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South African Centre for Digital Language Resources

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UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA



UNIVERSITEIT
iYUNIVESITHI
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UNIVERSITY



UMLANDO WEBUTHELELO LAMA KHOPHASI: IKGHONAKALO LELANDLELELA LERHUBHULULO LOMLANDO WAMAREJISTA WELANGA LE-TRUST VOC.

- Roné Wierenga

Funda:

UMLANDO WEBUTHELELO
LAMA KHOPHASI:
IKGHONAKALO LELANDLELELA
LERHUBHULULO LOMLANDO
WAMAREJISTA WELANGA LE-
TRUST VOC

UKUHLONYWA
NGOKUSEMTHETHWENI
ISISETJENZISWA SEDIJITHALI
YOBUNTU EGADANGWENI
LEENKUTANI

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Ilandelela yomlando wekhophasi ye-Trust (ngemva kwekhophasi ye-THT) iyikhophasi eyidijithali ehlanganiswe ngokutlolwa kukamalangenini otlolwe ngesandla ukusuka ekhulwini leminyaka eli-17 ne-18 (1687-1714). Abomalangenaba bebatlolwa malunga we-Dutch East India Company lapho acoca khona ngeendaba zabo zaqobe langa eKapa yeKoloni. Abomalangenaba baletha ukuzwisisa okukarisako eempilweni zamakoloni we-Dutch anzinze eligwini leKapa begodu abandakanya amalanga wemaraga, iminyanya karhulumende neyepolitiki kanye nobudlelwano obutjhideleneko hlangana kwemindeni, kokubili kumaSewula Afrika nakuma-Dutch. Imitlolo le itlolwe ngokusebenzisa ilimi lesiBhuru sangaphambilini ekungasiso isiDatjhi namkha isiBhuru esinzinziweko.

Ikhophasi yedijithali njengekhophasi ye-THT ilibuthelelo elikhulu lemitlolo ekghona ukufakwa ngaphakathi beyamukelwe mtjhiningqondo. Yeke-ke, ikghona ukusetjenziswa njengesisetjenzwa serhubhululo. Okuhle ngekhophasi le kufaka hlangana ukuthi ayikabekelwa ukuthi isebenze endaweni ethileko kwaphela, ikghona ukuhlaziyeka ngokusebenzisa ama-*software* ahlukahlukene kanti-ke godu kanengi iyatholakala abarhubhululi nabayifunako. Ikhophasi le ifaka hlangana amarejista wemindeni, irhelo lamalanga wokubelethwa kanye namalanga wokuhlongakala, amarejista wokufuduka kanye namarejista weengqila. Ilwazeli livumela iindlela ezitja zokurhubhulula emikhakheni efana nejiyoloji, amasiko wobuntu kanye nesayensi yokuhlaziywa kwehlalakuhle yobuntu. Kibosomlando, ikhophasi le iligugu lelwazi emlandwini weengodi zeendawo zeSewula Afrika kanye nepolitikini.

Ibonelela abarhubhululi ngombono ohlukileko wamagugu namasiko weSewula Afrika.

Ukuqakatheka kwekhophasi le akukabopheleki erhubhululweni lezomlando kwaphela. Ngebanga lokuthi abomalangenaba benziwe ngaphambi kokunzinziwa kwelimi lesiBhuru, ikhophasi le sisetjenziswa esiqakathekileko sokurhubhulula ngokuhluka kokupeleda kanye nokuthuthukiswa kokupeleda, irhubhululo ngokwesihlathululimezwi sekhethomagama elimini laphambilini lesiBhuru, irhubhululo lehlelomotjho njengesakhiwo semitjho nezinye iingcinye zelimi. Abomalangenaba bangabuye basetjenziselwe ukuthola abatloli ngokwerhubhululo, ihlaziyo lokuziphatha kwelimi kanye nesifundo sokumadanisa isiBhuru saphambilini nesiDatjhi sekhulwini leminyaka eli-17.





Ikhophasi le isebenza njengomkhanyo emiphakathini we-Cape of Good Hope ekhulwini leminyaka eli-17 neli-18. Yendlala indaba yamaPhotjhugisi akhwela iinkepe kanye naBathwa esele bahlala eKapa kanye nekoloni engaba mthelela wokusungulwa kweRiphabhliki yeSewula Afrika.

Ukuthola ilwazi elinabileko mayelana nekhophasi le,funda incwadi ka-Liebenburg (2018) namkha uqale ku-Wierenga and Breed (2021) njengesibonelo somhlobo werhubhululo elingasetjenziswa yikhophasi ye-THT.

Imithombo

Liebenberg,H. 2018. Die Wes-Kaapse Argief en die begin van Afrikaans. *Tydskrif vir Geesteswetenskappe*, 58(2):204-236.

Wierenga,R. & Breed, C.A. 2021. Diachroniese benadering tot die ontwikkeling van die progressiewe perifrastiese konstruksies in Afrikaans en Nederlands: 'n Korpusondersoek. *Tydskrif vir Geesteswetenskappe*, 61(2):588-619.

UKUHLONYWA NGOKUSEMTHETHWENI ISSETJENZISWA SEDIJITHALI YOBUNTU EGADANGWENI LEENKUTANI.

- **Natalie Simon**

I-South African Centre for Digital Resources (SADiLaR) kanye nosihlalo weYunivesithi yeThagwini Tjingalanga (NWU) ongaphasi kwe-UNESCO ku-Multimodal and open Educational Resources (OERs) bazikhakhazisa khulu ukumemezela ukuthathwa kokuthoma kwegadango leenkutani zedijithali yobuntu. Ihlelveli, elilethwa nge-SADiLaR's *ESCALATOR Digital Champions Initiative*, lihlose ukusikinya ubutjhotjhozeli kanye nerhubhululo ekusetjenzisweni nekutlanyweni kwe-OERs manqophana nedijithali yobuntu eYunivesithi yeSewula Afrika.

Bekube nje, sithakase khulu ukumemezela bonyana amaphrojekthi ama-26 amukelwe ehlelweneli ukuze kusekelwe bekusekelwe nangeemali umtlambo kanye nokunziza kwe-OERs kudijithali yobuntu.

"Njengombana igama lizitjho,ama-OERs ayifundiso enye nenye abuye godu abe ziinsetjenziswa zokufunda nokurhubhulula ezitholakala

eendaweni zikawokewoke begodu azibhadelelwa,zisimahla", kutjho uSolwazi u-Jako Olivier,ongusihlalo we-Multimodal Learning and OER. "Ama-OER aziinsetjenziswa eziqakatheke khulu ekwakheni amakhono wedijithali yobuntu kanye nekghono lelwazi eSewula Afrika njengombana umkhakha oqakathekileko lo usadinga ukuthuthuka ngokuya

Sithinta:





kweendingo ezithileko efundweni kanye nebuntwini eSewula Afrika”.

“Idijithali yobuntu imkhakha omutjha kezerhubhululo eSewula Afrika”, kutjho uSolwazi u-Menno Van Zaanen, onguSolwazi wedijithali yobuntu kwa-SADiLaR. Uthi, “Lokhu kuyindlela yokwenza nokusebenzisa iinsetjenziswa zobutjhiningqondo eendaweni ezinabileko zobuntu. Itheknoloji yedijithali ivumela abarhubhululi bobuntu kanye nesayensi yobuntu ukuhlaziya ilwazi elinengi khulu njengemitlolo. Ibavumela godu bonyana bakwazi ukuphendula imibuzo yerhubhululo namkha ukuphendula imibuzo yelwazi elisele likhona”. Amaphrojekthi la ama-26 asatjalaliswe emazikweni woke eSewula Afrika. Kumaphrojekthi aneenhloso zokusebenzisa ama-OERs kanye nokuletha ubuliminengi nokugolulula imikhakha ehlukenekene eemfundweni zobubikiindaba. Abuye godu asekele amarobodi afundisa ngamalimi wendabuko efundweni yeSewula Afrika.

Eenyangeni ezizakwezi, i-SADiLaR izokutjengisa ngemisebenzi eyenziwa maphrojekthi la nekumisebenzi ebandakanywe ehlelweneli kanye neenkundleni ezihlukahlukene.

Ukungezelela esibonelelweni serhubhululo, ihlelweni linamandla aqinileko wokwakha ukudzimelela. Abazozibandakanya ehlelweneli bazokufundiswa kafitjhezana *online* ngama-OERs, okufaka hlangana ama-*webinars* neemfundobandulo kanye nokwabelana ngemisebenzi eseqophelweni eliphezulu. Ihlelweni godu lizokubandakanya ukusekelwa kweenkutani zobuntu ukuze zirhubhulule ikambiso le kanye nokuzibandakanya ku-*colloquium* erhubhululweni labo nokugadangisa imisebenzazo. Umphumela oqakathekileko wehlelweni kukwakha ukusebenzisana kwabarhubhululi bedijithali yobuntu kanye nezazi eSewula Afrika ukuze kuthuthukiswe umkhakha lo osakhasako.

HUNDZULA RETREAT: UKUVALA ISIKHALA SOKWEHLUKANA KOBUSAYENSI BOMTJHININGQONDO NEZELIMI.

- **Natalie Simon**

Sithinta:



I-Afrika ilikhaya leenxhumakani kwabanengi, khulukhulu ngokunotha kwamalimi wakhona. Ngokuya [kweHlelo lamaLimi we-Afrika eYunivesithi ye-Harvard](#), pheze ingcinye yesithathu yamalimi ephasini loke kumalimi abuya enarhakazini ye-Afrika. Isitjhiyilo esihlangabezana nabosolimi kanye nabafundi bamalimi kugcina ukusetjenziswa kwamalimi la emkhakheni wedijithali. [IHundzula Retreat](#), eyenzeke ngenyanga kaMhlojanja ngomnyaka wee-2022 eYunivesithi yePitori, ihlanganise abosolimi be-Afrika kanye nabasebenzi ngelimi okuyimvelo ngomzamo wokuvala isikhala hlangana kwemikhakha le kanye nokugcugcuzela ukuhlanganyela nokwakha umthlala kwezedijithali yamalimi wendabuko weSewula Afrika.



Amalunga amane we-South African Centre for Digital Language Resources (SADiLAR) ezile begodu ethula ku-retreat. Amalunga la bekungu: Rooweither Mabuya, omrhubhululi we-digital humanities (DH) elimini lesiZulu; Andiswa Bukula, omrhubhululi we-DH elimini lesiXhosa; Mmasibidi Seteka, omrhubhululi we-DH elimini lesiSotho; kanye no-Respect Malmbo, omrhubhululi we-DH elimini leXitsonga. U Mabuya bekayingcanye yesigungu esihlelako bese boke abanye abarhubhululi bathula iinkulumo zabo.

Ukwakha Ukuzwisisa, Ukuqhasula Imikhawulo.

Ikambiso yelimi okuyimvelo [*i-Natural Language Processing* (NLP)] ibandakanya zelimi, ubusayensi bomtjhiningqondo, ubuhlakani obungasibo bamambala ukwenzela bonyana umtjhiningqondo wenze imisebenzi ebandakanya ilimi lobuntu. Isifundo sezamalimi sifundo selimi nezakhi zalo, ezibandakanya iingcanye njengehlelomotjho (*syntax*) nomtlotlomazombe (*phonetics*). Lokhu okubili kubonakala kuyirhara nomncamo, eqinisweni ihlelokambiso lazo alikahluki ngendlela umuntu angacabanga ngayo.

'Nanyana abasebenzi be-NLP benza iinsetjenzi swa ezisetjenzi swa barhubhululi bamalimi, thina njengabosolimi asiyazi ikambiso abayilandelako, ngakelinye ihlangothi abasebenzi be-NLP banokungazwisisi ihlelomotjho (*syntax*) namkha isakhiwomagama (*morphology*) selimi', kutjho uBukula. Iinsetjenzi swa ezithuthukiswe basebenzi be-NLP zithoma kusuka ku-software etholakala koke njengokutjheja ukupeledwa kwamagama ukuya eensetjenzi sweni ezidzimelele khulu ngokwerhubhululo,

njengokuhlaziywa kwe-software.

Ubunzizo obukhulu be-retreat le bebunqophe ekutheni izazi ezimbilezi zinikele ngelwazi lazo ngokuya kwemikhakha ezisebenza kiyo. USolwazi ongumenganyelwa (Associate Professor) uVukosi Marivate abuye abe ngusiHlalo wobuSayensi beLwazi eYunivesithi yePitori, wethule ikulumo ngaphasi kwesihloko esithi: '*Machine Learning for Everyone-what is the 4IR?*'. Ekulumenakhe, akakahlathululi kwaphela imiqondo edzimeleleko yokufundwa komtjhini kodwana ubuye waveza bonyana nalabo abangasi kiwo umkhakha lo bangazibandakanya ekufundweni komtjhini. Okhunye okuqakatheke khulu kukuthi unikele ngendlela abosolimi abangayisebenzisa ukufunda khudlwana ngokufundwa komtjhini. Ezinye izethulo ku-NLP zifake hlangana '*Ukwazisa nge-NLP*' ngo-Jade Abbot, ongusonjinyere we-machine learning e-Ritro Rabbit abuye abe mthungelanisi we- Masakhane, ekuyihlangano esisekelo ye-NLP. U Mabuya unikele ngesendlalelo sesifundo sezamalimi, lapho bekakghedlha khona bonyana ziyini kuhlekuhle zamalimi, wabuya godu wahlathulula iinkhundla ezihlukahlukene kanye namagatja akhona kilomkhakha. Ngakelinye ihlangothi, uSeteka wenze isethulo ngesifundo sobuhlathululimezwi (lexicography) aqalelele amalimi athlayelelwa ziinsiza, lapho bekaqale ukuqakatheka kwama-NLP kanye nobutlharhatlharha bedijithali yokuhlanganiswa kweenhlathululimezwi emalimini wendabuko we-Afrika.

I-retreat le ilethe umkhanyo nokuphandlululeka kubarhubhululi bakwa-SADiLaR.

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'Okube bubhadekelo kimi kube kuzwisisa bonyana iinsetjenziswezi zobutjhiningqondo zithuthukiswa njani nokuthi ilwazi elibandulwa kizo liqakatheke kangangani', kutjho uBukula. 'Njenganje sekunokobana ngikghaphe isisetjenziswa ngombana sikhiqiza izinga eliphasi lokubetha emhloveni, ngiyelele bonyana indaba isekufunzeni isisetjenziswesi ilwazi elinengi lesiXhosa namkha ukusebenzisana nesisebenzi sakwa-NLP ngokunikela umbiko obuyako mayelana nehlelomotjho (*syntax*) kanye nesakhiwomagama (*morphology*).

UMabuya uthi kube sikhanyiso kuye ngokuthi abe yingcenyane yokubuthelwa kwemikhumbulo yabatjha ukuze babonisane bonyana bangasivala njani isikhala hlangana kezamalimi nekambiso yokusebenzisa ilimi okuyimvelo.

Ukwendlala Umsebenzi Osisekelo Wokuhlanganyela.

I-retreat ibuye godu yafaka hlangana iinkulamo eziphandlululako ezethulwe ngibo boke ebebazibandakanyileko. Lezi kube zizethulo ezifitjhani mayelana nalokho umrhubhululi ngamunye arhubhulula ngakho. Lokhu kwenze laba ebebakhona babone abahlanganyeli abaveleleko abangazibandakanya emahlelweni azako. UBukula uthi sele atlola isihlongozo sokuhlanganyela nabalingani bakhe ngokomsebenzi ababuya eYunivesithi ye-Stellenbosch kanye neYunivesithi yeLimpopo. U Mabuya uthi naye bekakghona ukwabelana ngemibono nabasebenzi be-NLP abasebenza ngesiZulu.

Ukuvula Iminyango Yekghonakalo Yokusebenzisa Umtjhiningqondo.

I-retreat isize ukususa nokurhobhisa ukwesaba kubarhubhululi bobuntu lokha nakutjhejwa enye nenye into ephathelene nobutjhiningqondo. Umkhakha wobuntu lo wanda khulu ngedijithali begodu akukho ukubuyela emva. Iinsetjenziswa zobutjhiningqondo zivula amathuba amatjha kubarhubhululi bobuntu begodu namathuba afana neHunzula Retreat asiza abarhubhululi bobuntu bonyana babone lokho ntanji. Akukafaneli bonyana bazenzele koke njengombana kunezazi zobusayensi bomtjhiningqondo abangahlanganyela nazo, kodwana ehlangothini likaBukula, lokhu kususe okungaziwako ekambisweni yelimi lemvelo, ebusayensini bomtjhiningqondo kanye nekufundweni komtjhini.

'Kuneemfundo eziqalelele labo abathomako ukufunda', utjho njalo. Ukufunda amakghono la wobutjhiningqondo kufana nokufunda enye nenye into. Uthoma ekuthomeni, bese uyakhuphuka kancani kancani'.

Isiyeleliso sakhe esiya kubarhubhululi bobuntu kanye nabafundi: 'Ungacabangi bonyana into le akusiyo yakho. Amakghono wobutjhiningqondo kanye nehlelo lomtjhiningqondo ziya ziqakatheka emsebenzini woke kanye nakusayensi yezehlalukhule nobuntu begodu azikahluki. AmaYunivesithi azabe enzela abafundi ubulula nakangathoma ukufundisa amakghono la kubafundi abenza iziqu zabo zokuthoma'.

Sithinta:





UMTLOLO OLUMBANISA ISIPHUTHI ELESOTHO: ISIRHUNYEZO.

- **Natalie Simon**

IsiPhuthi lilimi elikhulunywa miphakathi yabaPhuthi eSewula yeLesotho kanye neTlhagwini yesifunda sePumalanga Kapa eSewula Afrika. Kulilimi elilengela ngerharheni lokutjhabalala. Imbalo yabantu abakhuluma isiPhuthi eLesotho ilinganiselwa eenkulungwaneni ezima-200 000, kodwana imbalo le yehla ngokuphazima kwelihlo. Ukuthungelelana kwelimi ukusuka kusizukulwana nesizukulwana—ekukulapho abantwana bamunya khona isiPhuthi kubabelethi nakibogogo babo—isiPhuthi sisemkhawulweni wamarharha amabili amaqalanga, uDaliwe noSinxondo.

Nanyana kuba khona ubudlelwano phakathi kwamarharha la womabili, lokha abaPhuthi batjhada abeSotho namkha amaXhosa, isiPhuthi asisasetjenziswa kubhoduluko yemakhaya. Emendweni ohlanganyelweko lo, abantwana bakhula bakhuluma isiSotho namkha isiXhosa njengelimini labo lokuthoma.

Ngetjhu, ukuqinisekisa bonyana ilimeli alilahleki, u-Matthias Brenzinger weYunivesithi ye-Free State kanye no-Sheena Shah weYunivesithi ye-Free State kanye neYunivesithi ye-Hamburg, e-Germany, bahlanganyele solo kwangomnyaka wee-2016 ngomnqopho wokutlola nokuvuselela ilimeli.

Ingcenye eqakathekileko yomsebenzi lo kuhlanyela okutjhidlene khulu nomphakathi wabaPhuthi, kokubili eLesotho neSewula Afrika. U-Brenzinger no-Shah bakholwa ukuthi abakhulumi belimeli kufanele kube ngibo abathatha isiquketo sokobana ilimi labo litlolwe bobani begodu njani.

Ihlelveli libandakanya ukugadangisa ukucocwa kwesiPhuthi, iinkulumbo, ukuhlungwa, iinolwana, ubukghwari bezomlando kanye

neenkondlo. Koke lokhu kufanele kubekelwe isizukulwana sanje nesizako. Babuye godu basekele ukukhiqiza iinsizakusebenza ze-Covid-19, ekumaphostara ayelelisa ngezepilo atlolwe ngesiPhuthi kanye nokuthuthukiswa kwesihlathululimezwi esilimine (amalimi amane) isiPhuthi-isiXhosa-isiSotho-isiNgisi, njengombana u-Brenzinger no-Shah banethemba lokuthi isihlathululimezwesi sizokusebenza njengesisekelo seensizakusebenza ezizokusiza ukuthuthukisa ihlelo lokufunda nokufundisa ilimi lesiPhuthi.

Ukusebenzisana Nompakathi, Ukwakha Isilinganiso.

Ngenyanga kaSinyikhaba emnyakeni wee-2022, u-Brenzinger no-Shah basingathe iimfundobandulo ezijayelekileko zemitlolo yelimi, ekukulapho babandule khona abantu abasithandathu nabancani ngeminyaka ababuya eDaliwe neSinxondo mayelana nelimi lesiPhuthi ngokuya kwemitlolo yelimi kanye namano weendlela abangazisebenzisa ukukwenza lokho. Ilutjheli elikhuluma isiPhuthi esitsengileko

Sithinta:





Sithinta:



lingathathwa njengesika edzimelelisa ilimi labeli elisengozini kanye nesiko labo.

Isifundobandulwesi asikabandakanyi kwaphela amano wokugadangisa kodwana neendlela ekungizo ezilungileko zokwenziwa kwemitlolo yelimeli, okufaka hlangana idatha enikela ngelwazi lenye idatha, ihlelo lokuhlaziya kanye namanye amakghono. Ebebakhambe le isifundobandulwesi basebenzise amakghonwabo amatjha ngokugadangisa iminyanya engeqakatheke khulu esingathwa qobe mnyaka kukhalenda yesiPhuthi: isikhumbuzo sekosabo esele iziyele kiboyisomkhulu uMurena Moorosi. Esitjhabeni sabaPhuthi, isikhumbuzwesi saziwa ngokuthi Sikhubhuto sa Murena Moorosi.

Ukubandulwa kwabo kwenzeke e-Bethel Business and Community Development Centre (i-BBCDC), ekuliziko elibandula ngomsebenzi wezandla begodu nekuliziko elinzinze eendaweni ezithathwa njengalezo ezingakaqakatheki eengcenyeni zeLesotho.

Ukusebenza Ngale Kwe-Covid-19.

Isitjhijilo esikhulu esihlangabezane nesiqhemesi bekukuragela phambili ngomsebenzaso welimi nanyana kurhagele umabhubhisa lo i-Covid-19. Isiqhemesi besiyitjheje khulu imikhawulo kanye namagadango wokuzivikela ku-Covid-19 ngokwemilayo evela ekhayapha nephasini loke. Abarhubhululi bebahlololwa umulwana ngaphambi kobana bangene eLesotho begodu boke ebebakhambe le isifundobandulwesi nabo bebahlolwa ngokuthatha amasampula emizimbenabo qobe

langu ngaphambi kokuqangulwa ngemisetjenzana yelanga. Izinga lomtjhisu womzimba belithathwa qobe langu bese liyagadangiswa, begodu nokuqalangana kezokuhlalisana bekwenziwa. Imisetjenzana ebeyibandakanya izandla beyenzelwa ngaphandle.

Ukuqalelela Phambili.

Ngemva kokuphumelela kwesifundobandulwesi sikaSinyikhaba, kunamahlelo azokwenziwa wokwenza ilandelela ngomnyaka wee-2022 ekukulapho abazibandakanyileko bazokufundiswa khona amano akhaliphileko ukwenzela bonyana baqinise amakghonwabo wokugadangisa nokubalungiselela ukuragela phambili ngemisetjenzana abayigadangisileko nanyana sele bathola umhlahlandlela nasekelo elincani kangangani.

Yini Eyenza IsiPhuthi Sikhetheke?

Umtlolo wesiPhuthi lo uqakatheke khulu njengombana isiPhuthi kulilimi elinomlando kanye nekareko yezamalimi. Lilimi elivele eminyakeni ema-200 eyadlulako, ezinye iimfundiswa zilithatha njengomvango welimi ngombana labelana iingcenywe ezinengi nesiSotho. Ukuhlaziya kwesiPhuthi ngebanga lendabukwalo ebuya keline ilimi kanye nokutjhugutjhuguluka kwalo ngebanga lokuqajelwa ngeline ilimi—koke lokhu kuzokuba nomthelela wokuthi kube nekulumopikiswano eragela phambili ngokuthi yini eyakha ilimi elihlanganisiweko nalimadaniswa nalelo elimvango.

[Ukuthola umkhigizo opheleleko wesirhunyezwezi, vakatjhela umtlolo lo.](#)



INTANDO YENENGI ENGENZASANA KWEPHROJEKTHI.

- **Boitumelo Matlala**

Temokerasi ke kgololosego, mme mo aforika borwa ga eyo kgololosego. Ga gona le temokerasi, ke maaka hela (Respondent 60, Democracy from Below survey 2021).

Go gololosega mo matshelelong a rona (Respondent 4, Democracy from Below survey 2021)

Imidzubhulo engehla le iziimpendulo embuzweni othi, 'ngiliphi igama namkha ibinzana ongalisebenzisa ukuhlathulula intando yenengi' begodu 'ingabe intando yenengi itjho ukuthini kuwe'. Le mibuzo emibili eqakathekileko ku-the *Democracy from Below project*. Kuphrojekthi le, ihloswethu kukwakha umthombo welwazi mayelana nokuzwisisa nokuziphatha kwentando yenengi emalimini asemthethweni eSewula Afrika, kanye nokubeka tjhatjhalazi ihlaziyo lentando yenengi emilandwini yekhayapha kanye nekuzijayezeni intando yenengi eempilweni zethu zaqobe langa. Iphrojekthi le iraga ngokuhlanganyela neZiko eliLetha iTjhuguluko kezeHlalakuhle i-Centrer for Social Change, iRhuhululo kezeHlalakuhle nokuSebenza i-Social Research and Practice eYunivesithi ye-Johannesburg kanye ne-South African Centre for Digital Language Resources eYunivesithi ye-North West. Kuyiphrojekthi esekelwa ngeemali liZiko loBuntu kanye neSayensi yezeHlalakuhle eliZweni Loke i-National Institute for the Humanities and Science.

Ngenyanga kaSinyikhaba emnyakeni wee-2022, sihlome ukuhlolwa kwamazizo wobuliminengi lapho besibuza khona abantu mayelana nokuzwisisa kwabo intando yenengi kanye nelimi

abalisebenzisako ukuveza intando yenengi. Ukuhlolwa kwamazizokhu bekwenziwa ngamalimi woke ali-11 weSewula Afrika begodu sikwenze ngokusebenzisa ikundla yoMoya iMoya App, ekuyikundla engabhadelisi abathengi intela nesetjenziwa babantu abaziingidi ezine ephasini loke. Emibuzweni le yokuhlolwa kwamazizo, ilimi ngalinye belinabatjhugululi ngababili abatjhugulula imitlolo ukusuka kiloyo wendabuko ukuya kelineye ilimi ukwenzela bonyana omunye nomunye umbuzo ube nomongo. Isizathu sethu sokwenza ukuhlolwa kwamazizokhu bekukuthola isilinganiso esitjhaphulukileko sentando yenengi ukwenzela bonyana sihlale siqakathekile. Ngakelinye ihlangothi, besitlame imibuzo yokuthi isisize ukuthola ukuqina kanye nesilinganiso sokwenza enye indlela yokuveza intando yenengi. Ukuhlolwa kwamazizokhu kubuyise iimpendulo ezingehla kwee-2000.

Ukuhlolwa kwamazizokhu kungenye yeendlela zokurhubhulula ezisetjenziwa yi-the *Democracy from Below project*. Kwesibili sitlame ukuhlunga mayelana nobukhethelo. Ngenyanga kaNobayeni emnyakeni wee-2022, sithome ukusingatha ukuhlunga okungakahleleki

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ngokwemibuzovama. Ukuhlungokhu nanje kusenziwa siqhema sabarhubhululi abathathu. Bekube kunje, sihlunge abatjhotjhozeli bendawo eemfundeni ezifana naboLimpopo, eThagwini Tjingalanga, eTjingalanga Kapa, KwaZulu Natal, e-Free State kanye ne-Gauteng. Ukungenelela emibuzweni iinsetjenziswa kwamaziso, ukuhlunga mayelana nobukhethelo kumumethe ummango nomlando owakha imibono namaziso wabantu mayelana nentando yenengi. Koke ukuhlungwa sikwenza ngamalimi wekayapha bese sikutlola ngawo wona amalimi la. Imitlolo le iyathathwa ithunyelwe bonyana iyokuhlolwa izinga lawo bebayiqinisekise bonyana umehluko okhona kukulumo-pendulwano nawo uyavela emtlotweni, bese imitlolo le itjhugululelwa esiNgisini. Umnqopho wephrojekthi le kukwakha ibuthelelo lelwazi lamalimi. Njenganje, kusele ilwazi elilinganiselweko lamalimi emalimini wendabuko begodu alikho elimayelana nesihloko esithileko esitlotlwe ngamalimi amanengi.

Eminye yemifakela ye-*Democracy from Below project* ibandakanya umbuthano kanye nefilimu elifitjhani. Umbuthano lo uzokuhlanganisa amalunga ahlukahlukeneko wesiqhema sabarhubhululi kanye nezinye iimfundiswa ezisebenza kiwo lomkhakha. Bazokubonisana bebacocisane ngalokho okutholakele kokuthoma erhubhululweni lephrojekthi le. Ifilimeli lizokugadangiswa ngenyanga kaSihlabantanga ngomnyaka we-2022 e-*Duncan Village*, esifundeni sePumalanga Kapa. Ifilimeli lizokubandakanya imisetjenzana esisebenzele phezu kwayo libuye godu liveze ukuhlukana phakathi kwalokho okutjhiwo litjhaphuluko nemizabalazo yetjhaphuluko kanye nemikhawulo yetjhaphuluko entandweni yenengi. Ngokukhetha isizinda sefilimeli bonyana sibe se-*Duncan Village*, sifisa ukubamba isisekelo semiqondo le emilandwini

yekhayapha nemizabalazo yakhona. Umnqopho wefilimeli kusiza bonyana lokho okutjhiwo yintando yenengi nalokho okumunyethwe yintando yenengi kwaziwe. Libuye godu liqinisekise ukuzibophelela kwethu ukuqozululwa kwelwazi elikhiqizwako nelihlose ukwabelana ngerhubhululo elingakavami ebusayensini bezehlalakuhle.

Imithombo yelwazi ekhona emiphakathini ephila ngaphasi kwetjhaphuluko nemayelana nokubunjwa kwemiqondo, indlela yokwenza kanye nomzabalazo wentando yenengi kanengi ayibandakanywa emithethweni yentando yenengi. I-*Democracy from Below project* itlanywe ngendlela yokuthi iqede ukungabandakanywokhu ngokunabisa umfundaze ofaka hlangana ilwazi, umlando kanye nelemuko lamaSewula Afrika amanengi mayelana nemithetho le yentando yenengi ukuze kuthuthukiswe ubujamo bentando yenengi ukusuka esisekelweni nangale kwayo. Iyizwisisa ngendlela yokuthi ibe yikundla yokuphalisana ebandakanya imiqondo emummongo emikhakheni ejayelekileko yentando yenengi, njengamalungelo womphakathi kanye netjhaphuluko kezepolotiki kodwana imibono enjengale inganikelwa ihlathululo etja nange ingahlaziyelwa ngokwezinga elisenzasana.

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ISIQHEMA SAKWA-SADILAR SIFUNDISA NGE-DATA CARPENTRY E-WITS.

- **Natalie Simon**

Ubuhle obukhulu ngobutharhatlharha bedijithali eminyakeni edlulileko butjho bonyana abarhubhululi njenganje sebangakhona ukubuthelela ilwazi kiyo yoke imikhakha ngendlela engazange kheyibonwe phambilini. Yeke-ke, kunokuthayela kwamakhono naziza kezokuphatha nokuhlaziywa kwelwazi, ingasi eSewula Afrika kwaphela, kodwana ephasini loke

I-*Data Carpentry* iligadango lephasi loke, elitlanywe belanziniswa miphakathi yendawo enethando lomsebenzawo, ekumiphakathi ebonelela ngeemfundobandulo eziqakathekileko zamakhono welwazi adingekako ukwenzela bonyana kwenziwe irhubhululo. Umnqopho we-Data Carpentries 'kufundisa abarhubhululi imiqondo esisekelo, amakhono neensetjenziswa zokusebenza ngelwazi ukwenzela bonyana benze imisebenzi eminengi ngesikhatjhana esincani nangaphandle kokuzwa ubuhlungu'.

Ngenyanga kaMhlolanga ngomnyaka wee-2022, amalunga amathathu we-South African Centre for Digital Language Resources (SADiLaR), ekunguMmasibidi Seteka, Benito Trollip no-Juan Steyn, badose phambili isifundobandulo se-Data Carpentry ebesibanjelwe eYunivesithi ye-Witwatersrand (Wits). Kube sifundobandulo ebesikhanjelwe bafundi abenza iziqu ze-Masters kezobuKghwari (*Master of Arts*) (MA) kanye ne-National e-Science Postgraduate Teaching and Training Platform (NEPTTP). Ihlelveli liyingcenywe legadango lephasi loke ukwenzela ukwakha amakhono welwazi lobusayensi hlangana kwamaYunivesithi asithandathu weSewula Afrika: I-North West University, Sol Plaatje

University, University of Limpopo, University of Pretoria, University of Venda kanye ne-Wits.

Njengombana i-NEPTTP inikela ngamahlelo amabili weemfundo: ekuyi-Master of Science ne-MA, isifundobandulwesi besinqotjhiswe khulukhulu ebafundini abenza iziqu ze-MA. Abafundi abahlangana kwabali-10 nabali-13 bazibandakenye kusifundobandulwesi esithethe amalanga amathathu lapho bekuqalelelwe khona ukwethula isendlalelo sokuqakatheka kwemiqondo yelwazi lobusayensi. Abafundi abezileko beze ngokwemisebenzabo ehlukahlukene, kufaka hlangana ubudlelwano beentjhabatjhaba, isifundo sezomkhumbulo, isifundo sezokurhatjha kanye nesifundo sezokuthuthukisa.

'I-Carpentries le iligadango elihle khulu ekubanduleni ngelwazi lobusayensi', kutjho u-Trollip, ongomunye wabafundisi kusifundobandulwesi. Uthi, 'ngombana ikharikhyulamu, iinsizakusebenza, zoke ziyatholakala ku-Creative Commons licence'.

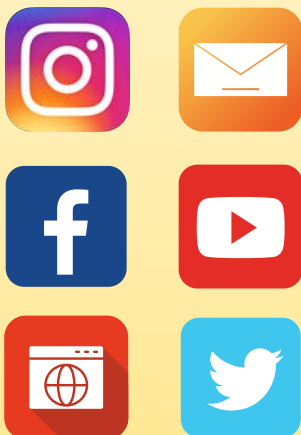
'Lokhu kutjho bonyana abafundisi bangathembela kukharikhyulamu ejanyiswe kule, begodu nangabe abafundi bafuna ukubuyekeza ngemva

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kwesifundobandulwesi, namkha isiqhema asikghoni ukufinyelela emalangen amathathu abekelwe ukwethula ikharikhyulamu, abafundi bangathola ilwazi elisaleleko *online*.'

Kusifundobandulwesi abafundi baziswe ngelwazi elisisekelo lokulawula ilwazi, kufaka hlangana ukuthinta indaba yomraro wokusebenzisa i-software ezijameleko njenge-*Microsoft Excel* ngomnqopho wokuhlanganyela namkha ukwabelana ngelwazi nokuthi ngiziphi ezinye iindlela ezikhona ezingasetjenziswa.

Abazibandakanyileko babuye godu baziswa ngelimi lokuhlela umtjhiningqondo i-R, elisetjenziswa kurhubhululo ngokuya kobukhethelo nembalo yakhona kezobuntu nebusayensini bezhlahlakuhle.

'Sithokozisa i-*Carpentries* ngeemfundo ze-R, sibuye godu sethula isimunyathwa esaziwa nge-*Swirl*', kusahlathulula u-Trollip. 'Lesi sisetjenziswa esisiza umuntu bonyana afunde kabanzi nge-R kancani kancani'.

Babuye godu bethula ihlelo le-*OpenRefine* kubafundi, ekusisetjenziswa esisetjenziselwa ukulungisa ilwazi elonakeleko namkha eliqajelweko, nekuyindlela enye ehle khulu yokusebenzisa i-spreadsheet se-Excel nekuyindlela yokwenza amatjhuguluko, lapho ukghona ukutjhugulula noku-editha khona ilwazi belingalahleki. Ngale kwapokho, kulula nokuthola umsebenzakho esele uwenzile ubuye godu ubuye emva ulungise ubutjhapho obenzileko.

Ihlelo le-NEPTTP linabile, okutjho bonyana abafundi bafundiswa

ubusayensi belwazi bese kuthi ingcenyehlelweli ihlose bonyana abafundi bakwazi ukwethula amakghono wobusayensi belwazi kanye nelwazi abalitholileko emikhakheni abasebenza kiyo njengengcenyehlelweli wokugcina erhubhululweni labo. Abafundisi be-SADiLaR be-*Data Carpentry*, babe nokwaneliseka ekusizeni abafundaba ukuze babone bonyana kuyakghonakala ukusebenzisa ihlelo le-R emarhubhululwenabo abawenzako.

'Ngicabanga ngesikhathesa nangenza iziqu zami ezikhithelweko. Ngazi kuhle bonyana kusitjhililo kangangani ukuba nombono okhaliphileko ngerhubhululo ofuna ukulenza kwangaleso sikhathi kodwana ungazi bonyana ungawethula njani umbono loyo', kutjho u-Trollip. 'Ingcenyehlelweli khulu kimi ngesifundobandulwesi bekukukhuluma nabafundi mayelana namarhubhululwabo nokuthi soke besinikelana imithala yamagadango abangawathatha ukuze bafike lapho bafuna ukufika khona'.

Kubafundi abazibandakanyileko kusifundobandulo se-*Data Carpentry* nalabo abafundi ukunabisa ilwazi labo, i-SADiLaR ibonelela ngehlelo elibizwa nge-*ESCALATOR*, elitlanywe ngomnqopho wokusekela abarhubhululi abanethando lokusebenzisa iinsetjenziswa zedijithali kanye neendlela zokwenza erhubhululweni nefundiswenabo.



IMINYANYA EZAKO:

I-SADiLaR ihlela iminyanya emithathu emikhulukazi yesifunda ezokusingathwa phakathi kwenyanga kaKhukhulamungu noSinyikhaba emnyakeni wee-2022 eSewula Afrika zombebele. Lokhu kubumba ingcenywe yephrojekthi EKHUTJHULWAKO begodu umnqopho wakhona kuragela phambili ukukhuthaza umphakathi ukudlala indima emkhakheni wedijithali yobuntu kanye nobutjhiningqondo besayensi yezehlalakuhle. Isakhiwo seminyanya le sizokubandakanya ikulumo ehlekileko naleyo engakahleleki ngomnqopho wokwabelana ngemibono. Qinisekisa bonyana uvakatjhela ubunzizolwazi bethu kanye namahlelo wokuthintana ukuze uthole isimemo sokuzibandakanya.

Ukuthola ilwazi elinabileko nge-*ESCALATOR*, sibawa uvakatjhele ubunzizolwazi namkha uzitlolise ku-*ESCALATOR announcement mailing list*.

**Nakunombiko obuyako
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**Gandelela la ukuzitlolisela
kuncwadindabethu**



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