



UMHLAHLANDELA WOKUBHALA ISIPHAKAMISO SOCWANINGO

Abafundi bezifundo zeMastazi nezobuDokotela.

Ucwaningo nokubekwa kwezinto ezinstha
kwaseNyuvesi yaseZululand

Isibuyekezo zokuqala sangoMasingana
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(OKUBALULEKILE. Kusemqoka kakhulu ukuthi uziqede zonke izahluko zocwaningo.)

1 UMBALO OBHEKISWE KUBAFUNDI

Mfundi Othandekayo,

- 1.1 Niyamukelwa kwiprojekthi yemibhalo yocwaningo yaseNyuvesi yaseZululand. INyuvesi iyakuthokozela ukuba nani njengengxenye yomphakathi wabafundi futhi inifisela uhambo lokuzithola nokukhula ezifundweni zenu okuhle.
- 1.2 Lencwadi yakhelwe wena uqobo njengomhlahlandlela wokusungula iziphakamiso zocwaningo zemibhalo yenu. ***Yenzelwe abafundi abeza imibhalo emincane, imibhalo ephelele noma imibhalo ephakamisiwe.*** Ayenzelwe abafundi abasenza amaprojekthi e-Honours. Kodwa abafundi be-Honours bangayibona inenzuzo. Umbhalo ubheka izindawo eziyisithupha ezibaluleke kakhulu: okulindelekile, uhla lwesiphakamiso socwaningo, inqubo, isikhathi esibekiwe, ukubhalwa kokuhlolwa kwesiphakamiso socwaningo, nezimiso zokuziphatha zocwaningo. Kunesiqeshan esinezibonelo uma ufuna ukubuyekeza. Thatha isikhathi ufundisise lomqingo.
- 1.3 Kwazise ukuthi uwena owongamele ucwaningo lwakho, ngokunikwa umhlahlandlela ochwepheshe babaphathi noma amasekela abaphathi. Isiphakamiso socwangingo kumele seqaliswe ngaphansi komhlahlandlela womphathi iNyuvesi ekunike yena ngokuhambelana nesihloko sakho. Thatha lesisibophezelo sokusungula nokunikezela ucwaningo olucatshangisiwe. Hlosa ukuhambelana nesikhathi esibekiwe ukuze isiphakamiso sakho siphasiswe. Isikhathi sokulethwa kocwaningo esibekwe ngokwesivumelwano umphathi, sizolandelwa, izizathu ezibucayi ezihambisana nobufakazi kuphela ezizokwamukeleka uma ucela ukwandiselwa isikhathi.
- 1.4 Kwazise futhi ukuthi incwadi iwumhlahlandlela. Ikhwalithi yomsebenzi owulethayo izobe ithelwe ukusebenza kakho, okubuka, (a) ukukhula kwezemfundo, (b) ukuqonda inqubo yocwaningo (c) Izinga lokuxoxisana nohlobo lobudlelwano onabo nabaphathi bakho. Isiphakamiso socaningo sizonikza iNyuvesi umqondo ngohlobo locwaningo ekumele ilulindele. Ngakho ke, zimisele.
- 1.5 Lencwadi iyingxenye yokuqukethwe ohlelweni lwezifundo zeMastazi nezobuDokotela. Ngokungeziwe kulencwadi, uyakwazi ukufinyelela kwizinsiza kusebenza emkhatheni noma eqenjini lokusungulwa kwezinto ezintsha zocwaningo kwi-inthanethi, okuzokunikeza ulwazi oluningi lwemfundo, namakhophi ezifundo zinzwe ngaphambilini. Hlosa ukusebenzisa izinsiza sazempaweni wolwazi.
- 1.6 Okuqukethwe kulencwadi kuhlezi kuvuselelwa emva kwesikhshana, lonke uhlobo loshintsho oluvela encwadini evuseleliwe onikezwa yona uma uyobhalis oluvela ku-inthanethi ku- <http://www.research.unizulu.ac.za/>. Kujwayele ukuba ushintsho oluncane, futhi ungakwazi ukubheka ukuthi kushintshwe kuphi uma ubheka ekhasini lokuqala ngaphansi kwezinto ezintsha ezikhishiwe, bese ukuqhathanisa nokuthola kwikhophi eyedlule kuhlobo lwe-PDF.
- 1.7 Uma wenza iziundo zakho zocwaningo (M&D), kumele uxhumane nomkhakha wakho nethimba locwaningo nokusungulwa kwezinto ezintsha ukuze uthole olunye ulwazi nokucaciseleka ezintweni ezithinta incwadi yomhlahlandlela wesiphakamiso socwaningo. Uma ungenzi lokho, xhumana nomkhakha wakho. Ithimba lokusungulwa kwezinto ezintsha nocwaningo ungaxhuman nbo kulelikheli elingezansi:

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2 OKULINDELEKILE

- 2.1 Isiphakamiso socwaningo siwuhlelo lokusebenza, indlela yomsebenzi noma isitatimende esihlose ukuchaza ukuthi *ini, ngobani, kanjani, kuphi nokuthi* ucwaningo luzoqedwa *nini*. Isiphakamiso socwaningo esihlelwe kahle nesifanele siyaveza ukuthi ucwaningo luqala kuphi, nalapho luzoze lufinyelele khona, kanye namasu azolwenza lufinyelele lapho.
- 2.2 Isakhiwo esesiphakamiso socwaningo saseUNIZULU siqukethe ezingxenye ezingu-19 ekumele ziqewe. Izihloko ezingu- 20 zingahlukaniswa samaqembu njengokulandelayo: (a) **amakhasi andulelayo-** akhombisa izihloko ezimbili zokuqala, ngokubalwa: Ikhasi lesihloko, iThebula lokuqukethwe no (b) **Umzimba wesiphakamiso-** obhekelela zonke izihloko ezisele. Isihloko ngasinye sichaziwe kwisigaba sesi 3,1 kuya ku 3,20 ngezansi. **OKUBALULEKILE. Kuzobe kunezingqungquthela zokufunda zokuqeqeshwa ezizobe zihlobene nesihloko noma nendaba ephathwayo okumele uzithamele ngesikhathi usungula isiphakamiso.**
- 2.3 Izinga lokubhala emibhalweni yesiphakamiso socwaningo kumele libe ngelezinga lezemfundo ephakeme futhi libe ngelesayensi. Lokhu kusho ukuthi kumele ugweme ukusebenzisa izga ezingenasidingo, izinkolelo, isitsotsi noma ulimi lwasemgaqweni. Isakhiwo, okuqukethwe nokubuyekeza kumele kuhambisane futhi kuhambelane. **Hlosa ukuba umpetha kwindlela okungenani eyodwa yohlelo lokubuyekeza (isibonelo, indlele ye- Mendeley, neyaZotero).** Ulimi kumele lubhalwe ngendlela yokubhala efanele. Ukubhekisiswa kokubhaleka kolimi nezipelingi kumele kwenziwe ngaphambi kokuthumela isiphakamiso socwaningo esiqediwe. Khumbula, wonke amakhasi kumele abe nezinombolo.
- 2.4 Ukubhala kwakho kumele kuqonde, kunikeze ulwazi nemibono ebalulekile. Ngalandlela uzokwazi ukulawula ubude bomqingo wesiphakamiso socwaningo. Isiphakamiso asiwona umbalo ophелеle wocwaningo, yize kumele sibe nolwazi olwanele olwandulela icwaningo oluphelele, akumele sibe neminingwane eyadlulele kakhulu. Umphathi wakho uzokunikeza umhlahlandlela wobude bomqingo.
- 2.5 Ukuze uqinisekise ukuhambisana kombhalo kumqingo wonke, kuphakanyiswa ukuthi usebenzise uhlobo lokubhala nge- Arial, usayizi- 12, ohlukanise izitanga ngo-1.5. Uma ucaphuna izinkulumbo, ukuhlukana kolayini kumele kube u-1. Ngeke ugwetshwe uma usebenzise indlela ehlukile yokubhala nokuhlukana kolayini. Xoxisana nomphathi wakho ngezinye izinguquko.
- 2.6 Ukubhala ngendlela engaqoqekile nokungahleleki kwamatafula nezinombolo kuphazamisa abantu abazobe befunda isiphakamiso sakho socwaningo. Qinisekisa ukuthi umsebenzi wakho uyahlolisiswa ngaphambi kokuhambisa umsebenzi wakho ukuthi uyophasiswa.
- 2.7 Landela isakhiwo sesiphakamiso njengoba sinjalo. Noma isakhiwo sezihloko sikhona, ungakwazi ukuzifakela ezakho, ezihambelana nezinga lakho lemfundo noma lomkhakha. Yazi ke kodwa ukuthi amamaki nokumakwa kwesiphakamiso socwaningo kulandelwa uhlelo lwesakhiwo olungenhla.

3 ISAKHIWO SESIPHAKAMISO SOCWANINGO

AMAKHASI ANDULELAYO

3.1 Ikhasi lesihloko

- 3.1.1 Ikhasi lesihloko linolwazi olulandelayo: Isihloko sombhalo wocwaningo, igama lomfundi, inombolo yakho yasesikoleni, isizathu sokuthumela iprojekthi, okufundelayo, umkhakha wakho, abaphathi bakho, nosuku lokuthunyelwa. Ikhasi lesihloko libuye libizwe ngekhasi elikhavile.
- 3.1.2 Isihloko sombhalo wocwaningo kumele sisungulwe ngokucophelela. Yini isihloko? Singamafuphi esifinyezo senhloso yocwaningo- esifinyeza izinkomba ezine (4) ezibalulekile: okukhulunywa ngakho, isenzo esikhulu, okugxilwe kukho, nomongo. Isibonelo: "UKUHLAZIYWA KWEQHAZA LOBUHOLI BENDABUKO KWINKUBOMGOMO YOKUSEBENZISANA KUMASIPALA UGU". **Isihloko nokukhulunywa ngakho kucwaningo lwakho akufani.** Okukhulunywa ngakho kutholakala ngaphansi kwesihloko, kuvezwa ngegama elilodwa noma amabili. Isibonelo, esihlokweni esingaphezulu, isihloko sithi (ukusebenzisana kwinkubomgomo); isenzo esikhulu (ukuhlaziywa); okugxilwe kukho okuhloswe ukuthi ucwaningo likuveze (iqhaza lobuholi bendabuko kwinkubomgomo yokusebenzisana); umongo (uMasipala WOGU). Nkwesinye isihathi nalawa amanye amaqoqo ayaba ingxenye yomongo.
- 3.1.3 Kulesisigaba, isihloko sijwayele ukubukwa njenge "sihloko sokusebenza". Kuthandeka ukuthi singeqi amagama ayi-15.
- 3.1.4 Umkhakha noma izifundo ziyaye zibe nomthelela wokuthi isihloko sokusebenza sihlelwe kanjani. Xhumana nomphathi wakho ukuze akubonise.

3.2 ITHEBULA LOKUQUKETHWE

- 3.2.1 Ithebula lokuqukethwe linikeza isifinyezo esisheshayo mayelana nezigaba zesiphakamiso socwaningo sakho, kanye nezinombolo zamakhasi ekuzotholakala kuwo lezigaba. Kuyimpoqo ukuthi isiphakamiso sakho socwaningo usihlele ngokuqondana ngoba lokho kulekelela abasebenzi beNyuvesi okubalwa (isibonelo, abaphathi nabanye abasebenzi besikhungo ababekwe ukuthi bafunde umsebenzi wakho) ukuthi bawufunde kahle umsebenzi wakho.
- 3.2.2 Ukuhlelwa noma isitayela sethebula lakho lokuqukethwe ungakwenza nanoma ikanjani. Ungakhululeka ukhethe phakathi kwethebula elihlukene kanye, elihlukene phakathi noma elihlukaniswe kaningi. Isibonelo esihle sethebula elihlukene kanye singangaba nokulandelayo: Isingeniso, Umlando wocwaningo, isitatimende senkinga yocwaningo, ukubuyekezwa kwezincwadi, Indlela yokusebenza kocwaningo nezibuyekezo. Izihlokwana zokukodwana kwalokhu kungaba isigaba sesibili sokuhlukanisa. Izihlokwana ezehlukanisayo zikuvumela ukuthi uqhubeke uchaze ngesihloko esikhulu ngasinye. Okunye ukuhlukanisa kwezihloko kungena esigabeni sesithathu.
- 3.2.3 Uma usebenzise izakhi zemifakela, amathebula nezinobono esiphakamisweni socwaningo sakho, qinisekisa ukuthi uyazifaka kwithebula lokuqukethwe siphakamisweni sakho. (Okubalulekile. Kunomehluko omncane ngokuhlukahlukana kwalezizimfuno uma uqeda imibhalo yakho ngoba ikhasi eliseceleni liyaye lenzelwe ukufaka uhlu lwezininombolo namathebula

kulemibiko). Umzimba wesiphakamiso kumele uvele kwithebula lokuqukethiwe. Gwema ukufaka okulandelayo kwithebula lokuqukethiwe: Izincomo, izifinyezo, nalo ithebula lokuqukethiwe.

UMZIMBA WESIPHAKAMISO

3.3 Isingeniso

3.3.1 Isingeniso siyisititimende esichazela abafundi bocwaningo lwakho ukuthi ikuphi okwenzile nekumele bakulindele esiphakamisweni socwaningo. Sivamise ukubhalwa ekugcineni, uma zonke izigama zesiphakamiso socwaningo seziqediwe. Kunezindaba eziphathwayo ezimbili ezibalulekile ezivme ukuvela kwisingeniso: (a) Ekukhulunywa ngakho; (b) Isakhiwo sesiphakamiso socwaningo. Ngakho ke,

- (a) Nikezela ngemigqa emibili noma eithathu echaza ukuthi ucwaningo lwakho lukhuluma ngani, nokuthi ekukhulunywa ngakho kugxile enini nokuthi kungani kubalulekile. Phinda futhi
- (b) Unikezele ngemigqa emithathu noma emine edweba iphinde ichaze isakhiwo sesiphakamiso socwaningo sakho.

3.3.2 Isibonelo sesingeniso siyavezwa ebhokisini lokuqala ngezansi, esibonakalisweni sokuala. Nakisisa isakhiwo

3.4 Umlando wocwaningo

3.4.1 Umlando nokulandelayo kuveza umqondo nomongo nokubaluleka kocwaningo ngokufinyeza ukuqonda nezingxoxo ezihlobene **nesihloko**- bese kulungisela isitatimende senkinga yocwaningo, imibuzo yocwaningo, inhloso nenjongo yocwaningo, okuphathkayo noemicabango.

3.4.2 Abafundi abanengi babhekana nobunzima bokubhala umlando nokulandelayo ngoba bayahluleka ukuqonda ukuthi kulindelekeni. Cabanga umlando nokubaluleka kocwaningo ngoba isigaba kumele siphendule imibuzo yabafundi bocwaningo elandelayo:

- (a) Yini le engiyifundayo?
- (b) Sibaluleke ngani lesihloko ukuze siphenywe?
- (c) Yini engundabuzekwayo ngesihloko njengamanje; i.e., ngaphambi kokuqala uphenyo?
- (d) Ukufunda kwami kuzoluthuthukisa kanjani ulwazi lwami, ukuqonda nendlela yokenza?

3.4.3 Imibuzo engenhla iveza izinto ezintathu. Iveza ukuthu uma “umlando nokulandelayo” kubhalwe kahle, kumele; (a) Ufingqe ulwazi olutholakale phambilini mayelana nesihloko ukuze ubeke isisekelo sokuqonda inkinga yocwaningo; (b) gqamisa izikhala, ubuthakathaka, ukushoda nezinkinga kumzimba womsebenzi wesihloko bese uchaza ukuthi olwakho ucaningo luzozigcwalisa kanjani lezi zikhala, ubuthakathaka nokushoda noma nezinkinga ezincwadini; bese (b) uxoxa ngokuzonikezelwa ucwango lwakho emibhalweni, inqubomgomo nokusebenza ukuze ukubaluleke nesidingo socwaningo lwakho kuzobonakala.

3.4.4 Bhekisisa, ngakho ke, “umlando nokulandelayo” awuyona indawo yokuveza izincazelo ezinkulu zomongo nezindawo. Kunalokho, kuyindawo yokuthuthukisa abafundi bocwaningo ngolwazi lwamanje ngesihloko socwaningo sakho nokuveza lapho wena ungena khona. Ngokuqinisekile, zikhona ezinye izifundo ezike zenziwa ongazigqamisa ezingxoxweni. Okwesibili, loku kumele kukutshale ukuthi isiphakamiso sakho socwaningo KUMELE siqale amva kokwenza izimfuno

nophenyo lwezezincwadi waphinde wathola nezikha kucwaningo lwphambilini. Ukufunda izincwadi ezinohlonze kuzokusiza ukuthi uqonde uphine ucabangisie izinkinga ezisemphakathini ozibonile ofisa ukuziphenya. Izinkinga zasemphkathini kumele zisekelwe imicabango

Ngaphambi kokuba zihumushelwe ezinkingeni zocwaningo. Umphathi wakho uzoinikezela ngomhlahlandlela ofanele.

3.4.5 Ngakho ke, bekumele uqale ufunde ngaphambi kokuba ubhale isiphakamiso socwaningo. Vakahela noma uthole imithombo yolwazi emtapweni wolwazi.

3.4.6 Indlela yokubhala “Umlando nolwazi locwaningo” ingahluka, kubekeke eitayeleni sakho sokubhala. Isitayela esijwayelekile sokubhala ilaoho “umlando nolwazi locwaningo” lubhekwe njengonxantthu obheke phansi noma isisefo. Kulesisitayela, ulwazi luhlelwe ngendlela elandelayo:

- (a) Xoxa ngezici ezijwayelekile zehloko kusakuswa esigabeni somlando nolwazi: (isibonelo. Uhlolajikelele esihlokwini socwaningo lwamanje, nokugqamisa ubumqoka besihloko).
- (b) Bese, unciphisa ukuhlaziya kwakho kube ulwazi olunesigqi oluqukethe umongo” isibonelo, ukuphikisana nezicabangela ezikhona, noma uvele izikhala noma ukushoda ocwaningweni olukona, njalo njalo ukuze ukubaluleka kuzovela).
- (c) Okokugcina, gxila (noma beka ucwaningo lwakho maphakathi nesidingo salo) ngokuchazisisa isikhala, inkinga noma ukushoda okuhlonziwe, okulpho inkinga izovela khona. Xoxa ngenhloso ykho, nesizathu sokuyicwaninga. Konke loku kuveza indawo yesitatimende senkinga.

3.4.7 Uma ucwaningo luyingxenye yprojekthi enkulu enezinkinga eziningi, sebenzisa ulwazi ukuveza ukuthi iyiphi ingxenye yocwaningo lwakho ezoba kwiphprojekthi enkulu.

3.4.8 Ngokuphelele, iphuzu elisemqoka ekumele linakwe ukuthi isitatimende senkinga yocwaningo nomubuzo ziyincazelo yesihloko sakho ecacile. Ngokuthola isitatimende senkinga ngaphakathi kwesakhi (buka umfanekiso wokuqala), uyakwazi ukuthola bese usbenzisa izi ncwadi ezifanele, imicabango nezindlela zomhlahlandlela nokusungula ucwaningo lwakho.

3.4.9 Hlosa ukubhala ngokucacile nokunomqondo kwimpikiswano yakho. Hlaziyisisa ekubhaleni kwakho, ungachazi. Abafundi bombhalo bazi kabanzi ngawe ngenxa yohlobo lwakho lokubhala. Umlando nolwazi olungacacile, olungahlelekile, olunamaphutha kuveza umqondo ongamuhle ngawe.

3.4.10 Ukuzindla,. Buyela emuva njalo uyobuyekeza umlando nolwazi ekuqhubekeni kwakho kombhalo- noma nje mawuqeda ukubhala umzimba wonke wesiphakamiso- ngoba imiphumela ayaziwa ngaphambi kokuphothula uphenyo. Bheka ukuthi izimpikiswano ziyahambelana nezinye izigaba, ikakhulukazi kwinkinga nenqubo yocwaningo. Ungangabazi ukubhala kabusha umlando nolwazi lonke kulesosigaba ukuqinisekisa ukuthi ifaniselana nesahluko sonke.

3.5 Isitatimende senkinga nemibuzo yocwaningo

3.5.1 Isitatimende senkinga siyisici esibaluleke kakhulu sokucabangisisa ucwaningo lwakho ngoba siba nomthelela, umhlahlandlela sihole inqubo yonke yocwaningo.

3.5.2 Inkinga yocwaningo iyisitatimende esicashile esivezwa ngokucacile mayelana nenkinga ekubhekenwe nayo, ubunzima noma ukushoda ekumele kunciphiswe, isimo ekumele sithuthukiswe, noma umbuzo oyindida okhona ongakaphenduleki

emkakheni wezemfundo– kwezemicabango noma kwezokwenza – Okukhomba
isidingo socwango oluqaphelisiwe ukuze kube nokuqondisisa okuncono.

Isaziso. Ngokwenzazelo engenihla, kumele ubone ukuthi inkinga yocwaningo ayivezi ukuthi into kumele yenziwe kanjani, noma iziphakamiso noma inikeze umbono ocacile, noma inkolelo, umuzwa, ukwehla kwemizwelo noma amahebezi. Isho nje ubunjalo nobuqobo bento.

3.5.3 Ukubaluleka kweitatimene senkinga ukuvuselela imibuzo yocwaningo, izinjongo zocwaningo, noma izisombululo ezisilandelayo, bese siba isisekelo senjongo nenhloso yocwaningo. Konke lokhu ngokuhlangana kwakho kukunika imephu yokubika imiphumela yakho uma sekwenziwa uphenyo.

3.5.4 Uma kubukwa ukuthi isitatimende senkinga silandulelwa umlando nolwazi locwaningo, akumele sibe side. Izitanza ezimbili noma ezintathu Zanele, okusho ukuthi kumele ugxile kwimbono ebalulekile kuphela. Isitatimende senkinga yocwaningo esifanele sineimpawu ezilandelayo:

- (a) Sibonisa noma siveza (i) ukukhathazeka ngento efihliwe, engachazeki noma inkinga engakafundwa ekusmele iqondisiswe; noma (ii) ubudlelwano thizeni phakathi kwezinkinga ezimbili noma ezingingqi ezinobuhle noma nezici ekumele kuphenywe ukuxhumana kwazo, noma ubuzona; noma (iii) ukukhathazeka ngokuhluka thizeni phakathi kwamaqembu amabili noma amaningi oma ukungenelela ekumele kuqhathaniswe noma kuvuleleke, noma (v) noma ukukhathazeka mayelana nezigameko eziphathelene nokuziphatha, unembeza noma imfundiso (ukuziphatha, okomthetho nokunye) okudinga ukuhlaziywa kwemithetho ejwayelekile nokuhluka kwamacala ahlukene.
- (b) Ikhombisa ulwazi lwesikhala nokusweleka kwenzazelo ezovezwa ekubuyekwezweni kwezincadi okwandulela ucwaningo. Kungakho ukubuyekwezwa kwezincwadi kwenziwa. Ikhonela ukuthi isekele isitatimende seninga yocwaningo lwakho.
- (c) Ikhombisa okugxilwe kukho: ikhobisa ukwehlukaniswa nemingcele yohlaziyo.
- (d) Yehlukile. Ayiphindaphindi imisebenzi yabanye abantu. Ifanele futhi iyacwaningeka ngokwezemfundo. Ingenzeka, uma kubhekwa ubude bocwaningo lwakho. Ububanzi beprojekthi yakho kumele buhambelane nesikhathi neinga lokuzimisela elitholakala kuwe.
- (e) Okuphoqayo. Inkinga echaziwe kumele ibaluleke futhi ihehe nakwabanye.

3.5.5 **Imisusa yenkinga yocwaningo lwakho ingahluka.** Isibonelo:

- (a) Ingxoxo phakathi kompetha, ongcweti, abantu abasemkhkheni ozimele noma wendawo kunikza ithuba lokuhlonza izinkinga zangampela zasemhlabeni ezingabe zingakocwaningwa noma ezisazitshwe baundi;

Isipiliyoni sakho siqu noma ukukhungatheka bgenkinga noma isigameko osibonile esingenayo incazelo ecacile emsebenzini wakho, emphakathini/endaweni noma emnenini.

- (b) Ukufundisisa izincwadi ziphathlne nesihloko (isibonelo., uhlobo lwemoto yeUber) emphakathini wakho.

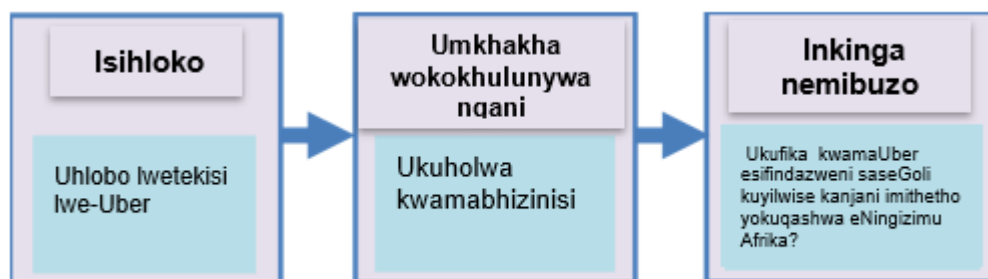
¹ Ngaphandle uma inhloso kukuphindaphinda.

Ukwenza okuhlukile kungaveza isikhala ekuqondeni isihloko, noma kuveze ukuthi isihloko sisacwaningwe kancane Ungenza uphenyo ukuze u (i) uvale isikhala solwazi, (2) uhlole inqubo yocwaningo olwedlule ukuba angeke isashintsheka ukuze kusombululeke izinkinga, (3) Yehlulela uma uphenyo olufanayo lungenziwa ngendlela ehlukele, ngesihloko esihlukele, noma esithinta iqembu elehlukele. Imibhalo eminingi yocwaningo iphetha ngokunikezela ngemigqa yokuqhubezela ucwaningo. Lemibhalo ingaba usizo lokuthola izinsiza zocwaningo olusha. Ukunciphiswa kwemicabango nako kungahlolwa ophenyweni.

3.5.6 Inkinga ozoqopha ngayo imibuzo yocwaningo kumele kuxoxwe ngayo kwisitatimende senkinga.

3.5.7 Isitatimende socwaningo lwenkinga yakho kumele sibe sambuzo ododayo, nemibuzo elandela lowo (noma izimfuno) ezisalele uphenyo. Imibuzo kumele ibe nohlaziyo, futhi ihambelane nesihloko esiveza inkinga, siphinde sibe ngaphansi kwesahluko sakho.

Ngokwengeziwe, kujwayeleke ukuthi imibuzo ibhalwe emva kwesitatimende senkinga[isibonelo., *“Lolucwaningo lubheka imibuzo ebelulekile emine emayelana namatekisi aka-Uber kanje nemithetho yokuqasha esifundazweni saseGoli...”*].



Umfanekiso wokuqala, ukuhlenganisa isihloko, isifundo nombuzo wenkinga (kuthathwe ku-Brown, 2023)

3.5.8 Uma ubeka imibuzo yocwaningo, hlosa ukuyenza iqonde, iphenduleke, ijule, ingachemi, ihehe futhi ifaneleke. Umphathi wakho uzokubonis ukuthi busebenza kanjani ubuciko bokubhala imibuzo yocwaningo ehambisana nesitatimende sakho senkinga, nenhloso. Imibuzo yocwaningo ehamba phambili ileyo egxila kokulandelayo:

- (a) Iveza imiqondo ebalulekile noma izimfuno ezifihliwe noma ezicwaningwe kancane.
- (b) Igqamisa inkinga ekhona, ukungabazeka kwayo, noma ukuida kesihloko- njengoba kungabe kubungaziwe esitatimendeni senkinga.
- (c) Iveza isidingo socwaningo olujulile noma impikiswano (kunencazelo nje noma isifinyezo)

3.5.9 IUmthelela wolwazi nobuchwepheshe bocwaningo emibuzweni yocwaningo. Kwiprojekthi yocwaningo, ubuchwepheshe nolwazi obufunwa wuwe ocwaningweni lwakho- okungaba, isigqqi, ubuningi noma izindlela zenqubo ezixubile- kuba nomthelela ekubekeni imibuzo yocwaningo lwakho.

3.5.10 Ubuchule bocwaningo obuningi buqagela ukuthi okungoqobo akushintshi futhi singakubheka ngezinhloso, kanti ucwaningo lwesigqqi luqagela ukuthi okungoqobo kwehlukahlukene futhi kusebenza ngemicabango, abantu

abaningi balibuka ngezindlela ezahlukene iqiniso. **Ucwaningo oluxube izinqubo zobuchule luqagela ukuthi kungaba kokubili- ekubeni kwesinye isikhathi okoqobo kungangashintsha bese kukalwa ngezinhloso.**

Ekubeni ezinye izimo zinemicabango, ngakho ke , akusiwo wonke umuntu ongavumelana nequniso, Ngokunjalo ke³:

- (a) Kucwaningo lwesigqi, umbuzo wocwaningo wakhelwe ukuhlaziya “ukuqonda” noma “ukwenza umqondo” wesimo. Uqukethe isakhi sokuthi “yini” “ngobani” nokuthi “kanjani” okuhambelana nenkinga ephenywayo. Kwenzakeleni, kungani kwenzakalile nokuthi kwenzeke kanjani. Isibonelo “Iyini inkululeko kubantu abamnyama baseNingizimu Afrika ababhekana nobandlululo behlala eSoweto?” noma “Izimoto zokuthutha abantu ze-Uber ziputshuke kanjani zangena emkhakheni wamatekisi, eGoli, eNingizimu Afrika?”
- (b) Ocwaningweni lobuningi, umbuzo wocwaningo wakhelwe ukuhlaziya ukulimala, ubudlelwano, ukwehluka nezinto ezidlulayo), noma ukuhlola. Uyabheka futhi ukuthi “Yini” (isibonelo, ukulimala nemibuzo yobudlelwano)...Yibuphi ubudlelwano [noma umehluko] phakathi kuka X no Y); noma “kanjani” ([isibonelo, imibuzo evhazayo]....Kungaphi....? kwenzeke kangaki...? Kwenza kanjani...?). Okunye ukwehlukana kungaba ukuqoqa imibuzo yocwaningo ibe imibuzo ehabelanayo. Isibonelo, “Kuhlobana kanjani ukwethulwa kwa-Uber eGoli Nokwanda kodlame lwamatekisi kulesisifundazwe?” (kuhabelane)
Noma
” Ingabe ukuqhudelana ngokufika kuchaza ubudlelwano phakathi kwebhizinisi lamatekisi lomdabu nele-Uber eselingene eGoli, nezinga lenzuzo emva kokubheka ukuziphatha kwabashayeli?” (okokuhlola)
- (c) Imibuzo yocwaningo kwinqubo exubile yehlukile kokungenhla. Ukuhlolisisa okuseduze kwemibuzo yocwaningo kwinqubo exubile kuveza isibalo(ubuningi) nesithombe (ubunjalo) phakathi kombuzo. Isibonelo, “Ibuphi ubudlelwano phakathi kabashayeli beUber nendlela abacabanga ngayo, nababuka ngayo izinto okubagwema ukuthi bangaziqondi izimpawu zomgwaqo?”

3.5.11 Iphuzu elisemqoka lana ukuthi imibuzo yocwaningo kulesisigaba sesiphakamiso, inemthelela kwinqubo ozoyikhetha. Hlakanipha ngemibuzo yakho ugweme nokuxova

3.5.12 Sebenzisa imibono ekulesisigaba, nebhokisi lesibili (buka umfanekiso wesibili), ozokuhola ukuthi ubhale isitatimende senkinga yocwaningo nemibuzo ehambelana nesifundo sakho.

Imibuzo efakeliwe icaza imibuzo yocwaningo ibe izicucu ezincane eziphathekayo. Imibuzo efakeliwe ibalulekile ngoba inikezela isikhathi ozothola ngaso ubufakazi obuzophendula imibuzo yocwaningo lwakho.

3.5.1 Imibuzo efakelwe ixhumanisa iphinde yakhe izakhi ongabe uzifundile waxoxa ngazo “kumlando nolwazi” “nakwisitatimende senkinga”, noma sisetshenziswe enkingeni yocwaningo.”. isibonlo, ingilazi, uphahla, uhlelo lokuhlola lwangaphakathi, izimo zenhlalo , ukusebenza kimqondo.

3.5.2 Uma umphathi wakho eseqokiwe, hlela ubude nesikhathi seprojekthi emhlanganweni wakho wokuqala naye nokulindele kuzinto ezibalulekile zesiphakamiso socwaningo.

² (Creswell, 2009).

³ (Brown, 2023)

3.6 Inhloso nezinjongo zocwaningo (noma imibono)

- 3.6.1 Inhloso yocwaningo icacisa injongo yesifundo sakho (ohlose ukukufeza), ivera namasu ozowasebenzisa (ukuthi uzowasebenzisa kanjani)
- 3.6.2 Inhloso. Inhloso yocwaningo kwsinye isikhathi ibhekwa njengenjongo yocwaningo. Lamagama womabili asetshenziswa ngokwehlukana esikhathini nasesikhathini thizeni Ngokomthetho, kumele kube nenhloso eyodwa (noma isitatimende senhloso), kodwa kusangavela izinjongo nemibono eyahlukahlukeni kwinhloso eyodwa. Ukuhlobana nokuhambisana kombuzo wocwaningo nenhloso yocwaningo (noma imibono yemifakela yocwaningo, nemibono) yikho okusemqoka kakhulu kulesisikhathi. Ukuxoveka kunganikeza aabafundi bombhalo wkho umqondo wokuthi ukhuluma ngezinto ezimbili ezahlukeni. Ngakho ke, ligweme lelophutha, Isibonelo senhloso yocwaningo ehambelana nombuzo:

UMBUZO WOCWANINGO

Ithini imibono yabantu besifazane mayelana nokufakwa kophahla lwengilazi ngaphakathi emabhange?

INHLOSO YOCWANINGO

Inhloso yocwaningo ukuhlola imibono yabantu besifazane mayelana nokufakwa kophahla lwengilazi ngaphakathi emabhange. Umthelela wezimo nenhlalo yokuphila kuzophenywa ukuze kubhekwe ukuthi imibono yabo iyiqiniso uthi ivera izinzo ezise zibe nobungozi yini.

- 3.6.3 Qaphela izinkomba kwisu elihlosiwe noma ngendlela ofisa ukufeza ngayo inhloso. Izinkomba zivame ukuthathwa emibuzweni eyimfakela.
- 3.6.4 Ukubhala inhloso nezinjongo zocwaningo kudinga ubuciko, futhi kumele uthole ikhono uthole nomhlahlandlela ofanele kumphathi wakho ngokuthi kumele ukwenze kanjani. Inhloso/injongo inezingxenye ezintathu ekumele uzigade, ezilandelayo, i:
- (a) Isiqu (i.e., igam “loku...”)
 - (b) Ibizo (i.e., igama lesenzo)
 - (c) Izinkinga ezisemoka (i.e., izakhi eziphenywayo).
- 3.6.5 Inhloso yocwaningo ithelwa kakhulu amabizo, amabizo ajwayelekile, ilawa” bhekisisa”, “hlaziya” “chaza” “cacisisa” “hlola” “kala” “qhathanisa” “qagela”. Lolu akusilo uhlu oluningi lwamabizo. Buka isibonelo esingehl.
- 3.6.6 Ukusetshenziswa kwamabizo kulele ekuteni kulandelwe uhlelo locwaningo lobuningi, lwemicabango noma lwenqubo exubile yobuchule. Umphathi wakho uzohola akubonise ukuthi asetshenziswa kanjani ambizo kwizinhlobo ezahlukeni zocwaningo.
- 3.6.7 Izinjongo zocwaningo. Izinjongo zocwaningo zinezakhi ezifanayo nenhloso yocwaningo, futhi zakhiwe kulandelwa imigomo efanayo. Nokho ke, ukulandelana kumele kwenziwe ngemibuzo yocwaningo eyimfakela.
- 3.6.8 Injongo ngayinye yocwaningo lwakho kumele be NOBUHLAKANI: CACISA- iqonde, igqame, ingahhemi ezinyatheweni ekumele zithathwe; IKALEKE- iba nezakhi eziveza izinkomba, IFEZEKE- qaphelisisa ububanzi besikhathi, ube nezinsiza zokukweseka, IFANELE- izinyathelo ezibalulekile zeprojekthi, NOKUGUQUKA KWESI KHATHI- ingenziwa ngesikhathi esikhona.

3.6.9 Umphathi wakho uzokunika umhlahlandlela. Nasi isibonelo sokuhlelwa kabusha kwemibuzo yocwaningo nezinjongo zocwaningo.

Imibuzo yomfakela

1. Iziphi izici zangaphakathi nezesimo ezibonwa abantu besifazane ezikhundleni zokuphatha ezingavela ngokufakwa kophahla lwengilazi enkampanini?
2. Iziphi izimo zemqondo ezenza ukwakhiwa kophahla lwengilazi ezinika abantu besifazane Amandla enkampanini?
3. Ikuphi ukungenelela okungenziwa kulezinkinga zangaphakathi neznhlalo eziveziwe ngokufakwa kophahla lwengilazi?

Izinjongo zocwaningo

1. Chaza izimo zangaphakathi nezenhlalo abantu besifazane abasezikhundleni zokuphatha abazibonile ngokuakwa kophahla lwengilazi enkampanini?
2. Ukuhlonza izinkinga zomqondo kubantu besifazane mayelana nokusungulwa kophahla lwengilazi enkampanini.
3. Ukubheka ukungenelela okuzovela ezinkingeni ezihlonziwe ngesimo sangaphakathi nesenhlalo esibhedulwa ukufakwa kophahla lwengilazi

3.6.10 Imibono yocwaningo (uma ikhona). Imibono yocwaningo iwukucabangela noma ukuqagela okuzohlolwa, uma ucwaningo lwakho lwamukeliwe noma luchithiwe. Iyizimpendulo jikelele zemibuzo yocwaningo lwakho. Abacwaningi ngesinye isikhathi basebenzisa imibono yocwaningo kunemibuzo yocwaningo noma izinjongo, ngenxa yalokhu abakufisayo noma ngokwesifundo sabo.

3.6.11 Ukusetshenziswa kwemibono kuvame kakhulu kwisayensi yezemvelo (uma kuqhathaniswa nakwisayensi yezenzalo)

3.6.12 Abaphathi bakho bazokukhombisa ukuthi ibhalwa kanjani nimibono. Khumbula, yonke imibono kumele ihambelane nolwazi olukhona, izakhin kanye nemicabango. Uma imibono ibhalwa, iveza ubudlelwano phakathi kwezakhi ezimbili- eziqoqwe kanje (a) izakhi ezizimele, (b) izakhi ezincinkile , (c) izakhi zokwandisa.

3.6.13 Imibono ingabhalwa nganoma iyiphi yezindlela ezilandelayo

- (a) Indlela yokuthi “uma ngabe ke”- (isibonelo, umangabe imanenja yesifazane iphethwe umholi wesilisa ebhange, kusho ukuthi umbono wakhe ngokufakwa kwengilazi uzokhuliswa)
- (b) Indlela yokuhambisana noma yomthelela- (isibonelo, Umhlangano phakathi kwamamenenja abesifazane abaphethwe abaholi besilisa unomthelela omuhle kwimibono yabesifazane yokufakwa kophahla lwengilazi).
- (c) Indlela yokuqoqa eqhathanisayo- (isibonelo, Amamenenja esifazane aphethwe abaholi besifazane azoba nombono ontekenteke uma beqhathaniswa nalabo abaphethwe abaholi beilisa).

3.6.14 Umbono ongenasici nawo uyaba ingxenye yezingxoxo zakho nomphathi wakho, ube futhi ingxenye yethuluzi ongalisebenzisa kwisiphakamiso socwaningo sakho. Umbono ongenasici usho ukuthi akukho ukhlobana phakathi kwezahluke. Uma ubona uphawu olunje(H0)1, lusho umbono ongenasici.

**3.6.15 Enye indlela yombono ongenasici kucwaningo lwakho lwemibono olunngenhla-
oluvela ngophawu (H1). Buka izibonelo:**

- (a) Ho: Ukuhamba komhlangano phakathi kwamamenenja esifazane aholwa abaholi besilisa akunamthelela embonweni wabesifazane ekusetshenzisweni kophahla lwengilazi. H0:
- (b) Ukuhamba komhlangano phakathi kwamamenenja esifazane aholwa abaholi besilisa kunomthelela omuhle kwimibono yabesifazane ekufakweni kophahla lwengilazi.

3.7 Iminikelo yesifundo ngolwazi (imicabango) ukwenza/ nenqubomgomo

3.7.1 Kuwumkhuba ojwayelekile ukuthi iziphakamiso zocwaningo zibungaze iminikelo ehlosiwe ngeprojekthi yocwaningo uma ucwaningo seluphelile. Ucwaningo lwesayensi kufaneel luholele entuthukweni ngoba ucwaningo alusiso isiphetho. Xoxa ngaleyontuthuko, umsebenzi wayo, Amandla ayo nenzuzo yayo ezovela ocwaningweni lwakho.

3.7.2 Ngokukhuluma okubanzi, ucwaningo lwesayensi lungakhiqiza iminikelo ezinkingeni ezimbili ezisemqoka: (a) Ukuqonda okujulile, okubizwa ngolwazi, ne (b) Ukusebenza, okubizwa ngenqubomgomo yokusebenza. Ucwaningo lwakho luhlonza isikhala noma ukushoda olwazini lwethu noma ezinwadini kwisihloko thizeni. Ngokwenza kanjalo, ugcizelela kokubili isidingo sokukhiqizwa kolwazi nesokuthola kabusha kanye nomnikelo ohlose ukuwenza ngocwaningo lwakho.

3.7.3 Isiphakamiso socwaningo sakho sizobantekenteke uma umnikelo waso ungawuvezi kahle, noma ngabe ulenze ngohlelo olufanele. Zombili izifundo zeMastazi nezobuDokotela kumele zibe nesiqu ngandlela thizeni. Ucwaningo lweMastazi akufanele lukhiqize into ehluke kakhulu kulokhu okwaziwayo: iibonelo, qinisekisa eyaziwayo ngokwengeza ulwazi olusha noma ngokuqhamuka nesisombululo senkinga ekhona eyaziwayo. Ucwaningo lobuDokotela kulindeleke ukuthi lukhiqize into eyiyo nokuthi lukhuphule noma lithuthukise umzimba wolwazi, wokwenza, noma wemicabango emisha. Isiphakamiso kumele sicacise ukuthi sizoletha muphi umnikelo.

3.7.4 Uma usungula isiphakamiso socwaningo, cabanga ngobudlelwano bokuhambisana. Okusha okutholakala ebudlelwaneni bokuhambisana, osekuhloliwe, kwaqondiswa kwaletsa nolwazi lwemicabango (isigaba sokuqala solwazi). Izikhala zolwazi ziqhamuka ebudlelwaneni obungafundisiwe, obungabhekiwe nobungahabelani emikhakheni yezemfundo. Kunolunye uhlonze lokukhiqizwa kolwazi, olujwayele ukubizwa ngesigaba sesibili solwazi, oluphakelwa kakhulu umongo. Xoxa ngalezi zigaba zokukhiqizwa kolwazi nomphathi wakho ukuze uzocaciseleka mayelana nomnikelo ofuna ukuwuletha kwezemfundo.

3.7.5 Ungenza iminikelo yolwazi noma yemicabango ngokusungula izindlela ezintsha zokuqonda, zokwazisa noma zokuphikisa izinqubo zaphambilini zokucwaninga, ufake izindlela ezintsha ezizohlolwa zikhiqize indlela etsha yemicabango. Ucwaningo lwakho lingabheka futhi inqubomgomo nenqubo, noma lungaholela ekhukhishweni kokungenelela.

Uma ubhala iminikelo, cabanga wedlulele ngozokuthola, ngokwezihloko zemfakela uphinde wenze izinsolo ngayo iminikelo ozoyenza. Bheka umfanekiso wesithathu. Ebhokisini lesithathu elikhombisa ukuthi ibhalwa kanjani iminikelo yocwaningo.

3.7.5 Bhala izitatimende ezinomqondo futhi ezijikisa umqondo..

3.8 Ukubuyezwa kezinchwadi

- 3.8.1 Kuzozonke izinhlobo zocwaningo lwesayensi, ukubuyezwa kwezincwadi kwenza ingxenye yesakhi socwaningo, nezingxoxo mayelana nokuzotholakala ekuhambeni kwesikhathi. Kusetshenziswa eziphakamisweni zocwaningo kanjalo nasemibhalweni yesiphetho ukuze kuvele ubufakazi obeseke inkinga yocwaningo- ishintsha imiqondo yabafundi bombhalo ukuthi babone kunesikhala ngampela kuleso sihloko ekukhulunywa ngaso. Zikhona nezinye izizathu zako: Kujulisa ukuqonda kwakho ngesihloko esiveziwe, kujulisa ukuqonda kwakho ukwakhiwa kwemicabango, kuphinde kukwazi kwezinye izinto ezihlobene nesihloko.
- 3.8.2 Ukubuyezwa kwezincwadi kuhlola, kufinyeze, kuphinde kucubungulise ucwaningo lwamanje (olubalulekile ngokomlando), neminye imithombo yolwazi ehlobene nesifundo sakho. Kuwuku"buyekeza" ayi "umbiko", ngakho ke iba nesineke ekubhaleni nasekucwaningeni kwakho. Gwema ukuchaza kakhulu.
- 3.8.3 Izincwadi ofuna ukuzibuyekeza akumele zihluke kwinjongo nenhloso yemibuzo yocwaningo lwakho. Ukubuyekeza kumele kuveze ucwaningo lwamanje oseluke lwavea inkinga efanayo nalena evale kwiNhloso, Injongo neMibono, neMibuzo yocwaningo lwakh. Ngalendlela, uzokwazi ukweseka imibuzo yocwaningo lwakho.
- 3.8.4 Imithombo yezincwadi ingaba miningi futhi yehluke. Xoxisana nabaphathi bakho mayelna nemithombo yezincwadi

Ithebula lokuqala: Imithombo ethembekile yesincwadi

EYOKUQALA	EYESIBILI	EYESITHATHU
Izifundo zocwaningo ezishicilelwe	Amaphephandaba	Izifundo
Imibhalo yobuDokotela	izincwadi	izifinyezo
Imibiko yengqungquthela	Imibhalo yobuciko	izahluko
Imibiko yezinkampani	Okushicilelwe kukahulumeni	Imibhalo yeshashalazi
Okushicilelwe kukaHulumeni	okugciniwe	izichazamazwi
Imibhalo engashicilelwe		Imibhalo yomlando

- 3.8.5 Lapho ungathola khona ulwazi oluningi lokucwaninga (isemibhalweni eshicilelwe). Yiba nezingxoxo ezijwayelekile nomphathi wakho mayelana nokuthi ungazithola kuphi izincwadi: isibonelo, imitapo yolwazi, imithombo yezemfundo yokufuna ulwazi, (iibonelo, kwi-inthanethi nakwiSABINET). Xoxa nomphathi wakho ukuthi uzozithola kanjaninle zizincwadi. Ukuhlela amagama ozowasebenzisa ocwaningweni lakho kubalulekile. Bamba iqhaza emihlanganweni yokuqeqeshawa ehlelwe umtapowolwazi noma ihhovisi locwaningo
- 3.8.6 Isihlahla somhlahlandlela singakusiza ukuthi uhlele ukubuekeza kwakho izincwadi .

Sikuvumela ukuthi ufake wonke amasu akho ngezihloko. Yiba nezingxoxo nomphathi wakho mayelana nesihlahla somhlahlandlela.

3.8.7 Uma ubhala ukubuyekeza kwezincwadi, zama ukwazisa izinkinga ezilandelayo:

- Izincazelo ezinesigqi nezisebenzayo kwinhloso, izinjongo, imibuzo, imibono, isihloko socwaningo, nezinye izimo zocwaningo lwakho. Izimfundiso ezahlukahlukeni uma kuphathelele nokuchaza izincazelo nesigqi. Imicabango nezakhi kulowomkhakha ezeseke lezizincazelo.
- Isifinyezo sezifundo zaphambilini eziphenye izincazelo nesigqi (ngokomlando) ezihambelana nesihloko sakho. Iba nezingxoxo nomphathi wakho mayelana nezinto ekumele uzibheke uma ubuyekeza. Enye yezibonelo ekumele uzibheke:
 - (i) Ubudlelwano obungabakhona phakathi kwezakhi ezikhethiwe (isibonelo, ukuhlobana phakathi kobulili babashayeli be-Uber nokugculiseka komsebenzi)
 - (ii) Ukwehluka okungaba kgoni phakathi kwamaqembu ezakhi ezikhethiwe (isibonelo; umehluko phakathi kwabashayeli besilisa nabesifazane be-Uber ngokwezemfundo)
 - (iii) Umongo lapho izakhi zike zaphenywa khona (isibonelo, kubashayeli be-Uber eGoli) nalabo abathintekayo.
 - (iv) Imiphumela yokuhlaziya nezingxoxo ezithinta izakhi nemiqondo ekhethiwe.
 - (v) Izikhala ezingakathintwa eziphathelele nezakhi ezikhethiwe
 - (vi) Izindlela ezahlukene zokukala izakhi
 - (vii) Ukubambeka kwezifundo zaphambilini..

3.8.8 Bheka ke ngalesosikhathi, ngesikhathi sokubuyekeza kwakho ukuthi kubalulekile ukuxoxa ngezifundo- obekuhloswe abacwaningi, nendlela abahlele ngayo uphenyo lwabo, nabakutholile nendlela abatolike ngayo abakutholile. Iba nezingxoxo nomphathi wakho ngezindlela zokubuyekeza imibhalo.

3.8.9 Ikhono lokubuyekeza umbhalo lizokusiza ukuthi ufunde futhi uqonde umbhalo wocwaningo, kuzokusiza usebenzise okufundile, kukusize futhi ubhale ukubuyekeza kwakho ngokucubungula nokuhlaziya. Nansi imibuzo ekumele uzibuze yona uma ufuna umbhalo wocwaningo ngesihloko:

- (a) Yini inhloso yocwaningo?
- (b) Yimuphi umongo wocwaningo?
- (c) Imuphi umcabango mbalo ozoba umhlahlandlela?
- (d) Iluphi uhlelo noma inqubo abayisebenzisile (cabanga uhlelo, ukuqoqwa kolwazi nababambe iqhaza)?
- (e) Batholeni?
- (f) Baphethe ngaliphi?
- (g) Imaphi amandla nobuntekenteke besifundo?

3.8.10 Ngokwesiphakamiso socwaningo, ukubuyekeza kwakho kwezincwadi ngeke kube neminingwane egcwele. Uzodinga nje ukujula kolwazi okuzogxila ezifundweni eikhon ezihambelana nezinkinga zesihloko sakho, inhloso, izinjongo nemibuzo. Ukubuyekeze okujule kakhulu kuzovela uma usubhala imibhalo yobuDokotela.

3.8.10 Bheka ukuziphatha kwezemfundo ekubuyekezeni kwakho izincwadi. Enye yendlela yokuchaza ukuziphatha kwezemfundo ukubhekisa ezintweni okuzibandakanyayo: izinkolelo zakho, indlela yokuziphatha emkhakheni akho. Ngokwakho, innhloso ukugwema ukungaziphathi ngendlela efanele nenkohlakalo kwezemfundo. Abaphathi bakho banekhono lokubona umbhalo okuyiwo nokungesiwo uma kubuyekizwa izincwadi.

3.8.11 Inkohlakalo yezemfundo ibukela phansi iNyuvesi, ukuma kwako kanye nmphakathi wezemfundo. Ukukopela kuyicala kwezemfundo kanye nokusetshenziswa kobuchwepheshe obukhiqiza imibhalo. Ubuchwepheshe obukhiqiz imibhalo ngeke bubhekwe njengombali. Ukusebenzisa lokhu ukukopela okungavumelekile eNyuvesi. INyuvesi iisungule ithuluzi lokuhlonza umsebenzi okotsheliwe.

3.8.12 Zijwayelanise nemigomo nemihlahlandlela yeNyuvesi ocwaningweni lokuziphatha, uma ungenaso isiqiniseko ngomgomo thizeni, xhumana nomphathi wakho.

3.9 Isakhi semicabango nomongo.

3.9.1 Enye yezinto ezibaluleke kakhulu zomsebenzi wakho wocwaningo, imicabango noma umongo wesakhi. **SUNGULA ISAKHI ESIHAMBELANA NOCWNINGO LWAKHO.** Isakhi sibalulekile ngoba sisebenza njengemephu ewumhlahlandlela wokwakha izimpikiswano zakho ocwaningweni. Angeke ukwazi ukuqhubeka nocwaningo ungenayo impu ngoba uzobe ufana nomuntu ohamba engaboni, i.e okuzokwenz auhluleke ukweseka imiphumela yocwaningo lwakho. Isakhi siba isisekelo socwaningo.

3.9.2 Xoxa ngomehluko phakathi kwesakhi semicabango nesakhi sesigqi nabaphathi bakho. Chitha isikhathi ufunda ngokujulile mayelana nalezi zakhi zombili. Inkinga yakho yocwaningo, nohlobo lwemibuzo yocwaningo kunomthelela omkhulu esakhinin ozosisungula. Sebenzisa esisodwa sesakhi esizosebenza, **AYI ZOMBILI.**

3.9.3 Isakhi semicabango siwukubuyekezwa kwemicabango eqondile neyesisekelo, ehambelana nenhloso yokwakha imephu yendlela ekuzohamba kuyo ucwaningo, ongasungula kuko izimpikiswano ozozisebenzisa esiphakamisweni socwaningo lwakho. Iphuzu mayelana " nezimpikiswano ozozisebenzisa esiphakamisweni socwaningo" kumele ulibhale ngoba uma usubhala imibhalo yobuDokotela lizophinde lisebenze. Umphathi wakho uzokunika umhlahlandlela ofanele.

3.9.3.1 Umkhakha wakho uqukethe imicabango eminingi- eyasungulwa abacwaningi baphambilini, ababehlose ukuqagela noma ukuchaza isigameko. Zijwayeze nalemicabango, nezakhi, ugxile ikakhulukazi kokuthinta isihloko sakho socwaningo. Ngokuthola isiphakamiso sakho sprojekthi, emkhakheni ohlelekile, wazisa abaphathi bakho ngezinsolo ezivelayo bese ubazisa ngofisa ukukwenza ngocwaningo lwakho.

3.9.3.2 Isakhi semicabango osamukelayo sinomthelela endleleni ozobhekana ngayo nesihloko nokunye. Ngamanye amazwi, abafundi ababili bezifundo zobuDokotea abanesihloko esifanayo,(endaweni yesihloko esisodwa), bangabhekana nesihloko ngendlela engafani, kuncike kwisakhi abasikhethile. Iisbonelo abafundi ababili bePHD kwezomnotho banomundla wokucwaninga isihloko "ukungalingani kokunotha". Omunye umfundi ukhethe ukuphenya isihloko ngeso lwezomnotjo, omunye ukhethe ukuphenya ngehlo leKeynesian. Lezizakhi zombili zinezincacelo ezimbili ezahlukene futhi ezingafani, okuzoholela ekutheni zitolikwe ngedlela engafani abafundi bocwaningo.Emkakheni wezemfundo, indlela yomcabango wokuziphatha ingaltha umqondo ongafani nendlela yomcabango wokusebenza komqondo womuntu.

3.9.3.3 Ithebula lesi-2 ngezansi libonisa izibonelo zethiyori evamile kuyo yonke imikhakha nezifundo zesayensi yemvelo nenhlalo yabantu, kanye nezabantu..

Ithebula 2: Izibonelo zamathiyori avame ukusetshenziswa ngaphakathi naphakathi kwezifundo

Isayensi yemvelo	Isayensi yezenhlalakahle	Ezabantu
<i>Isayensi yezinto eziphilayo: Ithiyori yamangqamuzana, ithiyori yegciwane; Ithiyori yokuziphendukela kwemvelo; Ithiyori yokukhethwa kwemvelo</i>	- Ithiyori yobulili - Shintsha ithiyori - Ukwakheka kobunikazi - Ithiyori yezinhlelo - Ithiyori yengqondo - Umuzwa wethiyori yomphakathi - Umpahakathi Wophenyo - Ithiyori yokuziphatha - Ithiyori ye-queer - Ithiyori Yabesifazane - Ithiyori yomjaho ebucayi - Ithiyori yokuziphilisa - Ithiyori ye-msebenzisi - Ithiyori yobudlelwano - Ithiyori kaMarxist - Ithiyori ye-Intersubjectivity - Ithiyori yenguquko - Ithiyori yentuthuko - Imibono yobudlelwano - Imibono yesimo - Ithiyori yomthetho wemvelo - Ithiyori yomthetho eqondile - Ithiyori yomthetho kaMarxist - Ithiyori ye-mthetho Ongokoqobo - Ithiyori yokuphatha / yobuholi	Ubuciko - Imibono yokulingisa - Imibono yokuhleleka - Imibono ye-Instrumentalism - Imibono ye-Emotionalism Umlando - Ithiyori yobuqhawe - Ukunqunywa komlando - Umlando - Ukuphela komlando - Ithiyori ye-Counterfactual - Ukungqubuzana kwethiyori yempucuko - I-Darwinism yemphakathi - Ithiyori yokuwa komphakathi Ifilosofi - Ifilosofi ebalulekile yomlando - Ifilosofi yomlando eqagelayo Ulimi/ukuxhumana - Imibono yokutholwa kolimi - Izithiyori zokuxhumana - Ithiyori yolimi - Ukusebenzisana okungokomfanekiso
<i>I-Astrology: Ithiyori yokuqhuma okukhulu; Ithiyori yokwandisa i-cosmic</i>		
<i>Ikhemistri: Ithiyori ye-athomu, Ithiyori ye-Kinetic</i>		
<i>I-Physics: Ithiyori yeQuantum field; Ithiyori ye-Gravitation; Ithiyori yokunyakaza; Isimiso se-Archimedes; Ithiyori yokuhlobana</i>		
<i>I-Hydrology: Imodeli yokunquma; imodeli ye-Stochastic; Imodeli ye-Empical; Imodeli yomqondo; Imodeli esekelwe ngokomzimba</i>		
<i>Izibalo: Ithiyori yamathuba; Izibalo zeKinetic neBoltzmann; Ithiyori ye-Percolation; ithiyori yezinombolo; Ithiyori ye Algebraic K; Ithiyori yokulimnganisa</i>		
<i>Ithiyori ye-asymptotic; Ithiyori ye-Automata</i>		
<i>Isayensi yekhompyutha: Imibono yemishini kahulumeni; Imibono eyinkimbinkimbi yekhompyutha; Imibono yokunemba kohlelo; kanye nethiyori ye-Cryptography.</i>		
<i>I-Botany: Ithiyori ye-Allometric; ithiyori ye-metabolic; kanye nethiyori ye-biomechanical</i>		
<i>Ezolino: Ithiyori yendawo yezoLimo; Ithiyori ye-Oasis; Ithiyori yokusetshenziswa komhlaba</i>		

(Imithombo okuxhunyanwe nayo: Lester, F. (2005); ULysaght, Z. (2011); Trifiletti, L., Gielen A., Sleet, D., & Hopkins, K. (2005); Grant & Osanloo (2014).

3.9.3.4 Okususela kulokhu okungenhla, ukuthi uhlaka lwethiyori lukhishiwe futhi lufingqiwe emibonweni ekhona noma amamodeli, axhumene nesihloko socwaningo lwakho futhi lukhombisa isisekelo setiyori sephrojekthi yakho yocwaningo. Uhlaka lwethiyori **AKUSILO** ukubuyekezwa kwezincwadi: okungukuthi, akukona ukuhlola okubucayi kwezifundo ezihlobene nesihloko sakho noma imibuzo yocwaningo / izinhloso / okucatshangwayo. Ungabadida. Esiphakamisweni sakho socwaningo, ahlukaniwe ngenxa yalesi sizathu.

3.9.3.5 Ukwenza uhlaka lwethiyori, udinga ukubhekisisa:

- Isitatimende sakho senkinga yocwaningo
- Imibuzo yocwaningo lwakho, inhloso, izinhloso, noma imibono ecatsangelwayo
- Ukubuyekeza incwadi
- Isihloko socwaningo (hhayi isihloko).

3.9.3.6 Izinhloko zetiyori ngokuvamile zihlotshaniswa nezifundo zobuningi. Lolu hlobo lohlaka luhlinzeka ngemibono eqhutshwa ithiyori ekucabangeni kwamanje.

3.9.3.7 Umphathi/abaphathi bakho bocwaningo bazokuqondisa kwezobuciko bokubhala uhlaka lwethiyori olufushane nolucacile. Ngokusebenzisa ulwazi olusohlwini olungenhla, ungaqala inqubo yezigaba ezintathu yokubhala uhlaka lwakho, ngale ndlela elandelayo:

- **Khomba futhi uqoqe imiqondo esemqoka noma ezakha esihlokweni sakho**, isitatimende senkinga yocwaningo, imibuzo yocwaningo, inhloso. Izinhloso noma ama-hypotheses. Bhaka ukubuyekezwa kwezincwadi ukuze uthole izincazelo zale miqondo noma izakhiwo. Ukubuyekezwa kwemibhalo kungakusiza futhi ukuthi wenze ukuxhumana phakathi kwemiqondo. Ingase ikubonise ukuthi abacwaningi bangaphambili bayisebenzise kanjani imiqondo. Thola amathiyori afanele ashumeka le miqondo. Konke lokhu kumelela amaphuzu okuqala ohlaka lwethiyori.
- **Hlaziya, hlola, chaza, futhi uhlanganise** amathiyori afanele. Bhaka amathiyori/amamodeli afanele asetshenziswe abacwaningi bangaphambilini, bese uwaqhathanisa futhi uwahlole. Ukuhlanganisa imibono evela emikhakheni eyahlukene ukuze wenze uhlaka lwakho oluyingqayizivele lungenzeka, inqobo nje uma luhambisana nesihloko sakho socwaningo kanye nenkinga. Uma usuxoxile ngamathiyori afanelekile, ungacacisa izincazelo zokusebenza ezifanelana nocwaningo lwakho futhi uchaze ukuthi kungani.
- **Chaza ukuthi ucwaningo lwakho luzoyisebenzisa kanjani** imibono edidiyelwe kumatiyori afanele. Eceleni kokucutshungulwa kwethiyori, kufanele ukhombise ohlakeni lwethiyori ukuthi ucwaningo luzoyisebenzisa kanjani imibono, kanye/noma ngisho nokuthi leyo mibono uzoyiqhubela kanjani phambili. Ingxenye yalokhu 'kusebenzisa ngendlela ehlukile' ingase ihlanganise nawe ukuhlanganisa imibono ehlukene ngendlela entsha noma eyingqayizivele.

Ocwaningweni lwakho, ungakha uhlaka ngoba ufuna ukuhlola ukuthi ithiyori iyiqiniso yini esimweni esithile, noma esingakahlolisiswa ngaphambilini; noma ngoba ufuna ukusebenzisa ithiyori ethile njengesisekelo sokuhumusha lokho okutholile ocwaningweni; noma ngoba ufuna ukubekela inselele ithiyori esifundweni sakho. Kungakhathaliseki ukuthi yikuphi, chaza futhi uxoxe ngokuthi uhlose ukuyisebenzisa kanjani imibono.

3.9.3.8 Indima yakho ukwakha uhlaka olufaneleka kakhulu oludweba ezimisweni ezimisiwe kanye nezicelo, futhi nixoxe ngalokhu ngaphakathi komongo wocwaningo lwakho..

3.9.3.9 Nina baphathi bazonichaya ezibonelweni zezinhloko zethiyori ezakhiwe mayelana nezinkinga ezahlukene.

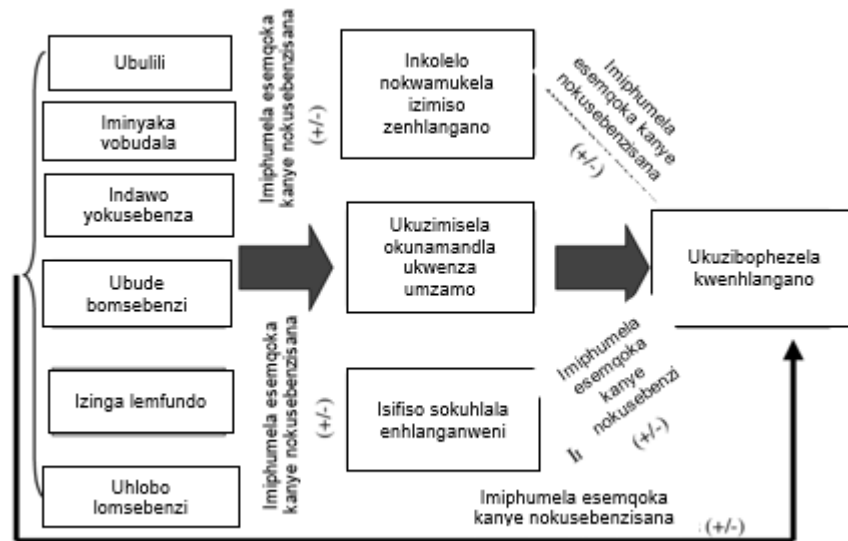
3.9.4 **Uhlaka** lomqondo wumdwebo wokuhlukahluka okubonisa ubudlelwano obuhlukahlukene phakathi kwamagama abalulekile, noma izici, noma izici ofuna ukuziphenya ocwaningweni lwakho. Ukumelwa okuyisithombe kwamagama okubonisa ubudlelwano okulindelekile kuyisici esivamile sohlaka lomqondo.

3.9.5 Kubafundi abaningi be-PG, ukubona ngeso lengqondo okuguquguqukayo noma imiqondo kuyisinyathelo sokuqala ekubumbeni uhlaka lomqondo. Inzuzo

yalokhu kuvezwa okubonakalayo isekuboniseni ukusebenzisana noma ubudlelwano phakathi kwemibono noma okuguquguqukayo ozokala/noma ukuphenye, nasekuthuthukiseni izimpikiswano ozozisebenzisa kuthisisi yakho..

3.9.4.1 ImibuzoImibuzo yakho yocwaningo noma izinjongo noma okucatshangelwayo kumelela

isiqalo sokwakha uhlaka lomqondo wakho ngoba kuveza lokho ofuna ukugxila kukho ocwaningweni, futhi iqukethe okuguquguqukayo (okungukuthi, okuzimele, okuncikile, ukulawula). Xoxa ngemibuzo/ngezinjongo zakho zocwaningo noma imibono yakho nabaphathi bakho futhi nivumelane ngezinto eziguquguqukayo nasemishwana yesitatimende ngaphambi kokuba niqale ukuthuthukisa uhlaka lwakho lomqondo. Ushintsho olubalulekile umusho wemibuzo yakho yocwaningo noma izinhloso noma imibono ecatsangelwayo ngokuvamile iholela ekutheni wenze izinguquko kuhlaka lwakho lomqondo..



Umdwebo 2 Ukumelwa okubonakalayo kwemiqondo kuhlaka (Kuthathwe ku-Carr & Eagles, 2023)

- 3.9.4.2 Kubandakanya umongameli, ukulamula, ukulawula, kanye/noma okuguquguqukayo okudidayo ohlakeni lwakho, ukuze ubonise umthelela wabo olindelwe ebudlelwaneni phakathi kweziguquguquko ezizimele nezincikile, njengoba kudingekile, kuyadingeka, futhi kwaziswa nomphathi wakho ukuthi wena. sebezifunde ngokucophelela izincwadi. Ukufunda ngokucophelela izincwadi zakho kubalulekile ukuze ubone lezi ziguquko. Sebenzisa isikhathi esiningi ekuhlaziyeni izincwadi ngoba uhlaka lomqondo luvamise ukukhishwa, bese luphuma, ekubuyekizweni kwezincwadi ezifundweni ezedlule ngesihloko sakho.
- 3.9.4.3 Njengomfundi owenza iziqu zobudokotela noma we-master's, kufanele wazi ukuthi izinhloso zomqondo zinemibono ye-ontological, epistemological, kanye ne-methodological, futhi umqondo ngamunye ongaphakathi kohlaka lomqondo udlala indima ye-ontological noma ye-epistemological (Guba & Lincoln, 1994; Miles & Huberman, 1994; Jabareen, 2009). Xoxa ngalezindima nabaphathi bakho. Uhlaka lomqondo alukona ukuhlolwa okungahleliwe kwemibono ehlukene. Ithuthukiswe ngokucophelela ngokusekelwe kumqondo.
- 3.9.4.4 Kufanele kuqashelwe ukuthi amaphuzu ashiwo mayelana nokumelwa kwesithombe ngenhla, noma kunjalo, uhlaka lomqondo lungabuye lubhalwe ngombhalo ongenalutho (okungukuthi, ngaphandle kwesici esibonwayo). Nokho, le nketho ayivamile.
- 3.9.4.5 Izinhloso zemiqondo ngokuvamile ziyingxenywe yocwaningo lwekhwalithi. Lokhu kungenxa yokuthi akukho ukuhlolwa kwethiyori

ocwaningweni lwekhwalithi. Inhloso yocwaningo lwekhwalithi ukuqonda, noma ukwenza umqondo, into ethile ngaphakathi komongo womhlaba wangempela ngokusebenzisa izindlela ezithile ezifana nezingxoxo kanye nokubuka. Uhlaka lomqondo lukusiza ukuthi ucacise imiqondo yakho, uhlele imibono yakho, futhi ubonise ukuthi ihlobana kanjani, ukuze wenze izimpikiswano ezigculisayo, ikakhulukazi kamuva lapho idatha ihlaziywa futhi kuxoxiswana ngokutholakele.

3.9.4.6 Ngakho-ke, yini ongayilindela kuhlaka lomqondo? Ngemva kokuhlanganisa imibono noma imiqondo, umsebenzi wakho olandelayo ukuxoxa ngokuhlobana. Abaphathi bakho balindele ukubona ingxoxo ecacile 'yezimo eziqondwayo ezisekelwe eqinisweni noma izitatimende' ezibonisa ukucabanga kwakho okunqunyiwe kokuxazulula inkinga ehlonziwe. U-Leshem no-Trafford (2007) bakubeka ngamafuphi, njengoba kanje: Lezi zimo zinikeza isizathu sokuqala kocwaningo, ukwenza ucwaningo, nokuza nesixazululo senkinga..

3.9.4.7 **Ukwakha uhlaka lomqondo.** Indlela ewusizo okufanele ilandelwe lapho kwakhiwa uhlaka lomqondo izobandakanya lezi zinyathelo ezilandelayo (Glaser & Strauss, 1967; Strauss, 1987):

- Ukwenza imephu imithombo yedatha ekhethiwe. Ukubuyekeza incwadi.
- Ukufundwa okubanzi nokuhlukanisa idatha ekhethiwe. Ukuhlonza okuguquguqukayo nokuqanjwa kwamagama.
- Ukususa nokuhlukanisa imiqondo ngezigaba. Thola izimfanelo zemiqondo.
- I Ukuhlanganisa imiqondo. Bheka imiqondo enokufana bese uyihlanganisa ndawonye.
- I-synthesis, i-resynthesis, nokwenza konke kunengqondo. Bheka ngokucophelela uhlaka, uqinisekise ukuthi zonke izici ziyahlanganiswa, futhi okuguquguqukayo okuningi (umongameli, ukulamula, ukudida, ukulawula, njll) kufakiwe.

3.9.4.8 Nina baphathi nizoxoxa ngezibonelo ezahlukeni zezinhloko zomqondo. Xoxisana ngezinhloko ezahlukeni zohlaka lwakho lomqondo nomphathi wakho(nabaphathi).

3.10 Indlela yocwaningo

3.10.1 Indlela yocwaningo iyingxenye ebaluleke kakhulu esiphakamisweni sakho socwaningo ngoba **yenza ucwaningo lube semthethweni**, futhi ithethelela, iqondise futhi ihlole izindlela ezikhiqiza idatha kanye nokuhlaziywa kwaleyo datha, okwenza isisekelo sokukhiqizwa kolwazi.

3.10.2 Ukuvikela ngempumelelo isiphakamiso sakho socwaningo kuncike ekubeni nendlela yocwaningo evumelekile. Isiphakamiso socwaningo esinesitatimende senkinga yocwaningo esichazwe ngokucacile nemibuzo, izinjongo, noma imibono ecatsangelwayo kodwa indlela yokusebenza eklanywe kabi ngeke ivikelwe ngempumelelo, noma ngokwesayensi noma ngokwezimiso zokuziphatha. Izimiso zokuziphatha zocwaningo zidinga ukuthi isiphakamiso socwaningo sisekelwe endleleni ezwakalayo eyandisa amathuba okuthi imiphumela ikhiqize izokholeka futhi ikholiseke. Kunezinye izinzuzo zokuba nendlela yocwaningo ephusile:

- uhlelo oluthile okufanele ululandele kulo lonke
- isiza ukuphindaphinda kocwaningo esikhathini esizayo
- ikhuthaza ukubeka izinto obala futhi ikhuthaze umkhondo wocwaningo.
- Ikhuthaza ukuhlela kanye nokwenza ngokwesayensi nokuhlelekile

3.10.3 **Izinsika zendlela yokwenza.** Endleleni yalo lonke ucwaningo lwesayensi, kufanele kucatshangelwe izingxenye ezine eziwayelekile, okuyilezi: (a) isisekelo sefilosofi socwaningo; (b) indlela yocwaningo; (c) idizayini yocwaningo; kanye (d) nezindlela ezithintekayo ophenyweni. Ukukhetha okwenziwa maqondana neminingwane kokukodwa kwalokhu kuthonywa inkinga

yocwaningo

oluphenywayo. Abaphathi bakho bazokuqondisa ekufaniseni inkinga kanye nendlela yokusebenza.



3.10.3.1 Ngokusekelwe ku-mdwebo 3, ukwakheka kwendlela yakho yocwaningo kufanele ngokujwayelekile kuqakathe izigaba ezilandelayo, kuye ngohlobo lwenkinga yakho yocwaningo.:

1. Isakhiwo Sendlalela

- 1.1 Ucwaningo lwefilosofi
- 1.2 Indlela yokucwaninga
- 1.3 Idizayini yocwaningo
- 1.4 Inani labantu okufundwayo nomongo
- 1.5 Isampula yokufunda, usayizi wesampula, amasu amasampula, kanye nenqubo
- 1.6 Indlela yokuqoqwa idatha: (1.6.1) Idizayini yethuluzi: (1.6.2) Izinqubo (1.6.3) Ukuhlola
- 1.7 Ukuthembeka nokuba semthethweni kwethuluzi lokuqoqwa idatha (uma likhulu)
- 1.8 Ukuthembeka kwedatha (uma ikhwalithi)
- 1.9 Indlela nezinqubo zokuhlaziya idatha
- 1.10 Izimiso zokuziphatha ocwaningweni

3.10.3.2 Chitha isikhathi uqonda isigaba ngasinye sendlela yocwaningo ebhalwe ngenhla. Khuluma nochwepheshe bocwaningo noma abaphathi bakho, hambela izingqungquthela, funda izincwadi nezindatshana zamajenali, vakashela amalabhorethri ocwaningo ukuze uthole okwengeziwe, futhi uhlangelele nabanye abaqokelwe i-PG endikimbeni ngayinye.

3.10.3.3 Insika ngayinye yendlela yocwaningo idinga ukuthi **wenze ukukhetha**: okungukuthi, ukukhetha ifilosofi yocwaningo, ukukhetha indlela yocwaningo, ukukhetha kwemiklamo yocwaningo kanye nokukhetha kwezindlela. Isinqumo ngasinye noma isinqumo esithathiwe kufanele sibe nesizathu **esicacile**. Ngamanye amazwi, chaza inketho ekhethiwe bese uxoxa ngokuthi KUNGANI.

3.10.4 *Isisekelo sefilosofi socwaningo*

- 3.10.4.1 Lonke ucwaningo lungaphansi kwezinkinga ezihlukahlukene zefilosofi.
Njengoba kuzodingeka uvikele ucwaningo lwakho kuforamu ye-Faculty Higher
Degrees kanye nasezinkomfeni zasekhaya zamazwe uma wenza i

Izethulo esikhathini esizayo, kuyasiza ukuthi uthuthukise ukuqonda okuyisisekelo kwezici zefilosofi zocwaningo lwakho.

- 3.10.4.2 Ngamunye wethu, njengabantu, usebenza ngaphakathi kohlaka oluthile lwefilosofi - okungukuthi, ngeqoqo lemibono nezinhlelo zokukholelwa mayelana nokuphila, mayelana namaqiniso, mayelana nokuthi yini eyakha ulwazi, nokuthi ulwazi lukhiqizwa kanjani. Lolu hlaka luhlala emiqondweni yethu njengabacwaningi, kodwa lubonakala ezenzweni zethu futhi luthinta kakhulu indlela yethu yokuklama nokwenza ucwaningo lwesayensi. Ungase ukholelwe ukuthi kukhona iqiniso elilodwa eliqinisekisekayo nelizinzile, kodwa omunye umuntu angase akholelwe ukuthi kukhona amaqiniso amaningi angalungisiwe noma azinzile. Lezi zindlela zokucabanga ziyinkomba ye-ontology yakho (Patton, 2002), futhi zinomthelela endleleni owenza ngayo ucwaningo..

Okwesibili, njengoba ucwaningo olwenzayo luwukukhiqiza ulwazi, indlela owenza ngayo uphenyo ithonywa yilokho ocabanga ukuthi ulwazi luyikho noma cha. Indlela owakwazi ngayo (okwaziyo), nokwamukela kwakho, nokwethemba, imithombo enjalo, kungase kwehluke komunye umuntu. Ukungavumelani okuningi mayelana nokuthi yini (noma okungelona) ulwazi ibangelwa ukuhluka mayelana nemithombo esetshenziselwa ukukhiqiza lolu lwazi, kanye nokungaqiniseki ngemikhawulo yeqiniso. Le mibuzo emayelana nemvelo yolwazi neqiniso iwukubonakaliswa kwe-epistemology yakho (Carter & Little, 2007), futhi ithinta indlela othethelela ngayo nokuhlola ukukhiqizwa kolwazi nolwazi. I-Epistemology ikhona engqondweni yakho, kodwa ibonakala ngokukhetha kwakho indlela yokwenza.



Kunemibono emithathu (3) yefilosofi evame ukusetshenziswa ebumba ukuthuthukiswa kwendlela. Futhi umsebenzi wakho ukukhetha okukodwa kwalokhu futhi uchaze ukuthi kungani (bona umdwebo 3). Lezi zinhlobo ezintathu zamafilosofi ocwaningo:

- (1) Ifilosofi ye-Positivism noma i-post-positivism;
- (2) Ifilosofi ye-Interpretivism; ne
- (3) Ifilosofi yePragmatism.

Lokhu okubalulwe ngenhla akulona uhlu oluphelele kodwa luwumele kahle umkhakha kanye nezinye izigaba eziningi ezinye izazi ezizithatha njengezigaba zefilosofi zimane ziyizinhlobonhlobo zenye yalezi zintathu. Isibonelo, i-constructivism kanye ne-postcolonial indigenous paradigms ayizinhlobonhlobo zefilosofi yokutolika. Izizathu zokukhetha ifilosofi yocwaningo lwakho kufanele zisekelwe ekuqageleni kwe-ontological kanye ne-epistemological, izimiso, kanye nezinhlelo zokubaluleka zefilosofi. Xoxa ngalezi zinkinga nomphathi wakho.

- 3.10.4.3 Ithebula lesi-3 linikeza ukuqhathanisa kwamafilosofi amathathu ocwaningo

avamile.

Ithebula 3: Ukuqhathaniswa kwamafilosofi amathathu ocwaningo avamile

Isici sokuhlaziya	Ucwaningo lwamafilosofi		
	Ifilosofi ye-Positivism noma i-post-positivism	Ifilosofi ye-Interpretivism	Ifilosofi yePragmatism
Isizathu sokwenza ucwaningo	Ukuthola imithetho, izimiso, nezinkolelo-mbono ezingaba yinto evamile, futhi engabusa indawo yonke	Ukuqonda, ukwenza umqondo, nokuchaza imvelo yomuntu nezenzo, kanye nezakhiwo ezakha imisebenzi yomuntu	Ukunquma izimiso, kanye namathiyori angajwayelekile, kodwa futhi ukuqonda, noma ukwenza umqondo, ngesimo somuntu.
Imibono ye-Ontological	Kukhona okungokoqobo okukodwa, okwenzekayo okungenzeka. Ingalinganiswa ngokulinganayo. Ama-Post-positivists aguqule le nkolelo kancane ngokuqaphela ukuthi umcwaningi kanye nesihloko socwaningo, ngenkathi ezimele, zingathonya kakhulu isizinda somcwaningi (ithiyori, umbono, ulwazi)	Kunamaqiniso amaningi akhiwe emphakathini. Iqiniso liyi-sihloko Kwakhiwe ngokwenhlalo, ezombusazwe, ezamasiko, ezomnotho, ubuhlanga, ubuzwe, ubulili, nokukhubazeka. Iphinde ibunjwe ukuxhumana kwemvelo, icosmos, abaphilayo nabangaphili	Yamukela ukuthi ezinye izici eizingokoqobo zizinzile/zilungisiwe futhi zingalinganiswa ngombono, kuyilapho ezinye izici zicabangela futhi ngenxa yalokho akuwona wonke umuntu ongavumelana ngeqiniso.
I-Epistemology - imvelo yolwazi neqiniso	Ulwazi luyinhloso Okubhekwa njengeqiniso ukubhekwa okunembayo nokulinganisa okuqinisekiswa	Ulwazi luyi-sihloko; idiographic; ngokwe-dialectical; esihlobene. Yini ethathwa njengeqiniso kuncike komongo (isb., umhlaba wenyama, iqhudelana ne-cosmos, vs. inkohliso)	Ulwazi luyi-sihloko kanye nenhloso. Okubhekwa njengeqiniso ukuhlanganiswa kwakho kokubili inhloso kanye nesihloko.
Ezinye izisekelo zefilosofi	Ukwaziswa ikakhulukazi ngamaqiniso, umbono ophelele kanye namaqiniso abucayi. I-Objectivist - izinto zikhona nencazelo, ngaphandle kokwazi komuntu: "idatha ikhona"	Ukwaziswa nge-hermeneutics kanye ne-phenomenology	Ukwaziswa ngamaqiniso abucayi, i-hermeneutics kanye ne-phenomenology. Imiphumela yocwaningo ayiyona inhloso ngokuphelele, futhi ayinaso isiqiniseko ngokungangabazeki.
Indlela yokucwaninga	Inani	Ikwalithi	Izindlela ezixubile / zokuthumba - okungukuthi, inhlanganisela ye-QUAN kanye ne-QUAL (iguqulayo / iyakhulula)
Idizayini yocwaningo	Idizayini yokuhlola yeqiniso; Idizayini ye-Quasi-experimental; Idizayini yokuhlobana; Idizayini yenhlobo (echazayo) Indaba eyisibonelo (echazayo)	Idizayini ye-Phenomenological; Idizayini ye-Ethnographic; Umklamo wokubamba iqhaza; Ucwaningo lwesigameko; Idizayini yocwaningo lwesenzo; Umklamo wethiyori olinganiselayo kahle; Idizayini yocwaningo lwezingqobane; Idizayini yokulandisa	Idizayini elandelayo Idizayini efanayo
Amasu okuqoqa idatha	Ikakhulu imibuzo, okubhekwayo, izivivinyo, nezivivinyo	Ikakhulukazi Izingxoxo, ukubhekwa kwabahlanganyeli, izithombe, izithombe, idayari, izinto, kanye nemibhalo. Futhi, izinhlelo zolwazi lwendabuko amasu; amaqembu okugxilwa kuwo; izinhlelo zolimi	Inhlanganisela yamasu kwamanye amafilosofi amabili
Iqhaza lomcwaningi	Kukhishwe ohlelweni locwaningo	Ingxenye yenqubo yocwaningo. I-Reflexivity: Hlola indima yakho enqubweni yocwaningo. Ukubuka kukabakaki.	Kucashunwe kwezinye izici zenqubo yocwaningo. Futhi ingxenye yenqubo yocwaningo kwezinye izici.
Intshisekelo yolwazi	Ukwakha imithetho nezimiso zemvelo evamile	Ukuqonda nokwenza umqondo wencazelo iqembu elihambisana nayo ngokoqobo emphakathini	Ukuqonda nokwenza umqondo wencazelo. Kodwa futhi ukwenza imithetho / izimiso zemvelo jikelele

(Imithombo okuxhunyanwe nayo: Chilisa (2011); UCrotty (1998); UBrown (2023); I-Ponterotto (2005); Trochim (2002); Eichelberger (1989); Saunders et al (2012)

- 3.10.4.4 Ungashintshi lapho ukhetha futhi uchaza ifilosofi yakho yocwaningo. Ukungaguquguquki kuphakamisa ukuthi ifilosofi yakho yocwaningo, indlela osebenza ngayo, i-ontology, umklamo nezindlela zihambisana futhi ziyavumelana. Indlela yocwaningo, umklamo kanye nezindlela ezihlotshaniswa nefilosofi ye-positivism ayikwazi ukusetshenziswa ocwaningweni olulandela ifilosofi yokutolika ngenxa yokuthi okucatshangwayo kanye nezinhlelo zokukholelwa kuhlukile. Kuthebula 3, umcibisholo ubonisa

Ile ndlela okufanele ilandelwe ukuze ihambisane.

3.10.5 Indlela Yokucwaninga

3.10.5.1 Iyiphi indlela yocwaningo edingekayo, ucabangela ifilosofi yocwaningo nemibuzo/izinhloso zocwaningo noma imibono ecatsangelwayo oyiqambe esitatimendeni senkinga? Lona ngumbuzo obalulekile okufanele uwuphendule kulesi sigaba. Ukukhetha kwakho indlela yocwaningo kuthonywa ifilosofi yocwaningo oyikhethile ngenhla (bheka Ithebula 3). Xoxa ngokukhetha kwakho nomphathi wakho wocwaningo.

3.10.5.2 Indlela yocwaningo ehlotshaniswa nefilosofi yocwaningo oyikhethile ingase ibe ngobuningi, ikhwalithi, noma ithumbe (Saunders et al, 2012). Esiphakamisweni sakho socwaningo, khetha indlela bese uxoxa kahle ngokuthi kungani ukhetha leyo oyikhethile. Kuleyo ngxoxo, bonisa ukuthi kungani ezinye izindlela zingafanelekile, futhi uchaze ukuthi kungani indlela oyikhethile kuyiyona engcono kakhulu yokuqonda inkinga yocwaningo, futhi ihambisana nefilosofi yocwaningo kanye nomklamo wocwaningo olindelwe.

Ithebula lesi-4: Izindlela zocwaningo kanye namaphuzu abalulekile angenzeka ukuze kuthethelelwe ukukhethanukukhetha

Indlela yokulinganisa	Indlela yekhwalithi
- Igxile ekubaleni ukuqoqwa nokuhlaziya kwedatha. Incike ekulinganiseni okuguquguqukayo. Isebenzisa idatha yezinombolo futhi ihlaziye okuguquguqukayo kokulinganisa ngokusebenzisa amasu ezibalo ahlukahlukene. - Kugcizelelwa ekuhloleni amathrendi, ukulinganisa nokuhlola ubudlelwano phakathi kokuguquguqukayo, njll. - Okuguquguqukayo nakho kuchazwa ngokusebenza ukuze kukhuthaze ukuqinisekiswa nokuphindaphinda kocwaningo - Umbuzo uklanyelwe ukuthi ungabi nanzuzo. Iqiniso lihluke kumuntu. - sebenzisa izindlela zesayensi zokuqoqa idatha ukuze kuzuzwe ukucabangela nokungathathi hlangothi enqubweni yocwaningo - Igcizelela amaqiniso, kanye ne-empiricism (isipiliyoni esiqondile) njengesisekelo solwazi. - Iyakwenqaba ukuqagela kwe-metaphysical njengemithombo yolwazi. - Izimisizokuziphatha ziwudaba olubalulekile kulo lonke ucwaningoy	- Igxila olwazini olungezona izinombolo ekuqoqweni nasekuhlaziyeni idatha. Ihlaziya idatha okungezona izinombolo ngokusebenzisa amasu ahlukahlukene okuhlaziya okukukethwe ukuze kuqondwe iqiniso labantu emphakathini njengoba linolwazi, okuhlanganisa imizwa yabo, ulwazi lwabo, izindaba, izimo zengqondo, intuthuko, inkolelo, ukusebenzelana, izindaba zobudlelwano, njll. - Kugcizelelwa ukuqonda i-phenomenology [okungukuthi, izinkolelo zabantu, izindaba, isipiliyoni, isimo sengqondo, ukuziphatha, ukusebenzelana, ubudlelwano, ukuxhumana] kanye ne-hermeneutics (umbhalo, ukuhumusha) - Uphenyo lwenzelwe ukuthi lube yi-subjective; ayikwazi ukungabi nanzuzo ngoba iqiniso lakhiwe emphakathini futhi alikwazi ukuhlukaniswa nomcwaningi. Iqiniso lisemqondweni, nasebudlelwaneni. Iqiniso lingaphakathi kokuhlangenwe nakho komuntu. - Wena, mcwaningi, uqoqa imininingwane eminingi. Lokhu kudinga ukuzidalula ohlelweni locwaningo. Ungubani? uzodinga ukuzichaza wena, izindinganiso zakho, ukuchema kwemibono, ubudlelwano nababambiqhaza, kanye nokusondelana nesihloko socwaningo. - Izimisizokuziphatha wudaba olubalulekile umcwaningi aludingida kulo lonke ucwaningo: ukufinyelela endaweni yocwaningo; ukusungula umhlanganyeli othembekayo
Izindlela ezixubekile	
- Indlela yezindlela ezixubile ihlanganisa (a) i-logic inductive, okungukuthi, ukutholwa kwamaphethini, (b) i-deductive logic, i.e., ukuhlolwa kwemibono nemibono; kanye (c) nomqondo wokuthumba, okungukuthi, ukwembula nokuncika kusethi engcono kakhulu yezincazelo ukuze uqonde imiphumela yomuntu. - Indlela exubile ibona indima yakho njengomcwaningi ngokwamukela ulwazi lwakho lwangaphambili njengento engenakugwenywa kodwa edingekayo enqubweni yocwaningo - ukuxhuma umcwaningi, isihloko socwaningo, kanye nethiyori. - I-Plt ihlanganisa izindlela zekhwalithi nenani kanye nokucabanga ukwenza imibono enengqondo. Izixenye eziqondile zalezi zindlela ezisetsenziswayo kufanele kuxoxwe ngazo. - Kule ndlela yocwaningo, umqondo wokusungula kanye nomqondo owayelekile unikezwa kuqala ngaphezu komqondo wokuziphendulela. ayifuni ukuhlola ithiyori noma ukuyikhiqiza kodwa ingase ifune izindlela zokuthuthukisa ekhona kakade. Isebenzisa kakhulu okucatshangwayo. - Iwusizo kakhulu uma ubhekene 'namaqiniso amangalisayo' noma 'izindida' ohlelweni locwaningo oludinga ukuchazwa. I-pragmatic - incazelo noma ukuhumusha kubekwa phambili ngumcwaningi.	

(Sources consulted: Haig (2005); Thomas (2010); Chilisa & Ntseane (2010); Wilson (2008); Neuman (1998); Mertens (2009); Ponterotto (2005); Johnson and Onwuegbuzi (2004); Creswell, Fetters and Ivankova (2004).

3.10.5.3 Ukwengeza, ingxenye yokulungiswa kwakho kwendlela kufanele
ichithelwe ukukhombisa ukuthi abacwaningi bangaphambilini
bayisebenzise kanjani indlela yokuphenya inkinga efanayo yocwaningo
kanye nezinzuzo ezalandela. Ireferensi

Yezifundo ezedlule ezisebenzisa le ndlela ithuthukisa ukwethembeka kwempikiswano yakho kanye nokuba semthethweni kwezimangalo zakho..

3.10.5.4 Njengoba uveza indlela yakho ocwaningweni, khumbula ukucacisa ukuthi ucwaningo lwakho lunezigaba ezihlukene noma ubude. Ucwaningo oluhlukene luwusizo ngoba lunikeza indlela esheshayo yokuphenya isihloko ngokunikeza isifinyezo sesimo sezindaba noma isimo endaweni ethile ngesikhathi. Ucwaningo oluhlukene luyifomethi edume kakhulu eyamukelwa ezifundweni zeziqoqo eziphakeme ngoba umsebenzi udinga ukuqedwa phakathi nenkathi ethile. Umoya wocwaningo oluhlukene ukuthi likuvumela ukuthi uqinise uphenyo lwakho ezicini zesampula elithathwe ngesikhathi esisodwa (isb., idatha eqoqwe eqenjini labafundi bonyaka wokuqala; ukubalwa kwabantu, noma umthwebuli wezithombe Isithombe sesigcawu ngesikhathi esithile. Zonke lezi zibonelo zimele ucwaningo oluhlukene). Ocwaningweni olulandela uhlaka oluphambanayo, umphenyi ufinyelela iqembu lesampula kanye, futhi aqoqe isethi yedatha efanelekile phakathi nesikhathi esifushane. Isihluthulelo lapha yisikhathi. Inzuzo yesikhathi esifushane ukuthi inciphisa ukuhlukahluka okuhlobene nesikhathi. Ngokuphambene, isifundo se-longitudinal yilolo olusebenza isikhathi eside, olunamaphoyinti amaningi wokuqoqwa kwedatha noma ukusebenzisana neqembu lesampula. Umcwaningi wesayensi yezehlalo oklama ucwaningo lokuthuthuka kobugebengu ezindaweni ezimaphakathi nedolobha laseThekwini ezinciphayo nezihlupheka ngenxa yokuswela okwandayo emphakathini, uzoba nombono wesikhathi eside futhi athathe umbono wesikhathi eside.

3.10.5.5 Indlela yocwaningo yobuningi, yekhwalthi, noma exubile/yokuthumba ingase ihlotshaniswe nohlaka olunqamula izigaba noma ubude. Incazelo emfushane kakhudlwana yendlela yakho yocwaningo ukucacisa uma kuyi:

- (a) Indlela ye-khwalthi ye ngxenye yesiphambano; noma indlela ye-khwalthi ende
- (b) Indlela ye-khwalthi ye ngxenye yesiphambano; noma indlela ye-khwalthi ende
- (c) izindlela ezixubile ezihlanganisa izigaba, noma indlela yobude obuxubile

3.10.5.6 Xoxisana ngalezi zinkinga nomphathi wakho. Futhi ubambe iqhaza esithangamini socwaningo ukuthuthukisa ukuqonda kwakho izindlela zocwaningo ngokuqhubekayo.

3.10.6 *Idizayini yocwaningo*

3.10.6.1 Isakhiwo socwaningo sisho isu jikelele kanye nemithethonqubo okhethe ukuyilandela ukuze uphenye ngendlela ehlelekile inkinga yocwaningo futhi uveze imiphumela efanele (Leedy, 1997). Umklamo ungafaniswa nepulani elisetshenziswa lapho kwakhiwe indlu ngezizathu ezintathu:

- (a) Kuwuhlaka lwesenzo. Ikhomba indlela okumele ihambe. Ibonisa indlela enengqondo nehlelekile uphenyo okufanele lwenziwe ngayo, ngaleyo ndlela isebenze njengebhulohi phakathi kwenkinga yakho yocwaningo. (okungukuthi, imibuzo/izinhloso noma imibono) KANYE nokwenziwa kocwaningo.
- (b) Iqukethe ipulani yezindlela: okungukuthi, izinqubo zokukhetha isampula nesayithi, ukuqoqwa kwedatha, ukuhlaziya idatha, ukulinganisa,

ukuqinisekiswa, nokutolika.

(c) Ikuvumela ukuthi uhlale ulawula ucwaningo. Idizayini yocwaningo ikuvumela ukuthi uhlale futhi uhlaziye zonke izici ezingase zibe nomthelela emiphumeleni yocwaningo lwakho (Durrheim, 2004). Kanjalo, ungakwazi ukubikezela okungenzeka.

3.10.6.2 Chaza idizayini ethile yocwaningo ucwaningo lwakho oluzoyigcwalisa, bese nixoxa ngezizathu ezicacile zesinqumo sakho, kanye nezinzuzo ezizotholakala ophenyweni ngokwamukela lowo mdwebho. Ukuqondanisa nokungaguquguquki kwedizayini yocwaningo nefilosofi yocwaningo nendlela yokubhekana nayo kufanele kugcizelelwe. Khomba umklamo 'ohambisana' nenkinga yocwaningo, indima ozoyidlala njengomcwaningi, kanye nokubalulekile, ukulandelana, ukubona ngeso lengqondo kanye nokuqinisekiswa kokwethulwa kwedatha kanye nenqubo yokubika. Bonisa futhi ukuthi indawo yakho engaphakathi kwedizayini yocwaningo ekhethiwe kanye nefilosofi ilolonga kanjani indlela obuka ngayo umhlaba, kanye neqiniso ofuna ukuliphenya. UBurrell noMorgan, (1979; 2005:24) bayagomela: "...ukubekwa endaweni ethile kuwukubuka umhlaba ngendlela ethile."

3.10.6.3 Isigaba somklamo wocwaningo kufanele siqinisekise umfundi ukuthi ucwaningo lucatshangelwa ngokucophelela nokuthi zonke izivikelo ezidingekayo sezibekiwe ukuze kwenziwe ucwaningo olunzulu; okungukuthi, inqubo yokufeza ikhwalithi yokuqina. I-Rigor, ezingeni le-methodological, ibhekisela ekubambeleleni ezindinganisweni zenqubo; ukuba nenqubo, ukucophelela, okunengqondo nokuhleleka kuyo yonke imisebenzi yakho phakathi nenqubo yocwaningo - uqinisekisa ukuthi yonke imingcele engaba nomthelela omubi kokutholakele ilawulwa futhi ilawulwa.

3.10.6.4 Kunezinhllobonhlobo zemiklamo yocwaningo esungulwe kahle, ethuthukisiwe futhi ehambisana namafilosofi ocwaningo ahlukene. Ezinye ziyifanele kakhulu ifilosofi ethile yocwaningo, kanti ezinye ziyifanele kakhulu ifilosofi yocwaningo ehluke ngokuphelele. Umfanekiso wesi-5 ukhombisa izibonelo ezijwayelekile. Le miklamo izama futhi ihlolwe amasu ongawasebenzisa. Ukukhethwa komklamo wocwaningo kuncike ezicini zenkinga yocwaningo.

Umfanekiso wesi-5: Ucwaningo luklama ngendlela yocwaningo ehlobene (Brown, 2023).

3.10.6.5 Umklamo ngamunye ufeza injongo ethile. Umklamo ngamunye uqukethe nesethi yawo yamaphrothokholi okufanele uwalandele ngendlela ethile. Ingxoxo yakho kufanele ikhombise ukuthi ukhulisa kanjani izinzuzo ezihambisana nomklamo okhethiwe wocwaningo.

3.10.7 Inani labantu okufundwayo nomongo

- 3.10.7.1 Isiphakamiso sakho socwaningo kufanele sibhekane nenani labantu ocwaningweni ohlose ukuthatha kulo isampula yakho yocwaningo. Kunezincazelo eziningi zenani labantu bocwaningo; ungazibuyekeza ukuze uthole ukuqonda okungcono komqondo. Okubalulekile ukuthi iqembu elinezimpawu ezifanayo ozimisele ukuzifunda lihlanganisa inani labantu (De Vos, 1998). Ukunikeza incazelo egcwele yaleli qembu kubalulekile ngoba ungase udinge ukwenza okujwayelekile kubantu bocwaningo ngemva kokuqeda ucwaningo.
- 3.10.7.2 Isibalo socwaningo asigcini kubantu kuphela. Kungaba izilwane, izindawo, izinto, izilinganiso, njalonzalo. Iphuzu okufanele siliqaphele ukuthi iqembu kufanele libe nokuthile elifana ngalo. Iba nengxoxo nomphathi wakho mayelana nenani labantu okuhlosiwe kanye nenani labantu elifinyelelekayo. Chaza zombili lezi zibalo futhi uchaze isizathu sokucatshangelwa kwazo. Kwesinye isikhathi inani labantu okuhlosiwe alifinyeleleki kuwena njengomcwaningi, okuholela ekutheni kudingeke ukuthi ulungisele ingxenye efinyelelekayo yeqembu eliqondiwe. Isibonelo esijwayelekile yilapho ucwaningo luchaza yonke intsha ekhulelwe (noma izinja ezinhlathayo) eNingizimu Afrika njengesibalo sabantu okuhlosiwe kodwa luhlanganisa uphenyo kubantu abafinyelelekayo bayo yonke intsha ekhulelwe (noma izinja ezilahlekile) kumasipala waseZululand.
- 3.10.7.3 Xoxa ngesethi yemibandela esetshenziswa ukuchaza okuhlosiwe kanye nenani labantu ofinyeleleka kulo. Xoxa ngemibandela yokufaneleka nomphathi wakho(nabaphathi). Lezi zindlela zicacisa izici abantu emphakathini okufanele babe nazo ukuze bafakwe ocwaningweni (Polit & Hungler 1999:278). Ngaphezu kwalokho, imvelo yezinye izifundo iwukuthi ziyazwela kakhulu kumongo. Umongo ubhekisela ezicini ezithile zesilungiselelo noma izimo lapho uphenyo lwenziwa khona. Xoxa (lapho kufanele) ubudlelwano phakathi kocwaningo lwakho nezimo zabantu ofinyeleleka kalula/okuhlosiwe ukuze abafundi bakuqonde zisuka nje. Ukubona umongo kuyingxenye esemqoka yokusebenza kahle ekuphenyweni.
- 3.10.7.4 Xoxa ngosayizi wabantu nokuthi unqunywe kanjani. Usayizi ungabalwa (isibalo sangempela) noma ulinganiselwe.

3.10.8 Isampula yokufunda, usayizi wesampula, amasu amasampula, nezinqubo

- 3.10.8.1 Kufanele uxoxe ngokwanele ngalezi zingxenye ezintathu ezilandelayo zalesi sigaba sesiphakamiso socwaningo: isampula yocwaningo, usayizi wesampula ohlobene, kanye nenqubo(ama)sampula. Isampula izakhi (okungukuthi, ubani noma ini) ezikhethiwe (kusukela kubantu okuqondiwe/okufinyelelekayo) ukuze zibambe iqhaza noma zisetshenziswe ocwaningweni (Polit & Hungler 1999). “Ubani” ongase abe umuntu ngamunye; iqembu labantu. “Yini” engase ibe izinto eziphilayo (isb., izilwane; izitshalo); izinto; izinto zobuciko (izincwadi, iphephandaba, imibiko, izithombe); izinhlobo zomphakathi; izinhlangano; inqubo; njll.). Abantu bavame ukubizwa ngokuthi yizihloko, ababambiqhaza, noma izimpimpi. Chaza izici zesampula ngemininingwane eyanele, bese uxoxa ngesizathu sokuthembela kumasampuli esikhundleni sokusebenzisa sonke isibalo sabantu. Isikhathi, izindleko, nokukhathala ngokuvamile kuyizici ezibalulekile ezishukumisayo. Xoxa nomphathi wakho ngomqondo

"weyunithi yokuhlaziya".

3.10.8.2 Okwesibili, kufanele ucacise usayizi wesampula, futhi uxoxe ngokulungiswa kwawo. Zingaki 'izakhi' okuwumbuzo obalulekile okufanele uphendulwe kulesi sigaba? Ifilosofi yocwaningo, indlela yokwenza, kanye nomklamo oyikhethile inomthelela omkhulu kusayizi wesampula yakho nezinqubo zamasampula. Ukuze ucwaningo locwaningo olulandela ifilosofi ye-positivism (ubuningi) lusebenze, kuyadingeka ukukhetha usayizi wesampula omele ngempela inani labantu okuhlosiwe; lokhu kuyadingeka ukuze kutholakale imiphumela jikelele. Ucwaningo locwaningo olulandela ifilosofi yokutolika (qualitative) alukhathazeki kangako mayelana nokumelela usayizi wesampula ngokuhlobene nenani labantu okuhlosiwe ngoba imiphumela yalo ihambisana komongo..

(a) *Ifilosofi yocwaningo lwe-Positivism (quantitative). Uma isiphakamiso sakho socwaningo silandela **indlela yobuningi**, futhi sitholakala ngaphakathi kwefilosofi yocwaningo lwe-positivism, nikeza ukucaca kwesampula efanele ngokuxoxa.:*

- Uhlaka lwamasampula (lapho kufanele)
- Inani lezifundo. Izindlela ezisetshenziswayo ukubala usayizi wesampula odingekayo (isb., kungakhathaliseki ukuthi isofthiwe noma amaspredishithi, nokuthi kungani). Inani lamandla
- Imibandela esetshenziswayo ukunquma usayizi wesampula (isb., idizayini yocwaningo; izindlela zokuhlaziya idatha), nokuthi kungani
- Amanani abalulekile amukelwe (umkhawulo wephutha okufanele ulindelwe) nokuthi kungani.
- Ukuhlukahluka kwesibalo sabantu kanye nomthelela waso kusampula

(b) *Ifilosofi yocwaningo lwe-Interpretivism (ikhowalithi). Uma isiphakamiso sakho socwaningo silandela indlela yekhowalithi, futhi sitholakala ngaphakathi kwefilosofi yocwaningo lwe-Interpretivism, nikeza ukucaca kwesampula elifanele ngokuxoxa.:*

- Inombolo yabahlanganyeli noma izinto, nokuthi kungani
- Imibandela esetshenziswayo ukunquma usayizi wesampula (isb., injongo yocwaningo; idizayini yocwaningo; izindlela zokuhlaziya idatha), nokuthi kungani

(c) *I-Pragmatism (izindlela ezixubile) ifilosofi yocwaningo. Uma isiphakamiso sakho socwaningo silandela **indlela yezindlela ezixubile**, futhi sitholakala ngaphakathi kwefilosofi yocwaningo lwe-pragmatism, nikeza ukucaca kwesampula elifanele ngokudweba ezindabeni ezisohlwini lwezinhlamvu kumapharadigms ashiwo ngenhla.*

3.10.8.3 Zonke iziphakamiso zocwaningo ezihanjise ku-HDC kanye ne-UZREC kulindeleke ukuthi zibe nesampula ecacile, usayizi wesampula, kanye namasu okusampula.

3.10.8.4 **Izinqubo zamasampula.** Idizayini yocwaningo, indlela yokwenza kanye nefilosofi nakho kunomthelela kumasu amasampula ongawasebenzisa. Kunezigaba ezimbili zamasu okusampula, kuye ngokwakhiwa kwephrojekthi yakho yocwaningo: Amathuba kanye namasu okusampula okungewona amathuba.

3.10.8.5 Xoxa ngezinhlobo ezahlukene zamathuba kanye namasu okuthatha amasampula okungewona amathuba nomphathi wakho. Vakashela umtapo

wolwazi futhi ufunde kabanzi ngalawa masu. Amathuba **amasu okusampula anezinzuzo** kanye nokubi. Ngokufanayo, **amasu okusampula okungewona amathuba anezinzuzo** kanye nokubi. Xoxa ngokuthi lezi zinzuzo kanye nokubi zikuthonya kanjani ukukhetha kwakho indlela.

- 3.10.8.6 Amathuba amasu okusampula afaneleka kakhulu ocwaningweni olulandela *positivism* (*ikhwalithi*) *ucwaningo ifilosofi, kanti okungenakwenzeka*

amasu amasampula afaneleka kakhulu ocwaningweni olulandela ifilosofi yocwaningo yokutolika (qualitative). Ucwaningo olulandela i-pragmatism (izindlela ezixubile) ifilosofi yocwaningo lungadonsa kukho kokubili okungenzeka kanye namasu okuthatha amasampula okungewona amathuba.

- 3.10.8.7 Izinqumo ozenzayo mayelana nendlela yokwenza amasampula nezinqubo ezihambisana nayo kufanele zithethelelwe ngokugcwele ukuze abafundi baqonde isizathu sokukhetha kwakho. Ngaphezu kwalokho, xoxani ngamasu amasampula afanele imiklamo ehlukeneyo yocwaningo. Ithebula lesi-5 ukuya kwelesi-7 likhombisa izibonelo.

Ithebula lesi-5: Amasu amasampula angenzeka ocwaningo anomklamo wocwaningo olusezingeni eliphezulu

Indlela yesampula	Imiklamo yocwaningo lokufunda ngendlela esezingeni eliphezulu							
	Idizayini yocwaningo lwendaba	Idizayini yocwaningo olulandisayo	Idizayini yocwaningo lwe-Phenomenological	Umkhlamo wethiyori olinganiselayo kahle	Idizayini yocwaningo lwe-Ethnography	Umkhlamo wocwaningo olubambe iqhaza	Idizayini yocwani ngo lwesenz o	Idizayini yenqolo bane
Okungenz eki	Isampula elula	Isampula elula	Isampula elula	Isampula lethiyori	Isampula elula	Isampula elula	Isampula elula	Isampula elula
	Ukusampula okuhlosiwe	Ukusampula okuhlosiwe	Ukusampula okuhlosiwe	Ukusampula okuhlosiwe	Ukusampula okuhlosiwe	Ukusampula okuhlosiwe	Ukusampula okuhlosiwe	Ukusampula okuhlosiwe
	Isampula yesabelo	Isampula yesabelo	Isampula yesabelo		Isampula yesabelo	Isampula yesabelo	Isampula yesabelo	
	Isampula ye-snowball	Isampula ye-snowball	Isampula ye-snowball		Isampula ye-snowball			

LoBiondo-Wood & Haber (1998); Burns & Grove (2001); De Vos (1998); Polit and Hungler (1999)

Ithebula lesi-6: Amasu amasampula angenzeka ocwaningo anomklamo wocwaningo oluningi

Indlela yesampula	Imiklamo yocwaningo yocwaningo ngendlela yobuningi				
	Idizayini yokuhlola yeqiniso	Idizayini eyi-Quasi-experimental	Idizayini yocwaningo lokuhlobana	Idizayini yocwaningo	Idizayini yocwaningo lwendaba
Amathuba	Ukusampula okungahleliwe okuhleliwe	Ukusampula okungahleliwe okulula	Ukusampula okungahleliwe okuhlanganisiwe (ngokulinganayo nokungalingani)	Ukusampula okungahleliwe okuhlanganisiwe (ngokulinganayo nokungalingani)	Ukusampula okungahleliwe okuhlanganisiwe (ingxenye engalingani)
			Ukusampula okungahleliwe	Ukusampula okungahleliwe	
Okungenz eki		Ukusampula okuhlosiwe		Isampula Elihlosiwe Ukuthatha kalula isampula	Noma yikuphi ukusampula okungewona amathuba
		Isampula elula; Isampula yesabelo		Isampula yesabelo	

LoBiondo-Wood & Haber (1998); Burns & Grove (2001); De Vos (1998); Polit and Hungler (1999)

Ithebula lesi-7: Amasu okusampula ocwaningo anezindlela ezixubile zokuklama

Indlela yesampula	Imiklamo yocwaningo lokufunda ngezindlela ezixubile	
	Umkhlamo ofanayo	Idizayini elandelayo
Amathuba	Ukusampula okungahleliwe okuhleliwe (ngokulingana nokungalingani) amasampula okungahleliwe	Ukusampula okungahleliwe okulula
		Ukusampula okungahleliwe okuhlanganisiwe (ngokulinganayo nokungalingani)
		Amasampula okungahleliwe
Okungenzeki	Isampula Elihlosiwe Ukuthatha kalula isampula	Ukusampula okuhlosiwe

Isampula yesabelo	Isampula elula Isampula yesabelo
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3.10.8.8 Izibonelo ezikuThebula lesi-5 kuya ku-7 zinikezwe njengomhlahlandlela wokukusiza ekuthatheni izinqumo ukuze uqinisekise ukuthi uhlanganisa izinqubo zesampula nesakhiwo socwaningo, indlela yokwenza kanye nefilosofi. Lolu akulona uhlu oluphelele lwezibonelo. Kungenzeka ukuthola umehluko emibonweni ethile mayelana nendlela yokusampula eyabelwe umklamo othile wocwaningo. Umehluko onjalo uyingxenye evamile yenkulumo mayelana nendlela yokusebenza.

Amasampula okungahleliwe

Ukusampula okuhlosiwe

Isampula elula; Isampula yesabelo

3.10.9 Indlela yokuqoqa idatha

- 3.10.9.1 Indlela yokuqoqa idatha ingenye ingxenye ebalulekile yendlela yakho yocwaningo. Isinyathelo sakho sokuqala ukudweba ithebula lezidingo zedatha, elingakuvumela ukuthi uqondanise imibuzo/izinhloso zakho zocwaningo noma ama-hypotheses namaqembu amasampula ocwaningo kanye nethuluzi lokuqoqa idatha.

Ithebula 8: Ithebula lezidingo zedatha

Imibuzo yocwaningo /Izinjongo	Ukalani	Kuzolinganiswa kanjani	Izizathu sokukhetha indlela yokuqoqa idatha	Iqembu lesampula
1. isb., ukuhlola imibono yabafundi basenyuvesi onyakeni wokuqalangokusebenzis a i-Uber taxi	isb., imibono yabafundi	isb., Uhlu lwemibuzo olujwayelekile	Inani elikhulu labaphenduli; futhi badinga ukuhlola izindaba zobulili ezimpendulweni	Abafundi basenyuvesi bonyaka wokuqala

- 3.10.9.2 Ithebula lezidingo zedatha kufanele lenziwe kumbuzo/inhloso yocwaningo ngayinye noma i-hypothesis. Chaza izidingo zakho zedatha. Kufanele ucace kakhulu ngokuthi inhloso ngayinye noma i-hypothesis ngayinye izohlangatshezwa kanjani, noma ukuthi umbuzo ngamunye wocwaningo uzophendulwa kanjani.

- 3.10.9.3 Chaza futhi ulungise amathuluzi wokuqoqa idatha owakhethile. Bonisa ukuthi lawa mathuluzi aklanywe kanjani, nokuthi angamathuluzi ajwayelekile noma angajwayelekile. Uma ithuluzi lingalinganisiwe, xoxa ngokuthi imfuneko enjalo iyadingeka yini esifundweni sakho. Njengoba uthuthukisa iphrojekthi yakho, kuzodingeka futhi ukuthi uxoxe ngesakhiwo samathuluzi wokuqoqa idatha, futhi esimweni sohlulwemibuzo, noma amathuluzi ahlobene okuqoqwa kwedatha yobuningi, izibalo zokwethembeka (isb., i-Cronbach Alpha) ye- i(izi)thuluzi. Ukuhlola ukuhlola ithuluzi lokuqoqa idatha kukusiza ukuba uthuthukise ithuluzi ngezindlela ezihlukahlukene ezifana nobunzima bokubona ngesakhiwo somusho, ukungaqondakali emiyalweni, ukuhlola isikhathi esithathiwe ukuqedela izimpendulo zezinto, njalo njalo. Sebenzisa idatha evela ekuhloleni ukuhlola izibalo zokwethembeka.

- 3.10.9.4 Bamba iqhaza kumasemina angakufundisa ukuthi ungaklama kanjani izinhlobo ezahlukeneyo zamathuluzi okuqoqa idatha.

- 3.10.9.5 Esinye isici sokuqoqwa kwedatha okuzoxoxwa ngaso yinqubo yokuqoqwa kwedatha. Inqubo ithonywa izindlela zokuqoqa idatha ezamukelwayo. Chaza inqubo ngemininingwane eyanele.

3.10.10 Ukuthembeka nokuba semthethweni [kwethuluzi lokuqoqwa kwedatha (uma kuwumthamo)]

- 3.10.10.1 Uma inqubo yakho yokuqoqa idatha ibandakanya uhlu lwemibuzo, noma ukuhlolwa, uzodinga ukuxoxa ngokwethembeka nokuba semthethweni kwethuluzi. Ukuthembeka nokuba semthethweni kusebenza ethuluzini lokuqoqa idatha hhayi idatha eqoqwe ethuluzini kuleli phuzu. Ukwethembeka nokuba semthethweni yimibono emibili ehlobene.

- 3.10.10.2 Kunamaphakheji esofthiwe ajwayelekile atholakalayo ongawasebenzisa ukubala ukwethembeka kwethuluzi lakho lokuqoqa idatha. Isibonelo esijwayelekile iCronbach Alpha etholakala ku-SPSS, SAS noma iphakheji yezibalo ehlobene

. Xoxa ngezindlela ezisetshenziswayo ukubala inani lokwethenjela, kanye nokuqagela okuhlobene nenani olithathile njengelamukelekayo.

- 3.10.10.3 **Ukufaneleka** nokho kuphathwa ngendlela ehlukile. Ekuthuthukisweni kwethuluzi lakho lokuqoqa idatha, kunezingxenywe ezintathu zokufaneleka okudingeka uzichaze futhi ubonise ukuthi zifinyelelwa kanjani, okuyilezi: (a) Ukufaneleka kobuso; (b) Ukuba semthethweni kokuqokethwe; kanye (c) nokwakha ubuqiniso. Kunamasu amisiwe ongawalandela ukuze uzuze ukuqinisekiswa ngakunye kwalokhu kuthuluzi lakho lokuqoqa idatha. Xoxa ngokuthi isho ukuthini ngayinye yale miqondo futhi uchaze amasu owasebenzisile, noma ohlose ukuwasebenzisa, ocwaningweni lwakho.
- 3.10.10.4 Kunezikhathi lapho izifundo zobuningi zidizayinelwe ukusetshenziswa kwedatha yesibili lapho ukuhlaziya kwemetha kwedatha yezinombolo eshicilelwe kuhileleka, noma lapho ukuhlaziya okuhlanganisiwe okuhlanganisiwe kwedathasethi eyinhloko evela emithonjeni eminingi kuhilelekile. Ukusungulwa kokufaneleka kulezi zimo kuhlukile lapho kwakhiwa ithuluzi lokuqoqa idatha. Uma uhlela ukuhlaziya imeta, noma ukuhlaziya kabusha okuhlanganisiwe kwedathasethi yoqobo eyinhloko, qaphela imithetho ephathelene nokufaneleka. Kulezi zimo, kulindeleke ukuthi uchaze izivivinyo ozozenza ukuze uthole izinsongo zokuba semthethweni.
- 3.10.10.5 Awukwazi ukubala ukwethembeka kwethuluzi lokuqoqa idatha elisetshenziselwa ukuqoqa idatha engeyona inombolo. Yingakho izindaba zokwethembeka zingasebenzi kumathuluzi okuqoqwa kwedatha asetshenziswa emsebenzini wocwaningo lwekhwalithi. Kungokufanayo nangobuqiniso. Awukwazi ukwenza okuqokethwe noma wakhe ubuqiniso bephrothokholi yenhlolokhono noma ishejuli yokubuka nanoma imaphi amanye amathuluzi okuqoqa idatha asetshenziswa ocwaningweni lwekhwalithi. Ngakho-ke, uma wenza ucwaningo lwekhwalithi, kufanele uzibe lesi sigaba sendlela yokusebenza. Kunalokho gxila esigabeni sokuthembeka kwedatha.

3.10.11 **Ukuthembeka kwedatha (uma ikhwalithi)**

- 3.10.11.1 Abacwaningi abafanelekayo abagxili emathuluzini okuqoqa idatha, kodwa kunalokho kulokho okutholakele lapho besungula ukwethembeka. Ngakho-ke okugcizelelwa kumqondo othi “ukwethembeka”. Okusho ukuthi, izinga lokuthembeka, noma ukuzethemba, abafundi abanalo emiphumeleni (Lincoln & Guba, 1985). Izilinganiso zokusungulwa ukwethembeka emiphumeleni yimiqondo emaphakathi okufanele uyichaze esiphakamisweni sakho socwaningo
- 3.10.11.2 Ukuze uzuze ikhwalithi yokwethembeka, chaza ukuthi isiphakamiso sakho socwaningo sizohlangabezana kanjani nemibandela emine yokwethembeka. Xoxa ngemibandela yokwethembeka nomphathi wakho wocwaningo. Isifinyezo semodeli eyodwa yenqubo sikhonjiswe kuThebula 8. Akhona amanye amamodeli. Encazelweni yakho, gcizelela isici esithi ‘kanjani’, ukuze abafundi baqonde izinqubo zakho zokucabanga nezenzo zakho..

Ithebula lesi-8: Imibandela yokwethembeka

Imibandela	Isu lokufinyelela imigomo
Ukwethembeka	Ukubonisa ukusebenzelana okude; Ukubonisa ukuqaphela okuqhubekayo; Ukukhombisa ukuxoxisana kontanga; Ukusebenzisa i-triangulation; Ibonisa ilungu

	ukuhlola; Ukuhlinzeka ngokuloba kwezwi nezwi; Ukubakaki
Ukudluliswa	Isampula lenhloso; Ukukhiqiza incazelo ewugqinsi, idatha ecebile; idatha eqinile
Ukwethembeka	Ukusetshenziswa kwezindlela zokunqwabelana (uhlobo lukanxantathu); Ukuhlaziywa kokuhlola uchwepheshe; kanye nokusetshenziswa kwawo wonke amasu akhonjiswe ngokwethembeka ngenhla

(Source: Whittemore (2001); Merriam (1995); Leininger (1994) Lincoln & Guba (1985))

3.10.12 Izindlela nezinqubo zokuhlaziya idatha

- 3.10.12.1 Ukuhlaziywa kwedatha kukuvumela ukuthi uthole imininingwane emisha kudathasethi yakho. Indlela yakho yokuhlaziya idatha ithonywa ifilosofi yakho yocwaningo noma indlela osondela ngayo, noma ukwakheka - okubunjwa uhlobo lwemibuzo/izinhloso noma imibono ecatsangelwayo oyishilo, noma uhlobo lwedatha oyiqoqile.
- 3.10.12.2 Xhumana nomphathi wakho wocwaningo mayelana nezindlela zokuhlaziya idatha ezisezingeni eliphakeme; izindlela zokuhlaziya idatha yobuningi; kanye nezindlela ezixubile zokuhlaziya idatha. Cacisa futhi uchaze izindlela zokuhlaziya idatha ohlose ukuzisebenzisa, futhi uchaze ukuthi kungani ukhethe lezi zindlela. Chaza izinqubo ezihambisana nendlela oyikhethile. Ukucacisa izinqubo kuzosiza ukuphindaphinda kocwaningo esikhathini esizayo. Iphinde ivumele umfundi ukuthi aqinisekise ukuthi kube khona izinyathelo ezingalungile enqubweni yokuhlaziya.
- 3.10.12.3 **Ukuhlaziywa kwedatha yobuningi.** Uma idatha yakho iyizinombolo futhi kufanele ibe ngaphansi kwezindlela zokuhlaziya inani, xoxa ngokuthi idatha izohlanzwa futhi ilungiswe kanjani (qinisekisa, hlela, ikhodi) ukuze ihlaziywe. Ngaphezu kwalokho, udinga ukucacisa uhlobo lwezibalo ozozisebenzisa. Izibalo ezichazayo yiqembu elilodwa lamasu ongawasebenzisa. Chaza izibalo ezichazayo ezithile (isb., invamisa, iphesenti, incazelo, imodi, imidiyeni, ukuchezuka okujwayelekile, ubuningi kanye nobuncane, iphesenti) oyikhethile nokuthi kungani. Izibalo ze-inferential ngelinye iqembu lamasu ongawasebenzisa. Chaza izibalo ze-inferential (isb., ukwehla, i-ANOVA, i-t-test, i-Chi Square) oyikhethile nokuthi kungani. Xhumana nochwepheshe bezibalo ukuze uqinisekise ukuthi uqoqa idatha efanele ezophendula imibono noma imibuzo yocwaningo lwakho.
- 3.10.12.4 **Ukuhlaziywa kwedatha okufanelekile.** Uma idatha yakho ingezona izinombolo futhi kufanele ibe ngaphansi kwezindlela zokuhlaziya ikhwalithi, xoxa ngokuthi idatha izofakwa kanjani ikhodi futhi ilungiselelwe ukuhlaziywa. Ukuhlaziya okuqukethwe/ingqikithi, ukuhlaziya izinkulumo, ukuhlaziya ithiyori enesisekelo, nokuhlaziya ukulandisa kuyizindlela ezivamile zokuhlaziya idatha yekhwalithi (Bogdan noBiklen, 1992). Chaza indlela ethile oyikhethile nokuthi kungani. Chaza izinyathelo ezihilelekile endleleni yokuhlaziya ekhethiwe.
- 3.10.12.5 **Ukuhlaziywa kwedatha yezindlela ezixubile.** Izindlela ezixubile zokuhlaziya idatha ziboleka kumasu obuningi kanye nekhwalithi. Nokho, inhloso yokuhlaziywa kwedatha yezindlela ezixubile ukuzuza ukuhlanganiswa kwedatha. Uma idatha yakho iyinhlanganisela yedatha yezinombolo nengeyona inombolo, xoxa ngokuthi idatha izofakwa kanjani amakhodi futhi ilungiselelwe ukuhlaziywa. Chaza izinyathelo eziyisikhombisa ezihilelekile enqubweni yokuhlaziya idatha yezindlela ezixubile: Ukwehliswa kwedatha; Isibonisi Sedatha; Ukuguqulwa Kwedatha; Ukuxhumana Kwedatha; Ukuhlanganiswa Kwedatha; Ukuqhathaniswa Kwedatha; kanye Nokuhlanganiswa Kwedatha (Onwuegbuzie kanye noTeddlie, 2003).

3.10.13 Ikhwalithi yocwaningo

- 3.10.13.1 **Ukucatsangelwa kokuziphatha nokuphepha ocwaningweni.** Zonke

izifundo zesayensi zinesibopho sokunaka izimiso zokuziphatha kanye nezindaba zokuziphatha. Ocwaningweni olubandakanya abantu, kunezinqubo zokuziphatha ezisungulwe kahle nezimiso okufanele zibhekwe. Ngokufanayo, ocwaningweni oluhilela izilwane, kunemikhuba nezimiso zokuziphatha ezisungulwe kahle okufanele zibhekwe. Isigaba sesithathu wucwaningo olubandakanya idatha yesibili

. Lesi sigaba socwaningo kufanele futhi sihambisane nezinqubo zokuziphatha nezimiso ezithile.

- 3.10.13.2 Inqubomgomo Yezimilo Yokucwaninga Yenyuvesi idinga ukuthi wenze umsebenzi wakho wocwaningo ngokuma kwesimilo. Udinga ukucabangela izindaba ezinjengokugcinwa kuyimfihlo, imvume enolwazi, idatha nokuvikelwa kombambi qhaza. Udinga ukuqinisekisa ukuthi uyaziqhuba wena kanye nocwaningo lwakho ngokuhambisana nokulindelwe komongo lapho ucwaningo lwenziwa khona. “Inzuzo” iyisidingo sokusebenzela izithakazelo nenhlalakahle yabanye, okuhlanganisa nokuhlonipha amalungelo abo.
- 3.10.13.3 Inqubomgomo Yokuziphatha Yocwaningo Lwenyuvesi idinga ukuthi unikeze ubufakazi bokuthi uzicubungule zonke izinkinga zokuziphatha ngaphakathi kwephrojekthi yakho futhi ususungule izindlela zokubhekana nazo. Xoxani ngalezi zinkinga zokuziphatha kanye nezinyathelo osuzibekile ukuze uzifeze.
- 3.10.13.4 Uma wenza ucwaningo olubandakanya abantu, izindaba eziyisisekelo zokuziphatha okufanele uxoxe ngazo futhi ubonise ukuthi zifinyelelwa kanjani yilezi ezilandelayo:

- **Imvume enolwazi**

(okungukuthi, incwadi yemvume evela enhlanganweni, futhi evela kubahlanganyeli ngabanye). Kufanele udalule ulwazi oluningi ngangokunokwenzeka mayelana nocwaningo ukuze umuntu enze isinqumo enolwazi. Yazisa abahlanganyeli ngokuthi ucwaningo ngolwani, ngubani ozoqhuba ucwaningo, ukuthi ulwazi lomuntu siqu luzosetshenziswa kanjani, ngubani ozokwazi ukufinyelela olwazini nokuthi ulwazi luzogcinwa isikhathi esingakanani, ukuthi imininingwane izosetshenziswa kanjani, mayelana nokuzinikela kwabo ngokuzithandela. ukubamba iqhaza, njll.

- **Ukuxoxa**

Ngabe abahlanganyeli bazoxoxwa kanjani (ngokubhalwayo noma ngomlomo)? Uma kungeke kuxoxwe ngakho, nikeza izizathu. Namathisela incwadi ebhaliwe ebazisa ngokuxoxisana, futhi kamuva lapho ucwaningo selwenziwa, namathisela amanothi edebrief noma okulotshiweyo kwengxoxo yomlomo..

- **Ukuhoxiswa ophenyweni**

Ababambiqhaza kufanele batshelwe ngokucacile ngokubhaliwe ukuthi bakhululekile ukushiya ucwaningo noma nini ngaphandle kwengozi. Xoxa ngqo ukuthi lokhu kuzochazwa kanjani futhi nini kubahlanganyeli. Abahlanganyeli futhi banelungelo lokuhoxisa idatha yabo ngokubheka emuva, ngemva kokuthi uyitholile. Chaza ukuthi bazokwenza kanjani lokhu nokuthi kunini lapho abangeke bakwazi ukuhoxa khona (okungukuthi, ngemva kokuba idatha isihlaziye futhi yasatshalaliswa).

- **Ukuvikelwa kwabahlanganyeli**

Ingabe ababambiqhaza basengozini yokulimala ngokomzimba, ngokwengqondo noma ngokomzwelo okukhulu kunalokho okuhlangatshezwane nakho ekuphileni okuvamile? Uma kunjalo, chaza uhlobo lobungozi kanye nezinyathelo ozozithatha ukuze unciphise ingozi enjalo.

- **Ukuba yimfihlo nokungaziwa**

Idatha yomuntu siqu oyiqoqa kubahlanganyeli isho ukuthi uyazi ukuthi bangobani. Ukugcinwa kuyimfihlo kusho ukuthi ususa lonke ulwazi oluhlonzayo embikweni wakho ukuze ababambiqhaza bangaziwa. Kufanele ngaso sonke isikhathi uvikele ukungaziwa komhlanganyeli ngaphandle uma enikeze imvume yakhe ukuze akhonjwe; (uma kunjalo, lokhu kufanele kubhalwe Efomini Lemvume Enolwazi). Chaza izinyathelo ozozenza ukuze ugcine idatha yomuntu siqu yabahlanganyeli iyimfihlo futhi ugcine amafomu

emvume kanye nedatha ngokwehlukana nangokuvikelekile.

- ***Ukuvikelwa Kwedatha***

Chaza izinyathelo ozozibeka ukuze uvikele idatha oyiqoqile futhi uyigcine iyimfihlo ngaphakathi komongo wokusetshenziswa kocwaningo. Izinyathelo ozisebenzisayo ukuvikela idatha zizothonywa uhlobo lwe

Datha. Iphasiwedi iyisu elivamile elisetshenziselwa ukuvikela idatha yezinombolo neyombhalo. [Njengengxenywe yokuvikela idatha, isiphakamiso sakho socwaningo kufanele sichaze ngokugcwele ukuthi idatha yocwaningo izogcinwa futhi ilawulwe kanjani. Ifomethi yedijithali yokugcina idatha yocwaningo okufanele icatshangelwe ihlanganisa izinketho zesitoreji esisekelwe emafini ku-Google Drive ne-Microsoft OneDrive. Xhumana nomphathi wakho mayelana nenketho yokulondoloza efanele.](#)

- ***Ukubhekwa komhlanganyeli (uma kusebenza)***

Uma ukubhekwa komhlanganyeli kuzokwenziwa ngaphandle kwemvume yangaphambili, chaza izimo lapho lokho kubhekwa kuzokwenzeka khona, futhi usho ukuthi kuzobhekwa kanjani amagugu endawo kanye nobumfihlo babantu ngabanye kanye/noma izikhungo.

3.10.13.5 Uma wenza ucwaningo oluhilela **izilwane**, kufanele ubonise inhlonipho ngezilwane njengezidalwa ezizwelayo kanye nawe. Xoxa ngezinyathelo ozozithatha ukuze ugweme noma unciphise ukuhlupheka kwezilwane. Xoxani ngezindlela ezifanele zokufuya enizozilandela. Izinkinga eziyisisekelo zokuziphatha okufanele uziveze futhi uzixoxe ukuze ubonise ukuthi zifinyelelwa kanjani ocwaningweni lwakho ukuze uvikele inhlalakahle yezilwane yilezi ezilandelayo:

- ***Izimiso ezi-R ezine: Faka esikhundleni, Nciphisa, Yenza ngcono kanye nokuzibophezela***
- ***Izimiso ezinhlanu zenkululeko***
- ***Izimiso zesizinda ezinhlanu***

3.10.13.6 Izimiso ezingenhla zihlanganisa lokhu okulandelayo okufanele ukubonise: Ukuhlonipha isithunzi sezilwane; Isibopho sokucabangela izinketho (Faka esikhundleni); Umgomo wokulinganisa: okungukuthi, isibopho sokucabangela nokulinganisa ukuhlupheka kanye nenzuzo; Isibopho sokucabangela ukunciphisa inani lezilwane (Nciphisa); Isibopho sokunciphisa ubungozi bokuhlupheka kanye nokwenza ngcono inhlalakahle yezilwane (Qinisekisa); Isibopho sokugcina ukuhlukahluka kwebhayoloji (gwema izinkinga zokuncipha kwabantu); Isibopho lapho kungenelela endaweni yokuhlala; Isibopho sokuvuleleka nokwabelana ngedatha nezinto ezibonakalayo; Isidingo sobuchwepheshe ezilwaneni; kanye Nemfuneko yokunakekelwa okufanele (Mohr, 2023).

3.10.13.7 Uma wenza ucwaningo olubandakanya idatha yesibili (isb., [a] imibiko, izincwadi, imibhalo, izindatshana zephephandaba, idatha yesithombe; [b] idatha evamile evela ohlelweni lolwazi lokuphatha; [c] idatha evela ezingqolobaneni zedatha) (Tripathy, 2013), kunezindaba zokuziphatha okufanele zicatshangelwe. Ukukhathazeka mayelana nokusetshenziswa kwedatha yesibili kugxile kakhulu (a) kubumfihlo, kuye ngenani lokuhlonza ulwazi olukuyo, (b) udaba lwemvume yokufinyelela kudatha, kanye (c) nokulimala okungaba khona kumuntu ngamunye..

3.10.13.8 Ocwaningweni olubandakanya ukusetshenziswa kwedatha yesibili, izindaba eziyisisekelo zesimilo okufanele nixoxe ngazo futhi nibonise ukuthi zifinyelelwa kanjani yilezi ezilandelayo.:

- ***Imvume enolwazi***

Enye idatha ingase ibe sesizindeneni esisesidlangalaleni kuyilapho enye ingekho. Xoxa ngezimfuneko zemvume ozodinga ukuziqaphela ukuze ukwazi ukufinyelela idatha yesibili. Uma idatha itholakala mahhala esizindeneni somphakathi ku-inthanethi, emibikweni, kumajenali omthombo ovulekile, noma ezincwadini, khona-ke imvume yokuhlaziya okwengeziwe

iyashiwo. Khombisa lokho, futhi ucele ukuyekwa ukuze uthole imvume, kodwa chaza ukuthi ukuvunywa kobunikazi bomsebenzi wasekuqaleni kuzofinyelelwa kanjani. Uma ucwaningo luyingxenywe yomunye umsebenzi wocwaningo futhi idatha ingatholakali mahhala, ngaphandle kwethimba lokuqala labacwaningi, imvume ecacile, ebhaliwe yokusebenzisa idatha kufanele itholwe ethimbeni labacwaningi (Tripathy, 2013).

- ***Ubumfihlo / Ukugcinwa kuyimfihlo nokungaziwa***

Ibhodi lidinga nje ukuqinisekisa ukuthi idatha empeleni ayaziwa. Noma uma kungenjalo, kuzofezwa kanjani ukungaziwa. Kodwa-ke, uma idatha iqukethe ulwazi oluhlonza ababambiqhaza noma ulwazi olungaxhunywa ukuze kuhlonzwe ababambiqhaza (isb., iziqephu zendatshana zamaphephandaba), kufanele uxoxe ngokuthi ubumfihlo babantu nokugcinwa kuyimfihlo kwedatha kuzovikelwa kanjani.

- ***Ukuvikelwa Kwedatha***

Njengengxenywe yokuvikela idatha, isiphakamiso sakho socwaningo kufanele sichaze ngokugcwele ukuthi idatha yocwaningo izogcinwa futhi ilawulwe kanjani. Ifomethi yedijithali yokugcina idatha yocwaningo okufanele icatshangelwe ihlanganisa izinketho zesitoreji esisekelwe emafini ku-Google Drive ne-Microsoft OneDrive. Xhumana nomphathi wakho mayelana nenketho yokulondoloza efanele.

Lapho ongoti bezibalo benza ukuhlaziya kabusha okuhlanganisiwe (ekuhlaziyweni kwe-meta yedatha yesibili), banesibopho sokwenza kanjalo kusetshenziswa idathasethi yoqobo eyinhloko. Ukufinyelela kudatha enjalo kufanele kucelwe futhi kutholakale imvume. Ngaphezu kwalokho, leyo dathasethi kufanele ilinganiswe ngesivumelwano sasekuqaleni lapho idatha iqoqwa futhi kwenziwa isimemezelo eKomidini Lezimiso Zokuziphatha mayelana nendlela yokuqinisekisa ukuvikelwa okuqhubekayo kwaleyo datha ekufinyeleleni okungagunyaziwe, ukulahlekelwa noma ukucekelwa phansi. Kufanele futhi uchaze (a) ubude besikhathi sokulondoloza kanye (b) nemvume evikelwe yokusebenzisa le datha ngaphezu kwenjongo yasekuqaleni lapho kunikezwa imvume.

Idatha esizindeni somphakathi ingase ingadingi ukuhlangabezana nemfuneko engenihla kodwa kufanele uchaze ukuthi uzovikela kanjani ubuqotho bomsebenzi ohlaziywayo. Isibonelo, cacisa zonke izivikelo ekuhumusheni kabi ngesikhathi sokuchazwa kabusha kwedatha yombhalo ikakhulukazi ukuthi idatha yesibili ayinawo umongo wangemuva (Szabo & Strang, 1997).

- ***Ukungqubuzana kwezintshisekelo nemithombo yedatha***

Njengoba ubudlelwano obukhona, noma imisebenzi yangaphambilini yomcwaningi, ingase idale ukungqubuzana kwezintshisekelo, kubalulekile ukuthi ubike ngokusobala ngalolu daba esicelweni sokugunyaza sezimiso zokuziphatha. Mingaki imisebenzi eshicilelwe ezosetshenziswa ocwaningweni eyabhalwa noma yadalwa nguwe, noma izihlobo zakho? Ubudlelwano bomndeni nemithombo yedatha kufanele kuxoxwe ngakho. Ukuthembeka kwemithombo ezosetshenziswa kufanele futhi kuxoxwe futhi kunikezwe isitatimende mayelana nemibandela ezosetshenziswa ukwahlulela imithombo yedatha yesibili ezofakwa. Angeke kwamukeleke ukusebenzisa imithombo yedatha yesibili esolwa, noma etholakala ibandakanyeka ekuqinisekiseni kwedatha.

3.11 Okwenziwe ngenqondo

- 3.11.1 Zindla ngephrojekthi yakho yocwaningo, futhi ufake nesitatimende esibonisa ukuthi yimaphi amalungelo empahla yengqondo engavela ocwaningweni, nokuthi yini engenziwa ukuze kuqinisekise ukuthi amalungelo avikelwe ngokwanele. Amathuba okuhweba okungenzeka nawo kufanele kukhulunywe ngawo.

3.12 Izinsiza ezidingekayo kanye nohlelo lwephrojekthi

- 3.12.1 Bhala isitatimende esibonisa uhlobo lwezinsiza ezidingekayo ukwenza ucwaningo, ukuthi izinsiza zeNyuvesi zanele yini, futhi uma kungenjalo,

Yini eyayizokwenziwa ukuze kungotshwe ukungafaneleki.

- 3.12.2 Faka ishadi le-Gantt elibonisa imisebenzi emikhulu okudingeka uyenze ukuze uqedele ucwaningo lwakho ngesikhathi. (Sebenzisa Iphrojekthi ye-MS ukuthuthukisa ishadi le-Gantt, uma kungenzeka). Ubuncane bemisebenzi eyi-15 (kuyo yonke inqubo yocwaningo) kuyo yonke inqubo yocwaningo ngokuvamile ilindelekile ukuze uhlelo lubonise ngokunengqondo lokho okudingeka ukwenze ukuze uqedele uhlaka lwakho.

3.13 Ukuba nokwenzeka kocwaningo

- 3.13.1 Bhala isitatimende mayelana nokuba nokwenzeka kocwaningo ngokwengqalasizinda nezinsiza zezimali, izinkinga zesikhathi, nokufinyeleleka kolwazi.

3.14 Uhlelo lokusabalalisa ulwazi

- 3.14.1 Ngaphezu kokukhiqiza ithisisi/uhlaka, ungenza imisebenzi yezazi ngokubhala nokushicilela izindatshana..
- 3.14.2 Bhala isitatimende esikhombisa ukuthi uhlose ukusabalalisa kanjani futhi kuphi imiphumela etholwe ocwaningweni lwakho. Kubalulekile ukuthi amakhandidethi nabaphathi bethule ucwaningo ezinkomfeni nokuthi izingxenye zocwaningo zishicilelwe kumajenali agunyaziwe. Chaza uhlelo lwakho lokusabalalisa.
- 3.14.3 Izindlela ezingenzeka zokusabalalisa umsebenzi wakho zifaka ukushicilelwa kumajenali, ezincwadini noma ezahlukeni zezincwadi, izinqubo zenkomfa ezibuyekizwe ngontanga, izifinyezo zenqubomgomo, izingqungquthela, njalongo.

3.15 Ukuhlukaniswa kokuqala kwezahluke ze-eseyi/ze-ndaba

- 3.15.1 Nakuba izimiso zokufundisa noma zokuqondisa izigwegwe zivame ukunquma isakhiwo esithile sethisizi yocwaningo noma umbiko wocwaningo, umbiko ojwayelekile uqukethe izici ezilandelayo.:
- 3.15.2 **Isakhiwo** sesicelo sakho sokugcina kufanele sibe:
Ikhazi Lesihloko (elifushane futhi liqondile)
Isifinyezo Esiphezulu ('uhlolojikelele' - ikhazeli-1 eliphezulu)
Ukubonga (kwalabo abasizile)
Uhlu lwe-zifinyezo (Kubonisa incazelo yezifinyezo ezisetshenziswe embikweni)
Uhlu Lokuphakathi (uhlu lwezahluke/izinombolo zekhazeli)
Uhlu lwezibalo namathebula (kokubili kufakwe ngaphakathi kombhalo futhi uhlobo ngalunye lunezinombolo zalo ezizimele ezilandelayo kulo lonke)
Isahluko 1: Isingeniso (sihlenganisa isizinda / isitatimende senkinga yocwaningo, imibuzo yocwaningo, inhloso nezinjongo ezithile, noma imibono, ukubaluleka, njll.)
Isahluko 2: Ukubuyekizwa Kwemibhalo (Inhlobo yezincwadi ezihlobene ezixhunye nemibuzo yocwaningo lwakho izincazelo zesihloko esiyinhloko, ukuhlonzwa kwababhali 'ababalulekile', izingqikithi, ucwaningo lwangaphambilini, izinhloso ezithile, noma imibono ecatsangelwayo, imiqondo emikhulu, njll.)
Isahluko 3: Indlela Yokucwaninga (Ifilosofi yocwaningo, indlela yokwenza, idizayini nezindlela; ukucatsangelwa kokuziphatha)
Isahluko 4: Ukwethulwa kwedatha kanye Nezingxoxo (okutholakele/imiphumela; kanye nengxoxo)
Isahluko 5: Iziphetho Nezincomo (kufanele zisekelwe ekuhlaziyeni kwangaphambilini futhi zibonise izincwadi kanye nemibuzo yocwaningo lwangempela, izinhloso, noma imibono ecatsangelwayo; izincomo kufanele ziphume eziphethweni)
Izithenjwa (uhlu lwezincwadi/izihloko 'ezicashuniwe' embhalweni kusetshenziswa ifomethi efanele yereferensi)

Uhlw lwezincwadi (ezinye izincwadi ezibe nomthelela emsebenzini)

Izithasiselo (noma yini engaphazamisa 'ukugeleza' komfundi ngaphakathi kombhalo, isb. amashadi, amathebula, njll)

3.15.3 Kunezinkambiso eziningi neziqondiso ongazilandela lapho uhlanganisa umsebenzi wakho. Lokhu okungenhla kuyisibonelo nje.

3.16 Izithenjwa / noma uhlu-lwezibalo (kuphoqelelekile)

3.16.1 Ireferensi iwuhlu lwezincwadi/izihloko 'ezicashuniwe' embhalweni. Inyuvesi ayinikezi isitayela esithile sokubhekisela futhi ngokubonisana nabaphathi babo, abazobhaphathizwa bakhululekile ukusebenzisa isitayela esifanele kakhulu, ngokulandela izivumelwano zokuqondisa izigwegwe. Ungaguquguquki ngefomethi eyamukelwe.

3.16.2 Uhlu lwezibalo ingezinye izincwadi ezibe nomthelela emsebenzini.

3.17 Isimemezelo somkhandidethi (kuphoqelelekile)

3.17.1 Isimemezelo sekhandidethi lapho kuboniswa khona ukuthi ikhandidethi iyazazi izinqubomgomo nezinqubo zocwaningo zeNyuvesi futhi ihlose ukuhambisana nezidingo ezifanele. Isimemezelo kufanele futhi siqukathe isitatimende soqobo kanye nesimemezelo sokukopela.

3.18 Isimemezelo somphathi (kuphoqelelekile)

3.18.1 Isimemezelo somphathi lapho kuboniswa khona ukuthi ukuqondisa okufanele kunikezwe, ukuthi isiphakamiso siqinisekisiwe ngekhwalithi, nokuthi isiphakamiso sithunyelwe ngemvume yomphathi kanye nemvume.

4. INQUBO

4.1 Lapho ukubhalwa kwesiphakamiso socwaningo sekuqediwe futhi usulungele ukusihambisa enyuvesi, kufanele kulandelwe lezi zinyathelo ezilandelayo (Qaphela ukuthi konke ukuxhumana kufanele kube nge-elektronikhi.):

- **Isinyathelo 1:** Umphathi uhlela ne-HOD ukuthi umuntu ozongenela ukhetho ethule isiphakamiso kusemina yomnyango ukuze aphawule.
- **Isinyathelo sesi-2:** Umuntu ozongenela ukhetho ubuyekeza isiphakamiso ngenxa yamazwana atholiwe futhi ngemva kwalokho athumele inguqulo ye-elektronikhi yesiphakamiso kumphathi.
- **Isinyathelo sesi-3:** Umphathi (hhayi umuntu oqokiwe) uhambisa inguqulo ye-elektronikhi yesiphakamiso komele ucwaningo lwe-Faculty.
- **Isinyathelo sesi-4:** Ummeleli wocwaningo lwe-Faculty uthumela inguqulo ye-elektronikhi yesiphakamiso kubabuyekezi abathathu, okungenani oyedwa wabo okumele avele emnyangweni womuntu ozobhalwa. Abaphathi nabaqondisi ababambisene nabo bangase bangabi ababuyekezi. Uma umnyango ungenalo inani elanele labasebenzi abaqeqeshiwe noma abanolwazi olufanele lokubuyekeza isiphakamiso, kungasetshenziswa umuntu wangaphandle owazi kahle lo msebenzi.
- **Isinyathelo sesi-5:** Umbuyekezi uqedela umbiko wempendulo ngesiphakamiso phakathi kwamaviki angu-2 futhi awuthumele nge-elektronikhi komele ucwaningo lobuhlakani.
- **Isinyathelo sesi-6:** Ummeleli wocwaningo lwe-Faculty uthumela imibiko yababuyekezi nge-imeyili kumphathi.
- **Isinyathelo sesi-7:** Ikhandidethi likhuluma futhi/noma lihlanganisa izinguquko/amazwana aphakanyisiwe.
- **Isinyathelo sesi-8:** Ngemva kokubuyekeza umphathi uthumela i-imeyili isiphakamiso sokugcina kumabhalane weDini futhi ahlele ukwethulwa kwesiphakamiso kubuhlakani.

- **Isinyathelo sesi-9:** Ngokushesha ngemva kwesethulo umphathi, iDini/Isekela-Dean, abasebenzi bomnyango othile kanye nommeleli wocwaningo lobuhlakani baxoxa ngesiphakamiso futhi baphakamise izinguquko zokugcina uma kunesidingo.
- **Isinyathelo 10:** Isiphakamiso sithunyelwa komele ubuhlakani bokuziphatha.

- **Isinyathelo 11:** Uma imvume yezimiso zokuziphatha isitholiwe i-HOD ithumela kuDini wophiko:
 - (1) Incwadi ezokwethulwa eBhodini Lobungcweti ebonisa ukuthi isiphakamiso sethulwe kuphaneli yeFaculty (enikeza amagama amalungu ephaneli) nokuthi iphaneli isithole samukelekile. Okunamathiselwe encwadini ikhasi lekhava lesiphakamiso kanye nencwadi evela eKomidini Lezimiso Zokuziphatha.
 - (2) Umqulu ophelele wesiphakamiso, kanye nemibhalo edingekayo yemvume yobuhlakani ukuze kuqhutshekwe kuhanjiswa eHhovisi Locwaningo.
- **Isinyathelo 12:** Izisebenzi zeHhovisi Locwaningo zizorekhoda imibhalo kusizindalwazi salo bese bewethula, ngokusebenzisa Isigaba Sekomidi Lobhalisi, kumaKomiti Ezemfundo Ephakeme Ephakeme kanye Nocwaningo LweNyuvesi ukuze agunyazwe okokugcina.

5. IZIKHATHI

- 5.1 Ngokujwayelekile iziphakamiso zocwaningo kufanele zamukelwe yizinhlobo ze-Faculty ezifanele futhi ekugcineni amakomiti eSigele afanele (iKomidi Leziqo Eziphakeme kanye neKomidi Lokuziphatha Lokucwaninga) phakathi nezikhathi ezilandelayo.:
- Umuntu ozongenela umsebenzi wezimfundo we-siqu esiphezulu kumele alethe isiphakamiso zingakapheli izinyanga eziyi-8 zokubhaliswa futhi athole ukwamukelwa kungakapheli izinyanga eziyi-12.
 - Umuntu ozongenela Isiqu esiphezulu wesikhathi esigcwele kufanele alethe isiphakamiso socwaningo phakathi nezinyanga ezi-4 zokubhaliswa okunemibandela futhi athole ukwamukelwa phakathi nezinyanga eziyi-6.
 - Umuntu ozongenela uDokotela wesikhathi esigcwele kufanele alethe isiphakamiso socwaningo zingakapheli izinyanga eziyi-6 zokubhaliswa okunemibandela futhi athole ukwamukelwa zingakapheli izinyanga eziyi-8.
 - Umuntu ozongenela itoho le-Isiqu esiphezulu noma uDokotela kufanele alethe isiphakamiso zingakapheli izinyanga eziyi-8 zokubhaliswa okunemibandela futhi athole ukwamukelwa kungakapheli izinyanga eziyi-12.
- 5.2 Usuku lokwamukelwa kwesiphakamiso usuku okutholwe ngalo ukugunyazwa kokubili kweKomidi Leziqo Eziphakeme kanye neKomidi Lokuziphatha Locwaningo okutholwe ngalo.
- 5.3 Uma izikhathi ezinqunyiwe zingafinyelelwanga, umphathi uzobika ukubambezuleka ku-HOD, anikeze izizathu zokubambezuleka futhi aphakamise isinyathelo esifanele okufanele sithathwe odabeni. I-HOD yona izobika udaba ekomitini elibhekele ukwengamela iziqu ze-postgraduate ku-Faculty. Ikomidi lobuhlakani elifanele lizocubungula umbiko we-HOD futhi lithathe izinyathelo ezifanele.
- 5.4 Ngokujwayelekile isenzo esinjalo siyobe sisusa ukubhaliswa komuntu oqokiwe, kodwa ezimeni ezifanele iminqamulajuqu inganwetshwa isikhathi esingekho ngaphezu kwezinyanga ezintathu. Azikho ezinye izandiso ezizovunyelwa.

6. UKUHLOLWA KWEZIPHAKAMISO ZOCWANINGO

- 6.1 Uma sesiqediwe, isiphakamiso socwaningo, okokuqala, siyohlolwa ngokusemthethweni yikomidi leFakhalathi ukuze kuqinisekise ukuthi uhlobo locwaningo oluhlongozwayo kanye nendlela yocwaningo, kanye nekhwalithi isiyonke yesiphakamiso socwaningo siyahlangabezana namazinga adingekayo eNyuvesi. Kuzobhekwa le mibandela elandelayo:

- Ukuhambisana nefomethi eshiwo
- Ukuqanjwa kocwaningo, okuhlanganisa ukucaciswa kwesizinda, inkinga, imibuzo yocwaningo, izinjongo, noma imibono ecatsangelwayo, ukubaluleka, imibhalo ehlobene, uhlaka, njll.
- Ukufaneleka kwendlela yocwaningo

- Izimiso zokuziphatha
- Ukuba nokwenzeka kocwaningo
- Ubuqotho besayensi bocwaningo

6.2 Amakhono angacacisa indlela yokuhlola eyengeziwe, ngakho-ke qiniseka ukuthi uthola umhlahlandlela ofanele we-Faculty ukuze uthole ulwazi olwengeziwe.

6.3 Ikhono ngalinye lizoba nezinqubo zalo zalokhu kuhlola, kodwa ngokuvamile umuntu ozongenela ukhetho uzokwethula isiphakamiso ekomitini ngendlela yomhlangano, ukuze imibuzo, ukuphawula, kanye neziphakamiso zibuyiselwe ngokushesha. Lapho iziphakamiso zocwaningo zingamukelwanga, umuntu ozongenela ukhetho kumele aziswe ngokubhaliwe ngezizathu zalokho. Uma ukubuyekezwa kudingekile, isiphakamiso kufanele sithunyelwe kabusha futhi siphinde sihlolwe yikomidi lobuhlakani (hhayi ngempela ngesemina). Uma isiphakamiso singamukelwa, lokhu kufanele kuthathwe njengenqubo evamile yokukhula ekulungiseleleni isiphakamiso, hhayi njengokwehluleka noma ihlazo.

6.4 Iziphakamiso zocwaningo ezamukelwe ziye zethulwa, ngeHhovisi Locwaningo kanye noPhiko Lobhalisi, eKomidini Leziqu Eziphakeme Lenyuvesi kanye neKomidi Lezimiso Zokuziphatha Lenyuvesi ukuze ligunyazwe ngokusemthethweni ezingeni leNyuvesi. Noma yiliphi kulawa makomiti lingakwazi:

- Vuma isiphakamiso, ngemibandela noma ngaphandle kwemibandela.
- Yenqaba ukugunyaza futhi ubuyisele isiphakamiso kukhandidethi ukuze sibuyekezwe

7. ISITATIMENDE NGEZIMBILIKO ZOKUSEBENZA, UKUKHOHLELWA KWEZINKONDLLELA, KANYE NOKWENZA

7.1 INyuvesi izibophezele ekuqinisekiseni ukuthi lonke ucwaningo lwenziwa ngobuqotho nangendlela evikela amalungelo abo bonke ababambiqhaza. Ikakhulukazi, iNyuvesi ihlose ukwakha nokugcina indawo yocwaningo lapho kuhlonishwa khona amagugu ayisisekelo esithunzi somuntu, ukulingana, ukungabandlululi, ubulungiswa bezenhlalakahle kanye nokungenzeleli. Lokhu kusho ukuthi abacwaningi bajutshwe ukuba benze ucwaningo oluhambisana nenhlalo nokuziphatha, ukuphishekela iqiniso, ukwethembeka kwengqondo nokuvuleleka emibonweni, kanye nokugcina izindinganiso eziphakeme kakhulu zobungcweti nezokuziphatha..

7.2 Yonke imisebenzi ehlobene nocwaningo nehlobene nocwaningo kufanele ihambisane nezindinganiso zokuziphatha ezifanele, futhi ukukhathazeka ngezimiso zokuziphatha akugcini nje emisebenzini ehloselwe ucwaningo lwabantu nezilwane noma ukuqoqwa kolwazi locwaningo, njengokwenziwa kocwaningo noma inhlolokhono, ukucubungula nokuhlaziya idatha yocwaningo, kanye nokubikwa kwemiphumela yocwaningo.

7.3 Ukukopela kuwukwephula ubuqotho ezifundweni, kwehlisa ubuqotho bomuntu/abantu abahililekile, futhi kulimaza isithunzi somphakathi wezemfundo. INyuvesi inesibopho sokugcina ubuqotho ezifundweni kanye nokukhuthaza ukwethenjwa emsebenzini wokufunda owenziwa eSikhungweni kanye nokuvikela ukukokotelwa ngaphakathi kweSikhungo..

7.4 Bonke abazongenela ukhetho kumele bafunde izinqubomgomo zeNyuvesi mayelana nezimiso zokuziphatha zocwaningo kanye nokukopela, futhi bacabangele eziphakamisweni zabo izindaba ezithile zokuziphatha ezivezwe ucwaningo lwabo. Izinhlobo ezithile zocwaningo, ezinjengocwaningo lwezempilo yabantu, ucwaningo oluhilela izilwane, noma izingane kanye nabanye abantu abasengozini, zibangela ukucatshangelwa kwezimiso zokuziphatha okukhethekile; kodwa kukhona nezindaba zokuziphatha ezihambisana nokungqubuzana kwezintshisekelo, ukugada, ukubhalwa ngokubambisana, ukushicilelwa kwemiphumela yocwaningo.

7.5 Isethi yemihlahlandlela kumele ngaso sonke isikhathi ifundwe ngokuhambisana

nezinqubomgomo zeNyuvesi ezihlobene nocwaningo, izimiso zokuziphatha, ukukopela, kanye ne-POPI, futhi kufanele ngaso sonke isikhathi zibe ngaphansi kwezinhlinzeko zezinqubomgomo ezishiwo.

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IZITHATHO

Isithasiselo 1: Ibhokisi 1: Isampula yesingeniso

Iaingeniso

Ukuhlolwa kwezakhamizi ukusebenza kwezisebenzi zikahulumeni kanye nokusebenza kwezinhlobo zikazwelonke mayelana nokusetshenziswa kwenqubomgomo kuseyingxenywe enkulu yentuthuko yezepolitiki eNingizimu Afrika. Imibiko eminingi yemibhikisho yasemgwaqweni mayelana nezidingongqangi ezingezinhle ikhombisa izinga lokukhathazeka mayelana nokungagculisi kokulethwa kwezidingongqangi phakathi kwezakhamizi komasipala abahlukene. Lesi siphakamiso socwangingo senzelle ukuphenya uhlobo lokusebenzisana olukhona phakathi kukamasipala wendawo kanye nemiphakathi yawo, kanye nomthelela lokhu kuxhumana okuba nakho empumelelweni noma ekuhlulekeni kokulethwa kwezidingongqangi. Ukungenelela kungathuthukiswa uma kunobufakazi obuhlola izinhlobo zenethiwekhi egxilile edlalwa phakathi kwezisebenzi zikahulumeni nezakhamuzi emiphakathini yendawo, kanye nohlobo lokuxhumana nendawo abasebenzi bakahulumeni abasebenza kuyo.

Isiphakamiso socwangingo siqala ngokwethula isizinda senkinga nesimo lapho lolu cwangingo luzoqhutshwa khona. Lokhu kulandelwa isitatimende senkinga kanye nemibuzo yocwangingo (imibuzo) enkulu ezophenywa. Ibe isiqhubeka nokusho inhloso noma inhloso yocwangingo kanye nezinjongo zocwangingo ezihlobene. Awekho ama-hypotheses ashiwo ngoba athathwe njengengabalulekile ekwakhiweni kwalolu cwangingo. Esikhundleni salokho, kugxilwa ekuchazeni ukubaluleka okulindelekile (umnikelo) wocwangingo lwethiyori nokwenza, ukuhlaziywa kokubuyekizwa kwemibhalo, kanye nokuveza ithiyori ezohola ucwangingo. Indlela yokusebenza, impahla eqanjiwe engenzeka kanye nezindaba zokuziphatha zibe sezichazwa futhi kuxoxwe ngazo, ngaphambi kokufingqa izidingo zensiza, ukuhlola ukuthi kungenzeka yini, izinhlelo zokusabalalisa ulwazi kanye nesakhiwo esilindelekile sezahluko zethesis egcwele. Isiphakamiso siphetha ngesigaba sereferensi kanye nezimemezelo ezivela kumcwangingo kanye nomphathi(abaqondisi).

Isithasiselo 2: Ibhokisi 2: Indlela yesinyathelo ngesinyathelo yokuxazulula inkinga kanye nombuzo

Izigaba:

- (a) Thola indawo noma isihloko onentshisekelo kuso isb., - Amasistimu okuhlola.
- (b) Thola udaba phakathi kwesihloko ofisa ukusihlola ngokuningiliziwe isb., - Okuhlangenwe nakho kwabesifazane ekuhloleni.
- (c) Chaza inkinga (okungukuthi, igebe, ukuntula, ukungqubuzana, njll.) etholiwe futhi edinga isixazululo ngokwenza noma ithiyori - ngokusekelwe ezingxoxweni zakho nomkhakha womphakathi/ozimele, ulwazi lomuntu siqu, ukufunda izincwadi. isb., - Umthelela 'wosilingi wengilazi' ekunyusweni / ekuthuthukisweni. Xoxa ngokusobala ngohlobo lwale nkinga, kanye nezinga layo elaziwayo noma elilinganiselwe: (isb., imizwa yokuthi ingilazi umphumela wosilingi ushunyekiwe ezinhlelweni zokuhlola; abesifazane abadlwenguliwe). Xoxa ngokubaluleka kokuyiphenya (isb., ukuhlukahluka okuthuthukiswayo kunqubomgomo yenkampani kanye nomthetho wamathuba alinganayo), kanye nomnikelo ozowenza.
- (d) Gcizelisa izindaba ezisesitatimendeni senkinga zibe ngumbuzo oyinhloko, bese uthola imibuzo emincane. Faka imibuzo kumongo ozofundwa ngawo. Isib:

Ithini imibono yabesifazane mayelana nokugxiliswa komphumela wengilazi osilingiwe ezinhlelweni zangaphakathi zokuhlola emabhange [enkampani/ esikhungweni] lapho besebenza khona?

2. Yiziphi izici zokusebenzisana nezimo ezibonwa abesifazane abasezikhundleni zokuphatha ukukhombisa 'uphahla lwengilazi' ohlelweni lokuhlola enhlanganweni?
3. Iyiphi indlela (izi)ndlela zezengqondo ezisiza ukuthuthukiswa kwemizwa 'yesilingi sengilazi' phakathi kwabesifazane enhlanganweni?
4. Yikuphi ukungenelela okungahle kuklanywe ukuze kuncishiswe amathonya avela ezicini ezikhonjiwe zokusebenzisana nabantu kanye nezimo emibonweni yengilazi egcwele uphahla ohlelweni lokuhlola

Isithasiselo 3: Ibhokisi 3: Isibonelo somnikelo

Iminikelo yocwaningo

Zijwayeze

Uphiko lwezabasebenzi oluphethe ukuhlolwa kwabasebenzi, kanye nokuphathwa kwenqubomgomo yenhlangotho ngokulingana nokuhlukahluka, ingaziswa ngocwaningo mayelana nemibono yomphumela wengilazi wophahla lwengilazi ezinhlelweni zokuhlola. Ubufakazi bokuba khona kwe-glass-ceiling endleleni okwenziwa ngayo i-appraisal buzosiza ekuhlukaniseni izimbangela zenkinga futhi kube nomthelela ekuqondeni kangcono izigaba zalezi zimbangela ngokwemigomo yalezo ezithintana nemvelo, nezinye banesimo ngokwesimo.

