyadingeka,” kuphawula u-Tonsing.

Ubekwe bonyana adose phambili iphrojekthi yerhubhululweli ngokulandela irhubhululo lakhe alenze eziqweni zakhe ze-PhD, ekulirhubhululo elidzimelele ekwenzeni ihlelo le-AAC elenza kube lula ukufinyeleleka ngamalimi weSewula Afrika ekungasilo ilimi lesiNgisi.

“Iphrojekthi le isekelwe erhubhululweni leziqo ze-*master’s* zikaNgwanama-shiane Rehab Mothapo, osele amfundi owenza iziqu ze-PhD njenganje abuye godu abe mhlanyanyeli oqakatheke khulu,” uragela phambili u-Tonsing. “Sisungule irhelo lamagama elimayelana nokuhlaziywa kweembonelo zelimi leSepedi zabafundi abasese semabangeni aphasi khulu wefundo. Sibuye godu sathola iimbunjwa esizithole ebulungweni eligcina iimbunjwa. Iimbunjwezi zihlolisisewe bezadluliselwa kilabo abadlala indima ephrojekthini le ukuze kube nekulumiswano engeneleleko. Ezinye zeembunjwa ezingezelelweko zitlanywe ngendlela yokobana zikghone ukujamela amagama amanye weSepedi

Sithinta:





ngombana azange zitholwe iimbu-
njwa zakhona ebulungelweni lazo.

Ihlelokambiso elidzimelele ebuntwini

Ngokuya kuka-Tonsing, benze godu nehlaziyo leendingo babuya godu bakhulumisana ngalokho okuzokudingeka nesiqhema salabo abadlala indima ephrojekhthini le, okufaka hlangana abodorhodera abasebenza ngekulumo yelimi abanelemuko ekusebenziseni ihlelo le-AAC kanye nokubonelela ngezenzelwa elimini leSepedi. Kufakwe hlangana ababelethi babantwana abanemiraro yokukhuluma ilimi labo leSepedi nekungilabo bantwana abangakghoni ukubeka kuhle ikulumo izwakale. Abazibanda-kanyileko bahlala esifundeni seLimpopo ekukulapho ilimi leSepedi likhulunywa khona kanengi.

Koke ukuhlanganyela okube khona neenqhema ebeziqothelweko kutlolwe phasi bekwahlaziywa ngokweenhlokwana zakhona. Igadango elilandelako ngelokuthoma ihlelokambiso elidzimelele ebuntwini ekukulapho isibonelo sokuthoma sehlelo le-ACC sizokuthunyelwa khona kwabanye abadlala indima ephrojekhini le bonyana basihlolisise." Sisehlweni lokutlama isibonelwesi sokulingelela sokuthoma, ekuyinto ekarisa khulu. Kulihlelo elibuyelelweko elibandakanya abasebenzisani lapho silalela khona imibikwabo ebuyako bese siyatlama godu besifike esigabeni sokobana ihlelweli seliyakghona bonyana lisebenziseke. Nanyana kunjalo, imibiko ebuyako

evela kubasebenzisi behlelweli isazokuragela phambili," kutjho u-Tonsing.

Umbuthano wephasi loka

Imiphumela yesigaba sokuthoma sephrojekthi le izokwethulwa ngu-Rahab Mothapo eMbuthanweni womPhakathi wePhasi Loka weKulumo eYandisako noKhunye e-Biennial. Umbuthano lo uzabe ubanjwe ukusuka mhlazana amalanga ama-24 ukuya emalangenini ama-27 kuVelabahlinze emnyakeni wee-2023, e-Cancun, e-Mexico. Umbuthano lo ozokusingathwa ngaphasi komongo othi "Communication beyond borders", uzokukhunjelwa barhubhululi, iimfundiswa, abasebenzi kanye nabantu abasebenzisa ihlelo le-AAC ephasini zombebele, begodu kuzokwethulwa irhubhululo lamva nje kanye nelemuko abantu ababe nalo solo bathome ukuba semkhakheni lo we-ACC.

"Kulilungelo elikhulu esiliphiwe ngebakwa-SADiLaR ukuze sikghone ukwethula lokho okutholiweko ngokusebenzisa irhubhululo lesifundo esiqakatheke kangaka, ekulirhubhululo elibuthethelela imikhakha eminengi khulu", kuphawula uMothapo. "Ngizimisele ukwabelana ngelwazeli ebantwini abanengi abahlukahlukeneko. Lokhu kimi kutshwaya imizamo emincani yokwenza bonyana ikulumo ifinyeleleke ebantwini boke abakhuluma ilimi leSepedi eSewula Afrika, ekungilabo abanemiraro yokubeka ikulumo izwakale kuhle."

Sithinta:





I-SADILAR IGIDINGA IPUMULELO YESI-4 YESIFUNDOBANDULO SE- RAIL E-CROATIA

- Birgit Ottermann

I-South African Centre for Digital Language Resources (SADiLaR) isingathe isifundobandulo sesine esibe yipumelelo ku-Resources for African Indigenous Languages (RAIL). Isifundobandulwesi sisingathelwe e-Dubrovnik, Croatia. Isifundobandulo saqobe mnyaka, esenzeke mhlanzana amalanga asi-6 kuMrhayili ngomnyaka wee-2023 njengengcenywe yoMbuthano wetjhumu nakhomba we-the European Chapter of the Association for Computational Linguistics (EACL 2023), sihlelwe ngebakwa-SADiLaR u-Rooweither Mabuya, uMmasibidi Seteka kanye noSolwazi u-Menno van Zaanen, kanye no-Don Mthobela ovela kwa-CAM Foundation.

“Isifundobandulo se-RAIL sibe yipumelelo ekulu khulu. Boke ebebasikhambele isifundobandulwesi babandakanywe ukusuka ekuthomeni bekwayokuba sekugcineni kwehlelo nanyana kube sifundobandulo esithethe ilanga loke nje”, kutjho uMabuya, obekabambisene noSeteka esikhundleni sokuba ngusihlalo womnyanya lo. “Isifundobandulwesi siletha ikundla yemikhakha ehlukehlukeneko kubarhubhululi abasebenza ngamaLimi weNdabuko we-Afrika, khulukhulu emalimini anganazo iinsizakusebenza ezaneleko”, uyahlathulula. “Koke lokhu kuhlanguanisa abarhubhululi abanekareko lokuveza amarhubhululwabo; kubuye godu kulethe iqalozombelele lokuba khona kweensizakusebenza ezikhona njenganje zamaLimi we-Afrika, okufaka hlangana ukubuthelelwa kwelwazi kanye namathulusi. Ngakelinye ihlangothi, kukghonakaza ukwabiwa kwelwazi kanye neenkulumiswano ezibanjwako mayelana nokuthuthukisa ikhethelo eliphezulu kanye nokuba khona kweensizakusebenza.”

Amalimi amanengi weNdabuko we-Afrika njenganje akanazo iinsizakusebenza namkha aneensizakusebenza ezimbalwa khulu ezikhona begodu ngokuvamileko iinsizakusebenzezi zakhiwe ngendlela ehluke khulu kunalezo zamalimi aneensizakusebenza ezingcono; yeke-ke, zifuna bonyana zithuthukiswe begodu kusetjenziswe iindlela zokwenza ezikhethekileko.

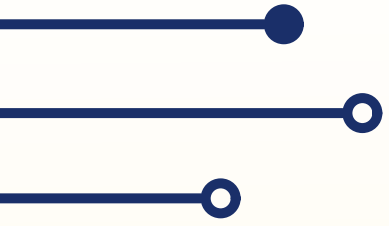
Ukukhulisa umphakathi ngokwezesayensi

“Ngokuhlanguanisa abarhubhululi abavela emikhakheni ehlukehlukeneko, njengomkhakha welimi lobutjhiningqondo, ilimi lezokuhlalisana kanye nelimi lobuttharhattharha, kukhulunyanisa ngetuthuko yeensizakusebenza zamalimi wendabuko we-Afrika. Sithemba ukufukula irhubhululo emikhakheni le”, kutjho uSeteka. “Emaphethelweni, siqothele ukutlama imigomo ephathelene nokuvela kwabantu abasebenza ngobusayensi obuphathelene nelwazi kanye namathulusi, khulukhulu lawo atlanyelwe amalimi wendabuko atholakala e-Afrika.”

Bobabili uMabuya noSeteka, ekubarhubhululi bedijithali yobuntu kwa-SADiLaR ngelimi lesiZulu nelimi leSesotho, babandakanyeke kusifundobandulo se-RAIL solo sasungulwako ngomnyaka wee-2019. Iifundobandulo ezimbili zokuthoma zabanjwa ngomhlango womkayi ekube mnyanya owawubanjelwe eMbuthanweni wokuBuyekezwa kweenSizakusebenza zeLimi i-Language Resources and Evaluation Conference (LREC) ngomnyaka wee-2020 kanye nembuthanweni weDijithali yoBuntu eHlanganyelweko yeSewula Afrika i-Digital Humanities Association of South Africa (DHASA) owasingathwa

Sithinta:





ngomnyaka wee-2021. Ngemva kwe-COVID-19, isifundobandulo sesithathu se-RAIL besisingathwe ngendlela yokobana abantu bakhambele umnyanya lo bunqopho ngomnyaka wee-2022 kusifundobandulo sehlandla le-10 se-South African Microlinguistics Workshop e-Potchefstroom.

“Isifundobandulo somnyaka lo, esibe ngesinye seemfundobandulo ezili-13 ezamukelwe embuthanweni we-EACL 2023, sibe namaphepha alinganiselwa kwali-14 kanye nephepha elilodwa lalokho okutholakeleko elethuliweko,” kuphawula uMabuya. Bekungomunye umhlobo ohlukahlukeneko wesakhiwo njengombana ezinye iinkhambeli zomnyanya lo azange zikghone ukukhamba — amaphepha alikhomba ethulwe bunqopho bese kwathi amaphepha abunane wona ethulwa ngehlelo lethungelelwano lomkayi.

Umbiko obuyako omuhle

UMabuya noSeteka babe netjhudu lokuba nekhambo eliya e-Croatia lapho bebakhambele khona umbuthano we-EACL 2023 bunqopho ngokwesiqu sabo. Bathokoze isibonelelo seemali abasitholileko esisekele ikhamba labo ukuze bethule amaphephabo embuthanweni loya. “UMmasibidi Seteka uthole iSekelo leemali lokuFakwa kwalokho okuHlukahlukeneko ngomnqopho wokusekela abafundi ababuye eemphandeni eziphayelwe ngeqadi, ngakelinye ihlangothi mina ngithole isibonelelo seemali esivela ehlelweni labafundi abasebenza ngokuzinikela ekulihlelo elinqophe ukusekela abafundi abasathomako eemfundweni zabo ukuze bakhambele umbuthano lo babuye godu balekelele ngemisebenzi yombuthano ekhona”, kutjho uMabuya.

Abarhubhululaba bobabili bethule amaphepha esikhundleni sabatloli abasebenzisana nabo kusifundobandulo se-RAIL. Iphepha likaMabuya belinikelwe isihloko esithi “*Unsupervised Cross-lingual World Embedding Representation for English-Zulu*”, lapho ahlangelele

khona no-Derain Ngomane, uVukosi Marivate, kanye no-Jade Abbott njengabatloli.

“Iphepha lethu lithole umbiko obuyako omuhle khulu ngendlela yemibuzo nangokuphawula okuvela kubamukelilwazi,” kukhumbula uMabuya. “Omunye wabahlanganyeli wabe wabawa ukuba nomhlangano nabatloli engisebenzisana nabo njengombana bekafuna ukulekelelwa ngerhubhululo lakhe ebelifana nalela lethu.”

USeteka ngokufanako naye bekaneliseke khulu ngependulo ayitholileko mayelana nephepha lakhe alethulileko lesihloko esithi “*Evaluating the Sesotho rule-based syllabication system on Sepedi and Setswana words*”, ngokuhlanganyela no-Johannes Sibeko njengabatloli. “Abantu babe nekareko ekulu khulu begodu be bathabe khulu ukuzwa bonyana kunesifundobandulo esenzelwe i-NLP ekuyi-(*natural language processing*) e-Afrika.”

Ukwenza amathungelelwano amatjha

Ukuqala emva embuthanweni kanye nepumelelweni zombebele yesifundobandulo, uSeteka uthi: “Umbuthano loya uhlanganise abantu abahlukahlukeneko abanekareko eengcenyeni ezinengi ze-NLP. Isifundobandulwesa ngokwaso sibe yipumelelo ekulu khulu okufaka hlangana nokuzibandakanya okukhulu okuvela kubamukelilwazi. Ngebanga lokobana isifundobandulo sethu samukelwe ku-EACL, lokho kube ngokuvelele khulu nangitjheja nobujamo be-EACL kanye nokudzimelela kwayo ebantwini be-NLP.”

UMabuya uyangezelela bonyana wenze ukuthungelelana okuhle khulu. “Bekumbuthano omkhulu khulu obe neenkulumo ezinengi ezikarisako kanye nokwethulwa kwamaphepha. Ngibuye ngahlangana neemfundiswa

Sithinta:





ezikarisako. Nasiqala isifundobandulo sethu, kube kuhle khulu bonyana sibe nabatloli ebebaletsha amarhubhululwabo ku-RAIL qobe mnyaka solo sathomako isifundobandulwesi. Lokhu kutjengisa iqophelo eliphezulu lesifundobandulo sethu kanye nomsebenzi ogadangiswe emibikwenethu. Sinekomidi godu ehle khulu yehlelo esilekelela ngokubuyekeza koke okulethiweko.”

Imibiko yesifundobandulo seSine seenSizakusebenza zamaLimi weNdabuko we-Afrika i-(RAIL 2023) sele ifumaneka, begodu abasebenzi bakwa-SADiLaR balindele ukwamukela ukulethwa okugadangisiweko kwehlandla lesihlanu kwe-RAIL, nasele kukhutjihiwe ukwamukelwa kwamaphepha. “Umqopho kukhulisa isifundobandulwesi bonyana sibe sesiqongolweni sentaba begodu samukele nezinye iimfundiswa bonyana zisize ukuhlela isifundobandulwesi ukuya phambili,” kusonga uSeteka.



Sithinta:





Gandelela la ukuzitlolisela kuncwadindabethu



Sithinta:



IRHUBHULULO LEZIQU ZE-PHD LIBEKA I-SADILAR EBALAZWENI LEPHASI LOKE

- Birgit Ottermann

I-South African Centre for Digital Language Resources (SADiLaR) ithabela amalungelo wokuzikhakhazisa wephasi loke. Siyathokoza eziqwini zerhubhululo le-PhD ebelibandakanywe emiBikweni egadangisiweko yoMbutano wangeMva womnyaka wee-2022 woMbutano we-CLARIN waQobe mNyaka.

U-Johannes Sibeko, omfundi weziqqu ze-PhD nongaphasi komlawuli uSolwazi u-Menno van Zaanen wakwa-SADiLaR, ube ngomunye weemfundiswa ezili-12 ezikhethiweko bonyana zethule isirhunyezo samarhubhululwabo kusetjhini yabafundi abenza iziqu ze-PhD yehlandla le-11 yoMbutano we-CLARIN waqobe mnyaka, ekumbumbuthano owenzeke ukuthoma mhlazana amalanga ali-10 ukuya emalangeneni ali-12 kuSewula emnyakeni wee-2022 e-Prague, Czech Republic. Kube yipumelelo khulu bonyana amenywe bonyana alethe iphepha lerhubhululo elipheleleko ukuze libandakanywe emiBikweni egadangisiweko yoMbutano wangeMva, ekumgangango otholakala ngokuvulelekileko oletha koke ebekusenzeka embuthanweni lo.

I-CLARIN, ekusirhunyezo se-Common Language Resources and Technology Infrastructure, imthangalasisekelo wedijithali ebonelela ngelwazi, iinsetjenziswa, kanye nezenzelwa ukuze kusekelwe irhubhululo elidzimelele khulu kunsizakusebenza zelimi. Iphepha likaSibeko lethula irhubhululwakhe lehlelo leziqqu zobudorhodere ekuliphepha elinabisa ituthuko yeensizakusebenza zokuqala isilinganiso sokufundeka kwemitlolo yeSesotho, ekulilimi laBantu elikhulunywa babantu abangehla kweengidi ezili-10 eSewula Afika zombebele.

Umfundi oyedwa owethulako ovela e-Afrika

“Incwadi yokwamukelwa kwami yatjho okukhulu kimi,” kutjho uSibeko, omfundisi weDijithali yoBuntu e-Nelson Mandela

University eGqeberha. “Bengithukile mayelana nokwethula embuthanweni kodwana ngakwelinye ihlangothi bengithakase khulu ukuthola ithubela lokuba sekundleni yephasi loke. Ukukhethwa bonyana ngijamele i-SADiLaR godu nokuba mfundi oyedwa owethulako ovela e-Afrika, kube yihlonipho ekulu khulu kimi. Ngizizwe ngizikhakhazisa khulu.”

Ngebhadi, uSibeko azange akghone ukukhambela umbuthano loya ngokwesiqu sakhe ngebanga le-*visa*. “Ngigcine sengiwukhambele ngehlelo lethungelelwano umbuthano loya. Kungidanise khulu ngombana azange ngikghone ukuzibandakanya emisetjenzaneni ekarisako ebeyihlelwe yi-CLARIN begodu ngiphundwe namathuba wokuhlanganyela nabanye. Ngale kwalokho, ngihlala ngidzimelele ethembeni lokobana kuzokuba namanye amathuba avulelekako wokukhamba ngokuzako.”

Nasiqala ipumelelwakhe, njengomrhubhululi osegadangweni lokuthoma lebizelwakhe, uSibeko uthi kufanele azithembe khudlwana begodu uthi kufanele avakatjhele iindawo zokugadangisa ephasini zombebele ngokukhulu ukuzithemba. “Ngizizwa ngathi sengiyafika lapho engifisa ukuba khona ngekhambo lerhubhululo lami.”

Ukukhuluma ngekghono labafundi elingasihle lokufunda

Nakabuzwa ngesihloko serhubhululwakhe leziqqu ze-PhD, uSibeko



**Nakunombiko obuyako
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yincwadindaba le,
wamukelekile ukuthintana
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**Nakunombiko obuyako
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komtlo lo, wamukelekile
ukwethula umlayezwakho
kumtjhugululi lokha
nawuthumela iposomoya
kwa-SADiLaR:
info@sadilar.org**

Sithinta:



uyahlathulula bonyana abafundi beSewula Afrika batlhayelelwa likghono lokufunda. "Efundweni, abafundisi balindeleke bonyana bakhethe imitlolo ekhambisana nezinga labafundi babo. Ngale kwalokho, zoke iinkambiswezi zinembile begodu zithatha ihlangothi. Ukungezelela kilokho, ayikho indlela enganabo ubuhlangothi eqinisekisa bonyana imitlolo ebekelwe ukufunda, ukufundisa kanye nokuhlola ifanele izinga lokufundwa," kutjho uSibeko.

"Isilinganiso somgomo wokufundeka kwemitlolo yesiSotho sizokusiza ngokukhethwa kanye nokunzinziswa kwemitlolo ngokulandela iinhloso ezihlukahlukene kanye namazinga alindelekileko. Isifundo sami siqophe ukuthuthukisa iinlinganiso ngendlela yokukhona kaza ukulinganisa imitlolo efundekako ezokwenza bonyana abarhubhululi, abatoli, abafundisi kanye nabafundi bahlomule kiyo imitlolo le. Umnqopho kukunzinzisa iinlinganiso ezilithoba ekungilezo ezilinganisa izinga lemitlolo efundekako elimini leSesotho ngokusebenzisa ilimi lesiNgesi njengelimi elineensiza eziseqophelweni eliphezulu ukuze kube ngilo ilimi elisizako. Woke amamojuli azokugadangiswa bese akghone ukufinyelelwa ngokuvulelekileko esilulwini sakwa-SADiLaR."

USibeko unethemba lokwenza ikundla esekelwe ngewebhu ukwenzela bonyana kufinyeleleke ihlaziyo lemitlolo ezenzakalelako, ekuyikundla ezokuvumela umsebenzisayo bonyana anamathisele imitlolo abe athole ihlaziyo lombiko wokufundwa komtlo.

Ngokuya kuka-Menno van Zaanen, onguSolwazi weDijithali yoBuntu kwa-SADiLaR ese-North West University, uveza bonyana irhubhululo likaSibeko liveza ukuqakatheka kanye nekghonakalo yokusebenza kweensizakusebenza zedijithali zelimi emalimini weSewula Afrika. "Ukukghona ukulinganisa isilinganiso semitlolo yeSesotho kwenza bonyana abolektjhara bakghone ukukhethela

abafundi babo imitlolo ebafaneleko, kubuye godu kwenze abatloli bonyana balungise imitlolwabo ukuze ikhambisane nabamuke-lilwazi ababatlolelako. "Umsebenzi ka-Johannes awukarisi kwaphela ehlangothi lezefundo, kodwana ubuye godu utjengise bonyana iinsizakusebenzezi zingasetjenziswa njani ukufukula amalimi weSewula Afrika, njengelimi leSesotho emphakathini mazombe," kuphawula uSolwazi Menno van Zaanen.

Umfundisi waphambilini wamabanga aphakemeko

Ngokukarisako, uSibeko mfundisi waphambilini wamabanga aphakemeko obekafundisa iSesotho nesiNgesi, ekukulapho irhubhululwakhe lidzimelele khulukhulu ekunabiseni amathuba wokufundwa kwamalimi. "Isitjhijilo sokukhetha nokuhlalisa kuhle imitlolo efundwako okubandakanya abafundi singaphezu kwelimi leSesotho. Ngale kwalokho, iSesotho sikhethwe njengegadango lokuthoma ekuqalaneni nendabamraro le. Nginethemba lokobana iinlinganiso zemitlolo zingenzelwa namanye amalimi wendabuko."

USibeko ube semkhakheni wedijithali yobuntu kokuthoma lokha nakathola umsebenzi e-Nelson Mandela University, begodu bekalindeleke bonyana ahlolisise emkhakheni lo omutjha. "Nangisathomako, benginganalo ilwazi lokobana umkhakha lo umayelana nani," uyakhumbula. "Njenganje sele ngidzimelele bengangenelele khulu emkhakheni lo. Ngikuthabele khulu ukwenza iziqu zami ze-PhD begodu nerhubhululo lami liya ngokuya liyakarisa."

