Policy Brief

Africa Indigenous Knowledge Research Network (AIKRN)
harnessing indigenous knowledge for youth empowerment

Project Manual for Undertaking Indigenous-Led, Community-Based Participatory Action Research

The Context

The interactions in this document centred on engaged scholarship and approach using a community-based Participatory Action Research (PAR) process to support the Indigenous people, in their thoughts and words' towards 'taking their rightful place in contemporary society. Engaged Scholarship concepts entail the integration of education with community development toward social transformation (Beaulieu, Breton & Brousselle, 2018). This concept postulates that educational outcomes become more meaningful and relevant when scholars direct their energies not solely toward an academic community, but also consider pressing public shared problems (De Lange, 2012; da Cruz, 2018). The emphasis is on commitments and power-sharing through which marginalized voices can be elevated, and this is critical in Africa and Canada wherein, to date, Indigenous people continue to face marginalization and exploitation.

One of the challenges faced by contemporary researchers has been lack of trust and respect that many Indigenous communities have for community-based research processes driven by conventional scientific methodologies (National Collaborating Centre for Aboriginal Health 2013); this has resulted in a paucity of cooperation among Indigenous people in some research projects, even though, many relate to their livelihood. Historically, research was occurring in Indigenous communities without the reciprocity required to make the people have a sense of belonging but to make the outcomes relevant and beneficial to their people (Nygård & Saus, 2016; Claw, Anderson, Begay, Tsosie, Fox & Garrison, 2018; Hayward, Sjoblom, Sinclair & Cidro, 2021). Beyond derogatory views, a notion that researchers and their affiliated institutions mainly distil, as well as exploit knowledge wealth of Indigenous people for self-gratification is a well-established connotation amplifying their hesitancy in research driven by Western scientific perspective – a standpoint legitimized in the fact that the majority of research undertaken on Indigenous people matters left no blueprint for Indigenous communities. Besides being

unethical, extractive research practices undermine the agency of Indigenous communities; a pitfall that must be bridged with urgency. In this, a shift from a passive paradigm to a more engaged scientific approach of carrying out Indigenous research projects is an ideal instrument as such a strategy will not only allow the integration of Indigenous people in the project but become owners and decision-makers. Through this project manual, various steps for undertaking indigenous-led participatory action research have been consolidated as a guide for community-based researchers engaging with Indigenous communities.

The Essence of the Manual

Public advocacy requires a clear understanding of existing societal issues, and this is only attainable when researchers engage with grassroots individuals using PAR instruments. PAR is a qualitative research methodology that involves researchers and participants, collaborating to understand social issues and take actions to bring about social change (Wood, 2019). PAR plays a critical role in social science research and has been applied in diverse disciplines within this area of study to unpack critical issues, understand their root causes and enact sustainable solutions to problems. For instance, religion (Husni, 2020), feminist and social justice (Fine & Torre, 2019) climate change and disaster risk reduction education (Trajber et al., 2019; Canlas & Karpudewan, 2020), primary education systems (Hilli, 2020), as well as community public health (Kjellström & Mitchell, 2019; Lindquist-Grantz & Abraczinskas, 2020), amongst others. Although the methodology is widely promoted and harnessed to provide a sustainable solution to societal issues, there is a dearth of information on how it has been engaged rigorously to contextualize policies and practices on Indigenous people's livelihood, specifically in Africa and Canada. In other words, its application in this context will provide a new perspective through which essential knowledge about issues confronting indigenous people in that regard can be deepened and understood to map out a more proactive solution to their problems.

Community-based participatory action research is crucial for developing regions such as Africa where research institutions, especially universities are increasingly being called upon to contribute more meaningfully towards not only developmental issues confronting indigenous people but solving crises across its grassroots communities. This is particularly important as it allows researchers to draw on a broad range of stakeholders, including community members to co-interact and contribute to providing a clear picture of their challenges, as well as enhancing collaborations with grassroots knowledge holders to co-design an area-specific solution-driven

2

framework peculiar to their problems (De Lange, 2012). Overall, such engagements invigorate, stimulate, enhance and contextualize the core functions of the university to the community. It is, therefore, appropriate to mention that, if a university stands on its island without talking to the society around it to make input, it is not going to transform and/or impact at the expected pace. Against these premises, it becomes an ideal decision to implement participatory action research in every Indigenous and community-centred research, especially those revolving around marginalized Indigenous communities in African and Canadian, as in the current context.

From the above discourse, PAR enhances engaged scholarship, which denotes the comprehensive involvement of grassroots people in research activities that concern them. Regardless, most conventional research institutions operate like ivory tower persona and profession-orientation entities wherein scholars undertake research without the active participation of grassroots individuals for whom the outcomes affect directly (Boyer, 1996; MacGregor & Makoni, 2010). It becomes worrying that the findings of such research may not be the true reflection of grassroots realities, nor, will policy actions based on inferences from such research outcomes meet grassroots demands. This pitfall often resulted in support initiatives and policy interventions being misplaced or insufficiently provided (Olowu, 2012). In light of the fact that only grassroots members affected by community challenges have sufficient knowledge of the precise circumstances to be able to suggest more accurate cause-effect relationships, the university's inability to engage effectively with them may result in their unsatisfactory contribution to finding sustainable solutions to problems and issues hampering the realization of improved quality of life of Indigenous communities (Francis et al., 2016). In other words, it is through the cooperation of various Indigenous knowledge holders whose livelihoods are directly affected by existing challenges that conditions are co-created and made conducive to the development of knowledge for lasting solutions (Lewandowska et al. 2021). This being the case, community-based participatory action research becomes the foundation for undertaking research that reflects the plight of Indigenous communities.

The whole idea of understanding what works best for grassroots Indigenous communities should be co-interacted by different stakeholders who are directly or indirectly affected. For instance, traditional authorities, community leaders, and the youth are knowledge holders with resourceful information that will enable researchers to map out fundamental support mechanisms that can address immediate grassroots realities. Firstly, these stakeholders are well engrossed in their Indigenous communities and have understood both the community

composition, dynamics and traditional systems. Unlike researchers who rely on short-term extractive information to suggest preliminary action measures, Indigenous people have lifelong knowledge and cutthroat experience to inform a comprehensive long-term framework for addressing issues they grapple with, be it in food security, climate change, health, medicine, reproduction and livelihood, amongst others. Secondly, drawing stakeholders of different demography within an Indigenous community will provide knowledge variation which can be triangulated to crystalize current debates fronted by different clusters in the community, understand confusions lingering within the people and identify gaps that should be bridged to foster societal transformation not just from an informed point of view but diverse perspectives. This argument is legitimatised in the fact that conditions are perceived differently; not until a common ground is established through which various stakeholders merge to co-interact conditions and derive a consensus, research reports may not sufficiently account for all existing issues.

Overall, the integration and centralisation of various traditional knowledge sources can establish new capabilities to predict a holistic solution-driven framework for Indigenous communities and optimize outcomes. Regardless, Indigenous people remain underrepresented in community-based research pertaining to their communities and are unlikely to benefit from such efforts. Based on these assumptions, a project manual is required to complement existing frameworks for conducting research among Indigenous people and in Indigenous communities. This manual will show how to undertake Indigenous-led, community-based participatory action research. This manual draws comparative knowledge from similar frameworks in Canada and other parts of the world. Whereas there are no precise and generally acceptable principles that guide PAR undertakings, seven steps were identified in the current context: research ethics, community entry, literature synthesis, consent and sampling, quality criteria, execution, and monitoring/evaluation (Figure 1). This was based on existing literature and several years of personal experience working with marginalised indigenous communities.
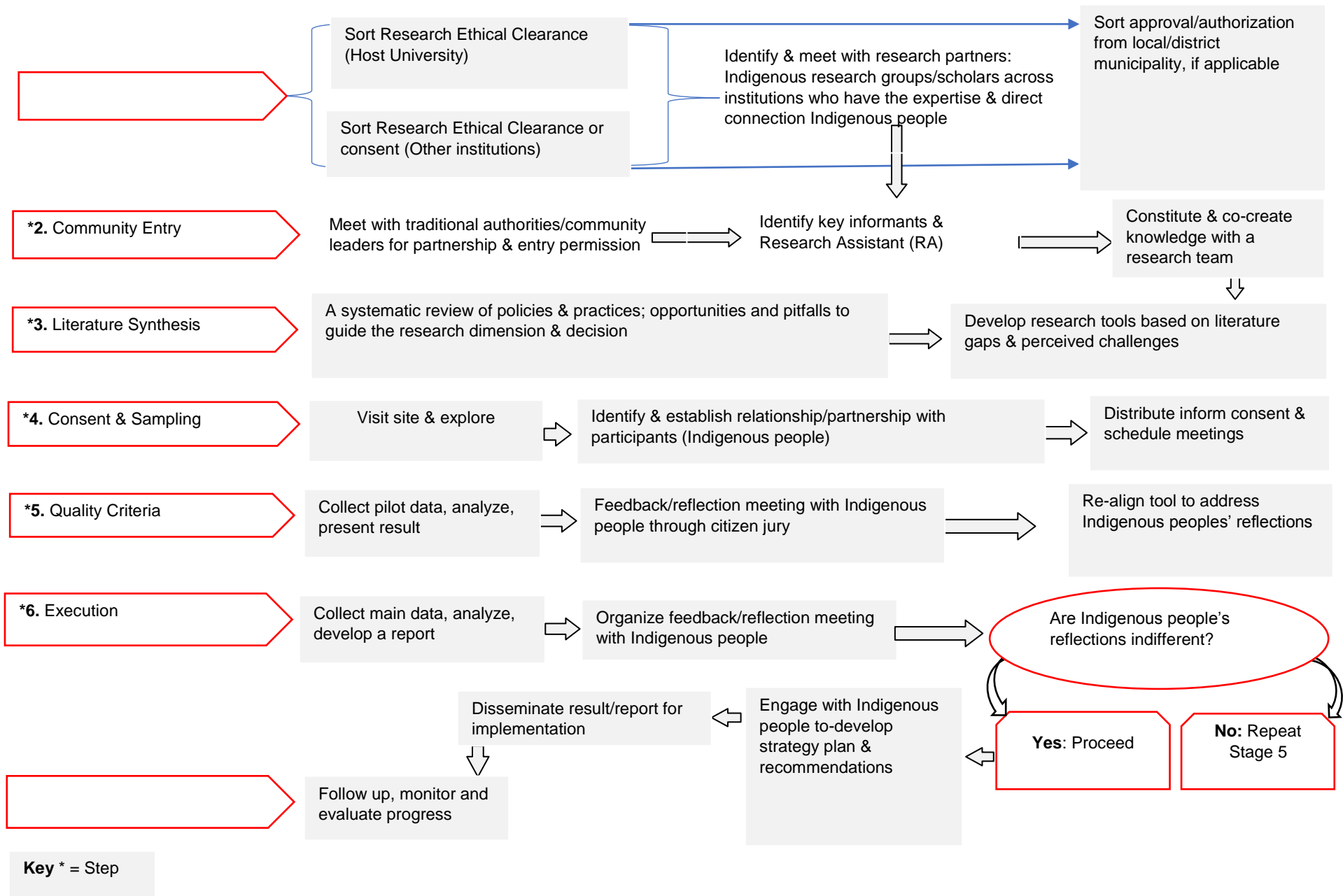
Figure 1: Project manual for undertaking Indigenous-led, community-based participatory action research

The flowchart contains the following elements:

- Sort Research Ethical Clearance (Host University)
- Sort Research Ethical Clearance or consent (Other institutions)
- Identify & meet with research partners: Indigenous research groups/scholars across institutions who have the expertise & direct connection Indigenous people
- Sort approval/authorization from local/district municipality, if applicable

*2. Community Entry
- Meet with traditional authorities/community leaders for partnership & entry permission
- Identify key informants & Research Assistant (RA)
- Constitute & co-create knowledge with a research team

*3. Literature Synthesis
- A systematic review of policies & practices; opportunities and pitfalls to guide the research dimension & decision
- Develop research tools based on literature gaps & perceived challenges

*4. Consent & Sampling
- Visit site & explore
- Identify & establish relationship/partnership with participants (Indigenous people)
- Distribute inform consent & schedule meetings

*5. Quality Criteria
- Collect pilot data, analyze, present result
- Feedback/reflection meeting with Indigenous people through citizen jury
- Re-align tool to address Indigenous peoples' reflections

*6. Execution
- Collect main data, analyze, develop a report
- Organize feedback/reflection meeting with Indigenous people
- Are Indigenous people's reflections indifferent?
  - **Yes**: Proceed
  - **No:** Repeat Stage 5
- Engage with Indigenous people to-develop strategy plan & recommendations
- Disseminate result/report for implementation
- Follow up, monitor and evaluate progress

Key * = Step

Figure 1: Project manual for undertaking Indigenous-led, community-based participatory action research

5

1) Ethical Clearance

Having conceptualized a proposal and completed initial arrangements to undertake an Indigenous-led, community-based participatory action research, the first step is sorting research ethical clearance from the host university and other affiliated universities directly involved in the study. In many instances, approval from the local government authorities to undertake research in certain areas, especially in rural communities is required. Ethical clearance and research approval applications enable the university ethical clearance committee and other authorities such as the government to glance at the researcher's aims and methodologies towards ensuring that the research design is ethically sound and the intended initiative is not biased, nor it will be conducted in a way that does not protect the dignity, rights and safety of people and/or subjects (in the case of animals and materials) involved (Davies, 2020). In principles and practice, a standard ethical research procedure, especially that involving Indigenous people must adhere to certain criteria such as mutual respect, anonymity, confidentiality, voluntary participation, and harm avoidance, amongst others (Drawson, Toombs & Mushquash, 2017; Msoroka & Amundsen, D., 2018). Indigenous people are cultural giants and traditional beings who often find pride in their ancestry, values and norms. In different cultures, traditions differ objectively and Indigenous practices are approached differently; not undermining any, researchers must at all costs respect not only the people but the tradition that preceded them in the course of research. Except otherwise authorised by the Indigenous people, revealing personal information about research participants violates ethical standards. Similarly, data may only be used for the primary purpose in which it was collected and held confidentially. Other ethical norms in research may include -not limited to - personal moral standing against fabricating, falsifying or misrepresenting research data collected from Indigenous people to avoid error.

For community-based research where community entry is a prerequisite, ethical clearance serves as a warrant; a document that signals the local authorities and grassroots individuals about the researcher's position; as a legitimate authority, designated by an institution to execute certain duties within a jurisdiction. This can be resourceful in buying participants' cooperation. Subsequently, establishing strong collaborative partnerships mainly with networks of existing Indigenous research groups in the area, government officials and university scholars whose expertise aligns with the research focus and has a direct connection to the research area is ideal. Firstly, their skills and experience can be useful in spearheading the project, secondly,

their relationship with Indigenous people could serve as a passport through which the research team navigate and engages easily with Indigenous communities, and thirdly, partnering with people that are knowledgeable and familiar with local systems, sorting local government approval for community entry can be less frustrating than usual.

2) Community Entry

Community entry is a hallmark strategy of engaged scholarship and is critical for ensuring that a research project is as community-driven as possible. Community entry lays the foundation through which researchers can build both personal and interpersonal relationships, learn how individuals understand their identity and connections, enter into partnerships with resourceful knowledge holders and access communities for research purposes (Oluwabamide, Adetayo & Olufunsho, 2020). Firstly, it helps researchers to observe ethical protocols and adhere to cultural norms governing indigenous people. Secondly, it lays the foundation through which researchers establish a healthy working relationship with Indigenous people; and thirdly, it is pertinent in soliciting support from the indigenous people. These put together, enhance the research initiative that delivers expected goals in good time and maintains trajectory. Despite these benefits, community entry has not been comprehensively integrated into contemporary research practice; scholars still default on community entry procedures due to lack of knowledge and negligence, resulting in unethical research practices. In research, community entry is the process of identifying with the grassroots people for which research will be undertaken. It entails recognizing the people, their culture, leadership and institutions, as well as mapping out appropriate measures of meeting, interacting and working with them to achieve the research goal (Krauss, 2014; Vermeulen, Bell, Amod, Cloete, Johannes & Williams, 2015). As earlier mentioned, a proper research process, especially that which involves Indigenous people should recognise, respect, accommodate and be accountable to the people being researched. The essence of these standpoints will be crystallised in subsequent discussions.

Worth noting is that most Indigenous communities have data sovereignty. This means that any information gathered through research regarding and within the community belongs to the people (Conroy-Ben, 2021). In other words, data collection, regardless of the nature, has to be reviewed and approved by the Indigenous people, meaning that researchers must work in close relationship with the community to undertake research. At this point, the community entry process is crucial. Indigenous people's rights have undoubtedly attracted global contestation and discourses are ongoing. However, their sovereignty over data and/or information

concerning their livelihood rarely receives expected attention. This remains a daunting task for community-based researchers dealing with societal issues as many countries have not clearly articulated research ethical procedures aimed at protecting Indigenous people, thus, leading to knowledge exploitation and information misrepresentation. It could be appropriate to reiterate that the lack of data sovereignty and unethical research conduct may have contributed to reasons why a lot of research has been conducted on Indigenous people, many of which make little or no impact on their communities. Borrowing from countries such as Canada where Indigenous people's rights remain central, they are laydown protocols researchers must adhere. For instance, The First Nations' principles of ownership, control, access, and possession (a phrase where the acronym 'OCAP' was derived) assert that Indigenous people (also called The First Nations) have a relationship with their cultural knowledge, data, and information (First Nations Information Governance Centre, 2022). As such, they have complete control over data collection processes, own the data and will determine and/or control how the information generated from their cultural knowledge can be used.

The term 'Ownership' represents the first letter in OCAP and at the same time, the first principle governing data access within the First Nations communities. It explains that a community or group owns information collectively in the same way that an individual owns his or her personal information. This elucidates complete data autonomy. 'Control', the second principle of OCAP further explains data mastery, specifically, information gathered within Indigenous people's jurisdiction. It is within the rights of Indigenous communities to oversee all aspects of research initiatives (from start to finish including resources and review processes, the planning process, and management of the information, among others), as well as the resultant policy actions and implementations directed to their communities. Hence, researchers working on Indigenous people's matters must at all costs and times not only navigate within the direction and space of the people but be transparent and accountable to the people. 'Access' is the third principle of OCAP which emphasize data accessibility at all times. Regardless of where it is archived, Indigenous people must be able to reach and utilise data collated about them to inform decisions regarding their wellbeing. Lastly, 'Possession', the fourth principle of OCAP. This principle emphasised the need for Indigenous people to remain custodians of data involving them. "While ownership identifies the relationship between a people and their information in principle, possession or stewardship is more concrete as it refers to the physical control of data. Just as the ownership principle protects data sovereignty, so too does the possession principle on Indigenous people's retention, and for any reason, this information can not be released or disposed of without consent and/or approval from the Indigenous people. Whereas the two

terms are interconnected, possession is the mechanism by which ownership can be asserted and protected. Ethically, these four principles, put together indicates that it is impossible to undertake community-led research in the absence of proper community entry.

Community entry helps in building collaborative partnerships between a researcher and grassroots individuals. It prepares the ground for the researcher to arrive on site and navigate without violating/obscuring existing traditional systems or being muscled by the community members. Through this process, a researcher is able to interact and gain an in-depth understanding of the community's interest, seek permission to carry out the study, as well as initiate, nurture, and sustain a desirable working relationship with the community, to secure and sustain the community's interest in the cause of undertaking research that concerns them. How does this work? Researchers must gather information about the indigenous community to be researched through research and key informant and then conduct a stakeholder analysis to map out essential key community partners that will be resourceful to the research project. Initial consultation with traditional leaders and continuous interaction with key stakeholders identified will set the stage for open community meetings with the targeted research participants which then will culminate in the initiation of the research action.

In principle, consultation during community entry entails briefing traditional authorities and/or community leaders about the proposed research initiative, its benefits to the community, the role of the community and expected support from the community (Krauss, 2018). In subsequent interactions, a dialogue to enter into partnership with the community to co-design instruments and collectively undertake the research for their socio-economic transformation is necessary. While the process may differ objectively from one region to another, in African cultural practices, such consultations are accompanied by packages (honorarium) that are presented to the local authorities as a token of acknowledgement and appreciation of leadership prowess. Giving of gifts functions to reinforce relationships and establish strong ties between local authorities and visitors. This relationship, coupled with the already established partnership with university scholars, existing Indigenous research networks and local government authorities is vital in identifying key informants across the community spectrum, as well as enrolling research assistants with the requisite expertise to steer the project, which altogether constitutes a research team.

3) Literature Synthesis

Literature review provides an understanding of the existing research and discourses relevant to the subject matter. Conducting a literature review on the subject matter will help the research team to build fundamental knowledge on issues around Indigenous people, their culture and their immediate environment in the broader array. Through review of literature, one would understand where research on Indigenous people departs, the current debates, neglected issues, critical challenges, policies (either functional or non-functional) put in place to address them, and the understanding of what is needed going forward. Put together, the distilled knowledge is essential in redirecting focus to areas of importance; guiding the research team in the development of research instruments and approaches not only based on perceived and observed (voiced) issues confronting marginalized Indigenous communities but existing gaps in extant literature.

4) Consent and Sampling

A multi-stakeholder research team made up of university scholars, research assistants sourced from the university and existing networks of Indigenous research units, government representatives, local authorities, and key informants drawn from grassroots communities have both tangible and intangible resources for community-led PAR. For instance, mapping out Indigenous knowledge holders (targeted participants) for the study will be a much easy task regardless of the sampling technique if all hands are on desks; the fact that the research team is composed of individuals with broad knowledge and strong connections to Indigenous people. In community-driven research undertakings, getting reliable and committed participants is one challenge, and being able to reach out to those with resourceful information pertaining to the research is another. These are problems that well-constituted multi-stakeholder research teams can address.

Participants identifying process goes simultaneously with informed consent. Informed consent is one of the founding principles of research ethics which gives a researcher the leverage to co-interact with participants to distil resourceful knowledge points (Afolabi et al., 2014). It's a formal or semi-formal agreement usually in a written document, briefly explaining the research background, as well as the clause that participants can enter research freely (voluntarily) and exit at will. The document also detailed full information about what it means for an individual to consent and partake in the research. Through research informed consent, both the research team and participants can reach an agreement on the approach (one-on-one, focused group, etc), date, time, and venue most convenient for data gathering. It should note Indigenous community-based research without binding consent is completely unethical.

5) Quality Criteria

Quality Criteria are the specific methodology functions that will be selected, tested and evaluated in order to confirm that the quality objectives to explicitly carry out the research have been met. In social science research that involves Indigenous people, a combination of pre-test and stakeholder analysis is a fundamental quality criteria agent which helps researchers conduct a diagnostic assessment of the following: 1) the suitability and effectiveness of research instruments towards delivering desired outcomes, 2) a test to evaluate participants' current knowledge and understanding of the research topic, 3) ability to work with the designed research instruments and 4) level of preparedness and willingness in involving in the study as some may have consented out of curiosity. In this case, the pre-test will help determine the next cause of action.

Pre-testing process entails observing participants at each level of interaction arranged to gather preliminary data, examining participants' attempts on the data collection tools, and analyzing the preliminary data collected from a controlled group of participants to see how the result ramps up which then determines whether instruments require further modification. Stakeholder analysis will provide a better picture of participants' overall standing in the project in terms of interests, cooperation, influence, expectations, and potential impact. Again, this will enable researchers to re-strategize engagement approaches to accommodate each stakeholder, regardless of their differences. In principle, a feedback meeting through a citizens' jury approach or related approaches is required such that participants have the opportunity to dialogue and reflect on the outcomes for further action. Receiving feedback can give researchers a better understanding of the conceptual and attitudinal differences and confusions amongst participants and indicate which gap would need to be bridged to help literature merge and stimulate both scholars, community leaders and youth, and policymakers to learn.

A citizens' Jury is fundamental in Indigenous-led, community-based participatory action research given that it is a method of deliberation where a small group of people (between 12 and 24) is drawn from the pool of each sampled cluster who then serve as representatives of the demographics. This representative convenes to deliberate on the research instrument, data collection approach and preliminary result. Put together, the outcomes will help the research team not only to modify and re-align research instruments but crystalize the sample structure and adopt a better engagement approach toward a more productive data collection exercise. Feedback and reflection exercise continue until saturation point wherein subsequent contribution for possible modification makes little or no difference. At this stage, the research

team can proceed with the main data collection, analysis and recommendations based on the research outcomes.

6) Execution

The execution is putting into effect the main course of action which ranges from data collection analysis, reporting, and strategy development in line with key outcomes of the research. Having completed a pre-test to validate instruments, as well as stakeholder analysis for proper classification, Indigenous community members should be engaged in discourse to gather information using the polished and well-developed data collection tool. Through this, a reliable report can be developed based on research outcomes from the data. In principle, the findings should establish grounds whereby the research team, co-interacts with Indigenous community members to arrive at a consensus on what their social issues require the most attention and most appropriate measures of addressing them, thus, co-designing a strategy plan contextual to their reality. It is imperative to recognise the position and roles of Indigenous people in the research project and ensure their voice permeates clearly through the research findings and recommendations derived from the outcomes for policy action and implementation. In doing so, there must be further interaction between the researcher team and Indigenous people to co-create knowledge as a final outcome of the research that should be disseminated. Having drafted a report of the study, scheduling feedback meeting(s) that suits their convenience to reflect on the research outcomes is a must condition. Bearing in mind that the finding document is a representation of the entire Indigenous community researched, it is necessary to convene the majority, if not all of the Indigenous community members or their representatives that have been engaged during the research project. This then provides an avenue to collectively discuss and reflect on the research outcomes, make decisions on data management, suitable recommendations based on the research findings, result dissemination, and implementation process. In a way, the active involvement of Indigenous people in every stage of the project gives them a sense of ownership and allows them to enact contextual solutions to their problems from an informed point of view. While the end result will then culminate in the initiation desired solution-driven programme for the Indigenous communities, there should be a clear monitoring and evaluation plan that follow.

7) Monitoring and Evaluation

Undisputedly, the saturation point for several Indigenous community-based research projects is a well-consolidated report with insightful results and recommendations that ends in digital or analogue archives. The argument here is that some researchers fail to map out guidelines through which research outputs, especially those in the social and management science fields which are sorely theoretical can be transformed into a practical instrument easily useable to foster livelihood. It becomes a challenge for both practitioners and Indigenous communities to understand the implementation process and resources needed to ensure program lunch and valorization. A proper Indigenous community-based research should be that which goes beyond recommendations to explain how the resultant programme is supposed to function by laying out the components of the initiative and the steps required to enhance efficacy. These components include a programme implementation guide, as well as monitoring and evaluation tools.

A clear framework, co-created by the research team and Indigenous people, is essential to guide monitoring and evaluation of the proposed/implemented program that resulted from the research outcomes. Program monitoring entails tracking a program's metrics, progress, and associated tasks to ensure compliance in terms of time, budget, standards and deliverables. Putting proper monitoring tools in place is fundamental not only in tracking progress but recognizing and identifying the potential risk that might deter success in the course of execution; which then helps researchers, practitioners and Indigenous people to collectively map out responsive measures either to averse or resist. Program evaluation on the other side is an examination by means of putting forward critical questions aimed at improving the program's responsiveness, ensuring that the development trajectory is in tandem with employed resources. Again, this is obtainable by means of reflection with key stakeholders involved and/or directly affected by the program. In other words, researchers' obligation goes beyond reporting key research findings and recommendations; there is a need to ensure research output successfully serves the purpose for which the research initiative was undertaken.

We conclude with emphasis on certain principles of research among indigenous communities such as a) respect and community- partnership, b) rights and protection of wholistic knowledge, as well as c) implementable knowledge production.

a) Respect and Community-Partnership

Community-led participatory action research in the context of Indigenous communities entails knowledge co-creation and implementation. Ethical research practice in this premise is that which does not only respect Indigenous people and their existing norms, as well as local research philosophies and culture but considers the involvement of the people concerned in the planning and implementation process. Involvement brings a sense of recognition and belonging which then motivates Indigenous people's support for research project accomplishment. Beyond support, positioning Indigenous people at the centre to champion events relating to their livelihood helps them to amplify their voices and co-create useful knowledge peculiar to existing realities. The emphasis here is that eligibility criteria that scientists develop for Indigenous research projects should reflect the participants' actual view of themselves, and this can is attainable only through direct and active involvement of the community members.

b) Rights and Protection of Wholistic Knowledge

Again, Indigenous communities have data sovereignty; this explains their rights, ownership and control over any information within their jurisdiction. Hence, the people must oversee the planning process, research initiation and implementation processes, as well as outcomes. As such, research action, in its entirety should be that which is subjected and accountable to the people. It should begin with ethical approval from the researched community. It is within the right of the Indigenous to reject or approve any consent to obtain information from their community and researchers, ethically, researchers must adhere. Beyond ethical research consent, it is obligatory for researchers to effectively communicate and translate research outcomes to the people during the project and co-design solution-driven strategies in line with recommendations. While the Indigenous people reserve the right to archive and manage their data, a piece of information regarding them may not be published or used for any other purpose without their permission.

c) Implementable Knowledge Production

Societies evolve with time; Indigenous communities are no exception. Just like every other individual, Indigenous people think about themselves and their systems in more complex ways, which in a real sense may differ from the norm in times past. This suggests not only a liberal scientific method of a systematic collection of data but an understanding of the people's complexities for contextual intervention. The attainment of this condition is largely enrooted in engaged scholarship, that is, active involvement of the Indigenous people being researched. This is an ideal condition for generating insightful and new information, as well as relevant knowledge that, in turn, can be applied to solve problems, improve quality of life, and provide a better understanding of certain conditions. In contracts, extractive research approach which is commonly practised adheres to researcher's principles and often defiles engagement conditions needed to provide information relevant to society and compactable with existing realities. Emphatically, the latter, is still too academic and distant from the developmental challenges of Indigenous communities; results obtained using such an approach may not address existing societal. This argument is legitimised in the fact that only Indigenous people affected by community challenges have sufficient knowledge of the precise circumstances to be able to suggest more accurate cause-effect relationships. In other words, their involvement in research projects is paramount in directing context-specific and original knowledge production that is implementable for action as opposed to research assumptions based on extractive knowledge and fallacies of hasty generalization.

References

Afolabi, M.O., Okebe, J.U., Mcgrath, N., Larson, H.J., Bojang, K. and Chandramohan, D., 2014. Informed consent comprehension in African research settings. Tropical medicine & international health, 19(6), pp.625-642.

Beaulieu, M., Breton, M. and Brousselle, A., 2018. Conceptualizing 20 years of engaged scholarship: A scoping review. *PloS one, 13*(2), p.e0193201.

Boyer E., 1996. The scholarship of engagement. *J Public Service Outreach, 1*(1), pp.11–20.

Canlas, I.P. and Karpudewan, M., 2020. Blending the principles of participatory action research approach and elements of grounded theory in a disaster risk reduction education case study. *International Journal of Qualitative Methods, 19*, pp. 1-13.

Claw, K.G., Anderson, M.Z., Begay, R.L., Tsosie, K.S., Fox, K. and Garrison, N.A., 2018. A framework for enhancing ethical genomic research with Indigenous communities. Nature communications, 9(1), pp.1-7.

Conroy-Ben, O., 2021. Recognize That Communities Maintain Data Sovereignty. *Nature,* 589, p.315.

da Cruz, C.G., 2018. Community-engaged scholarship: Toward a shared understanding of practice. *The Review of Higher Education, 41*(2), pp.147-167.

Davies, S.E., 2020. The introduction of research ethics review procedures at a university in South Africa: Review outcomes of a social science research ethics committee. Research Ethics, 16(1-2), pp.1-26.

De Lange, G., 2012. Developing a University-Community Engagement Conceptual Framework and Typology-a case study of a South African comprehensive university. *Africa Insight, 42*(2), pp.94-111.

Drawson, A.S., Toombs, E. and Mushquash, C.J., 2017. Indigenous research methods: A systematic review. International Indigenous Policy Journal, 8(2).

Fine, M. and Torre, M.E., 2019. Critical participatory action research: A feminist project for validity and solidarity. *Psychology of Women Quarterly, 43*(4), pp.433-444.

First Nations Information Governance Centre 2022. Exploration of The Impact of Canada's Information Management Regime on First Nations Data Sovereignty. Available at https://fnigc.ca/wp-content/uploads/2022/08/FNIGC_IM_Regime_Discussion_Paper_EN_FINAL.pdf (Accessed 21 September, 2022).

Francis, Joseph, Beata Kilonzo, and Pertina Nyamukondiwa. 2016. Student-perceived criteria for assessing university relevance in community development. *South African Journal of Science*, 112: 1–7.

Hayward, A., Sjoblom, E., Sinclair, S. and Cidro, J., 2021. A new era of indigenous research: Community-based indigenous research ethics protocols in Canada. Journal of Empirical Research on Human Research Ethics, 16(4), pp.403-417.

Hilli, C., 2020. Distance teaching in small rural primary schools: a participatory action research project. *Educational Action Research, 28*(1), pp.38-52.

Husni, H., 2020. The effectiveness of the social responsibility program for Islamic religious education through the participatory action research method. *The Social Studies: An International Journal, 6*(1), pp.103-116.

Kjellström, S. and Mitchell, A., 2019. Health and healthcare as the context for participatory action research. *Action Research, 17*(4), pp.419-428.

Krauss, K.E., 2014. A confessional account of the community entry phases of a critical ethnography: doing emancipatory ICT4D work in a deep rural community in South Africa. Proceedings of the 7th Annual SIG GlobDev, (9).

Krauss, K.E., 2018. A confessional account of community entry: doing critically reflexive ICT4D work in a deep rural community in South Africa. Information Technology for Development, 24(3), pp.482-510.

Lewandowska, A., Stopa, M. and Inglot-Brzęk, E., 2021. Innovativeness and entrepreneurship: Socioeconomic remarks on regional development in peripheral regions. *Economics & Sociology, 14*(2), pp.222-235.

Lindquist-Grantz, R. and Abraczinskas, M., 2020. Using youth participatory action research as a health intervention in community settings. *Health promotion practice, 21*(4), pp.573-581.

MacGregor K, Makoni M. Universities must be citadels not silos. University World News. 2010 May 02 Available at: http://www. universityworldnews.com/article.php?story=20100502103801345 (Accessed 07 September 2022).

Msoroka, M.S. and Amundsen, D., 2018. One size fits not quite all: Universal research ethics with diversity. Research Ethics, 14(3), pp.1-17.

National Collaborating Centre for Aboriginal Health 2013. Available at: file:///C:/Users/ishmaeliwara/Downloads/FS-IndigenousApproachesProgramEvaluation-EN.pdf (Accessed 22 September 2022).

Nygård, R.H. and Saus, M., 2016. Emphasizing indigenous communities in social work research ethics. International Social Work, 59(5), pp.666-678.

Olowu D. 2012University-community engagement in South Africa: Dilemmas in benchmarking. *S Afr Rev Sociol.;43*(2), pp. 89–103.

Oluwabamide, A, J., Adetayo, O. and Olufunsho, A.O., 2020. Community Entry and Exit Behaviour in Social Research. Contemporary Issues in Social Research, pp 195-222.

Trajber, R., Walker, C., Marchezini, V., Kraftl, P., Olivato, D., Hadfield-Hill, S., Zara, C. and Fernandes Monteiro, S., 2019. Promoting climate change transformation with young people

in Brazil: Participatory action research through a looping approach. *Action Research, 17*(1), pp.87-107.

Vermeulen, N., Bell, T., Amod, A., Cloete, A., Johannes, T. and Williams, K., 2015. Students' fieldwork experiences of using community entry skills within community development. South African Journal of Occupational Therapy, 45(2), pp.51-55.

Wood, L., 2019. Participatory action learning and action research: Theory, practice and process. Routledge.