Ida Widianingsih*, Donna M Mertens

Transformative research and the sustainable development goals: challenges and a vision from Bandung, West Java

https://doi.org/10.1515/ijtr-2019-0005 received 21 March, 2019; accepted 2 August, 2019

Abstract: The transformative research lens incorporates ideas such as consciously addressing power differences with strategies that allow for the inclusion of the voices of the full range of stakeholders, including those who are most marginalized. The goal of transformative research is to support the development of culturally responsive interventions that foster increased respect for human rights and achievement of social, economic, and environmental justice. In this article, we use a case study from Universitas Padjadjaran in Indonesia to illustrate the application of a transformative approach to research in a complex setting in which the rights of those living in poverty are not respected and economic development occurs at the expense of environmental degradation. We discuss a transformative framing for research associated with the development of interventions designed to support West Java, Indonesia in moving forward toward achieving the Sustainable Development Goals (SDGs), the goals established by the United Nations to address inequities. The road to transformation is not simple or smooth, but the combination of a transformative approach to research with the development of transformative interventions provides a hopeful pathway.

Keywords: transformation; sustainable development goals; economic development; social justice; envirnomental justice

The transformative research lens incorporates ideas such as conducting a contextual analysis to fully understand the challenges in the research context, and consciously addressing power differences with strategies that allow for the inclusion of the voices of the full range of stakeholders, including those who are most marginalized. The goal of transformative research is to support the development of culturally responsive interventions that foster increased respect for human rights and achievement of social, economic, and environmental justice (Mertens, 2020; 2018; Mertens & Wilson, 2019). The transformative paradigm is defined in terms of four assumptions, building on the early work of Guba and Lincoln (1989) who identified these assumptions that represent different paradigms in educational and social research: the axiological assumption about the nature of values and ethics, ontological assumption about the nature of reality, the epistemological assumption about the nature of knowledge and the relationship between the researcher and the stakeholders, and the methodological assumption about the nature of systematic inquiry.

In this article, we provide an explanation of these assumptions as they are reflected in the transformative paradigm and illustrate their application to a research study in West Java, Indonesia as it attempts to achieve the SDGs that were developed by the United Nations to "end poverty, protect the planet, and ensure prosperity for all" (United Nations, 2018). Leaders who support the attainment of the SDGs have recognized the need for transformative action in order to address the societal barriers that have limited progress for those most marginalized on this planet (Waddell and Oliver, 2018). Given this recognition by the international community of the need for transformative action, we see the transformative approach to research in alignment with the need for transformative action. Thus, the purpose of this article is twofold: first, to explore the meaning of the transformative approach to research, and second, to illustrate its application in the complex and challenging context of West Java.

^{*}Corresponding author: Ida Widianingsih, Padjadjaran University, West Java, Indonesia, Email: ida.widianingsih@unpad.ac.id Donna M. Mertens, Gallaudet University, Washington DC 20002, USA

1 Transformative Axiological Assumption

The transformative axiological assumption provides insights into the nature of ethical research that furthers human rights and social, economic and environmental justice. The salient values that constitute this assumption include: cultural respect; explicitly addressing inequities; inclusion of reciprocity (i.e., giving back to the community); recognition of community resilience and the interconnectedness of all things (living and nonliving); and building relationships. The implication of this assumption for researchers is the need to structure the study to be inclusive of all voices and use strategies that lead to the development of interventions that are respectful and that support positive transformative change in the form of increased social, economic, and environmental justice.

2 Transformative Ontological Assumption

The transformative ontological assumption holds that reality is multi-faceted and that there are many different opinions about what is real. Versions of reality emanate from different social positionalities and thus are accorded greater privilege depending on whose version of reality is accepted. Following from the transformative axiological assumption, researchers who work within this paradigm recognize that some versions of reality sustain an oppressive status quo and others provide a pathway for enhanced justice and human rights. For example, different versions of reality exist about how to address food scarcity arise in West Java based on the contrast between government officials' and rural farmers' version of what is best for their economic development and protection of the environment. The government of Indonesia has a version of reality regarding food production that puts value on increased use of pesticides. The farmers and those who are dependent on water from the river into which the pesticides flow have a different version of reality about food production. The consequences of accepting one version of reality over another has significant consequences in terms of the health of the farmers, the surrounding communities, and the river.

3 Transformative Epistemological Assumption

The transformative epistemological assumption addresses the nature of knowledge and the relationship between the researchers and the community members. The nature of knowledge is considered with regard to the historical location of knowledge, i.e., what is considered to be valid knowledge. How do historical factors influence whose knowledge is accorded value? Following from the transformative ontological assumption, what are the consequences of privilege in terms of the value placed on knowledge that comes from different constituencies and positionalities? A second aspect of the epistemological assumption is the relationship between researchers and communities. In keeping with the transformative axiological assumption of cultural respect, the transformative epistemological assumption emphasizes the importance of establishing culturally responsive relationships with the full range of stakeholders in the study. Issues of power need to be explicitly addressed and strategies need to be developed that allow for respect for knowledge that comes from the full range of stakeholders. In order to capitalize on the power from the people who are not in formal positions of power, it may be necessary to support the development of coalitions from the grassroots. We examine how this is being addressed in West Java later in this article.

4 Transformative Methodological Assumption

The transformative methodological assumption provides a lens for critically examining the assumptions that researchers use as a basis for making methodological decisions. The transformative methodological assumption aligns with the previous assumptions in that the design needs to incorporate culturally responsive strategies that support positive change to increase social, economic, and environmental justice. The use of a transformative lens combined with the mixed methods (both quantitative and qualitative integrated into the design) provides opportunities to be responsive to multiple stakeholder groups and to capture the complexity of the processes needed for transformative change. The design also needs to incorporate the building of relationships and use of the findings throughout the study to critically examine and inform practices and policies.

5 Transformative Mixed Methods Design

A transformative mixed methods design (Mertens, 2018) typically begins with a phase of relationship building. This includes the identification of the relevant stakeholders and development of strategies for working together that are culturally respectful and provide a safe space for sharing ideas. Power differences need to be considered so that members of marginalized communities' voices are not lost. This phase is followed by a contextual analysis that involves collection of quantitative and qualitative data to get a better picture of the economic, historical, political, and demographic variables that are relevant in that context. The third phase of the transformative mixed methods design uses the data from the first two phases to inform decision makers, developers, and communities about potential interventions that can be pilot tested. At this phase, data can be collected about the strengths and weaknesses of the potential interventions.

If the situation is very complex, many types of interventions might be needed and the cycle of testing and refining might extend over a long period of time. If an intervention or set of interventions is found to be effective at the pilot level, then they might be scaled up and implemented in a wider population. While these phases of transformative mixed methods are presented here in a linear manner, in the complexity of the world, there may be a re-visiting of the various phases throughout the course of the study. The critical feature of transformative research is that the findings are used throughout the study to support culturally responsive, transformative change.

6 Application of the Transformative Approach to Research in West Java

In this section, we illustrate the transformative approach with a project conducted by researchers at the Universitas Padjadjaran (hereafter referred to as Unpad) in West Java, Indonesia that addresses the intersection of social, economic and environmental justice. The transformative methodological assumption calls for the use of a transformative lens, mixed methods, cyclical designs (using data throughout the course of the project to understand the context, the nature of the problem, identify potential culturally responsive interventions, determining the effect of the interventions). In this case study, data are collected on an on-going basis to inform decisions throughout the research cycle (DRPMI, 2017).

The project is in its early stages and thus provides insights into framing a study that is geared toward supporting the transformative change that is needed to achieve the SDGs in this part of the world. Conditions of high poverty and unemployment with environmental degradation in West Java, Indonesia provide an opportunity to understand the cultural and contextual complexities that present challenges. It supports the development of strategies to address those challenges in order to make progress toward the transformative change needed to achieve the SDGs.

6.1 Phase 1 of Transformative Mixed Methods Study: Building Relationships

The first author is the principal investigator for the study reported herein. She is part of The Center for Decentralization and Participatory Development Research (CPDP)/ (Pusat Studi Desentralisasi dan Pembangunan Partisipatif) (hereafter referred to as The Center) under the Faculty of Social and Political Sciences, Unpad. The Center includes staff who are focused on understanding the contextual factors that support or inhibit transformative change. In addition, they conduct research to develop and test a multitude of possible interventions that are needed to address issues of youth disenfranchisement, lack of environmentally just employment opportunities, provision of capacity building and technology access, food scarcity, access to clean water, increased human trafficking, sustainable farming practices, and enhanced participatory governance (Widianingsih, Gunawan, & Rusyidi, 2019).

The transformative epistemological assumption's focus on building relationships, i.e., addressing issues of power; building capacity; and developing action-oriented, community-based coalitions, is evident in the approach the university is taking in West Java. The research processes, ideally, should involve all development stakeholders, including local government institutions, business sector, academics, NGOs, and local communities (Widianingsih & Morrell, 2007; Widianingsih, McLaren, & McIntyre-Mills 2017). Two research centers at Unpad partnered to conduct the research reported in this article: The Center for Decentralization and Participatory Development Research (CPDP) and the SDGs Center, a research center that was established to support the Indonesian government in achieving the SDGs agenda. The university has also formed a partnership with government to improve the use of data for policy decisions.

At the university level, the Center engages with the faculty of the department of social and political science to involve students in the generation of ideas about what needs to be done. These relationships are formalized in a service course that has been developed; this is discussed further in the pilot phase of the research study.

At the community level, the CDPD researchers have developed relationships with farmers, the farmer's wives, and youth who live in the rural areas. The strategies for involvement with these stakeholders include travel to the rural areas to host opportunities for sharing concerns and ideas for improvement. The university and community members use a mixed process for planning from the grassroots; people in the community have a discussion about what they think is important in development; like a wish list. Then they bring it to the village level, then district level, then provincial, and on to the national level. Even with this participatory model, government does not necessarily give the people what they want.

Many aspects of a transformative approach are evident in the work that is being done in West Java. However, challenges continue. Based on interviews that Ida conducted with 24 planners at the district level, many aspects of development in Bandung seem to have improved but development in terms of environmental health and issues for women and youth have not progressed. Youth concerns are not included in planning documents; there is no mention of disability. Gender is mentioned but it is not supportive of women to be engaged in meaningful ways that will benefit them economically. The Center is working to improve strategies for engagement with youth, women, and people with disabilities (Widianingsih & Paskarina, 2018; Widianingsih & Paskarina, 2019).

6.2 Phase 2 of Transformative Mixed Methods Study: Contextual Analysis

The transformative axiological assumption leads to analysis of the elements of cultural respect, reciprocity, relationships, recognition of the resilience in the communities, and consciously addressing inequities and promoting social, economic and environmental justice that are relevant in the West Java context. A complicated picture emerges from the data in West Java. Data collected thus far indicate that economic development has occurred at the expense of social and environmental justice.

The contextual analysis, with the transition to SDGs starting in 2015 under President Jokowi's leadership, included documents that addressed Indonesia's commitment to the SDGs agenda. This process revealed that Presidential decree No. 59/2017 strengthens Indonesia's commitment to achieving the SDGs through developing national policy frameworks such as the Roadmap to 2030, National Action Plan, and Local Government Action Plan (all documents that were reviewed as part of the contextual analysis). For this, the National Development Planning Board (BAPPENAS) adjusted Indonesian development planning framework and policy towards the SDGs agenda (Post MDGs). The Indonesian government integrated 94 out of 169 SDGs agendas into Medium Term National Development Plan (2015-2019) through four main development pillars (social, economy, law and governance) (Yusuf, Komarulzaman, Alisjahbana, Anna, Ghina, & Megananda, 2018 ; Bappenas, 2017).

Ida and her staff interviewed six provisional government officials in the West Java province who are members of the West Java Development Planning Board. These respondents are responsible for the implementation of SDGs agenda. They consider Indonesia's agenda to be a very ambitious plan due to development problem complexities related to poverty, unemployment, and inequality. In terms of the SDGs agendas, West Java provincial government has an obligation to design a five-year Local Action Plan for Sustainable Development (Rencana Aksi Daerah Tujuan Pembangunan Berkelanjutan, RAD-TPB). This is reflected from the achievement of West Java Medium Term Development Indicators (2013-2018) that only 15 out of 41 indicators could be reached as the initial targets. For example, access to education remains low and unequal economic development persists (Bappeda Jabar, 2018).

Researchers at the SDGs Center at Unpad used document analysis and focus groups with all the planners and programmers at the provincial and district levels to examine West Java's achievement of SDGs agenda (Pemerintah Provinsi Jawa Barat, 2019; Yusuf et.al., 2018). They reported that West Java's low SDGs achievement is most probably caused by lack of innovative development programs and policies. The business as usual policy and approaches failed to address economic inequality and sustainability. In West Java, social justice is an issue because youth cannot find employment in their villages. They move to the cities where they take low paying and sometimes illegal jobs; this also results in an increase in human trafficking. For example, the document review revealed that there is a growth in prostitution networks; this is evident in analyzing the advertisement for jobs such as a masseuse or house cleaner, but really it is for prostitution. The lack of jobs is an economic issue. Textile factories have stepped in to create jobs, but they are also responsible for high levels of air and water pollution, dumping 20,000 tons of waste and 340,000 tons of wastewater into the Citarum River every day (Tarahita & Rakhmat, 2018).

The Citarum River, the third largest river in Java, is extremely polluted, not only with industrial chemicals, but also with plastic rubbish, trash, waste, and dead animals. Its levels of lead are 1,000 times worse than the U.S. standard for drinking water. Yet, 25 million people depend on it for drinking water, irrigation of crops, and energy production. The result is that many people who use this heavily polluted water and breath the contaminated air now suffer from health problems such as scabies, infections, and respiratory distress. The transformative axiological assumption calls for researchers to include these aspects of social, economic, and environmental justice into their designs in order to support constructive pathways towards transformation (Tarahita & Rakhmat, 2018)

Unpad has made a commitment to support Citarum river restoration that is embodied in the establishment of Unpad Citarum Research Center that aims to integrate previous and future research of Unpad academics related to Citarum River (Pusat Riset Citarum Unpad 2019).

An important issue that was identified in the contextual analysis is that access to clean water is different dependent upon the citizen's economic status. In Bandung, a large city in the West Java province, access to clean water is limited to certain groups of communities. Bandung's population is 2,497,938 people (2017); 103,980 people (4.17 %) are considered poor. The water comes from the river and ground water but there is a water crisis due to lack of rain. Local government is not able to provide enough provide clean water for Bandung inhabitants, the Government Local Government Water Company (Perusahaan Daerah Air Minum, PDAM) could only serve 74% (1.789.836 people) of its community (PDAM Tirtawening 2013; Irawati, et.al 2013). Our research found that in the Bandung context, rich people have better access to water and better quality at a lower price. Since the service capacity of the Tirtawening PDAM is limited, urban poor do not necessarily have access to water pipelines, so they pay a great deal more to buy water. Based on Unpad's Customer Satisfaction Survey conducted with 1011 customers in 2012, the cost of water provided by the PDAM as IDR 2.00 per liter, whilst water from street vendors would cost IDR 75.00 per liter (Irawati, et.al., 2013).

6.3 Phase 3 of Transformative Mixed **Methods Research: Pilot Testing** Interventions

Interventions have been developed and are being tested at many levels, reflecting the complexity of the context and the multiple stakeholder groups who are involved. Some of these interventions are shared below along with reports of the methods used to study their effectiveness and preliminary reports of the results.

Government Participatory Intervention: The government instituted an E-participatory planning process in Bandung; the mechanism is to use IT to allow the local government to communicate about their needs. With support of students and research assistants, the Center conducted surveys with 72 respondents who had experiences in the E-planning process of Bandung Municipality (Widianingsih et.al., 2018).

The results reveal there are still many challenges. For example, the IT mechanism that the government set up is not easy for many local people, even though they can use their mobile phones for the IT access. A skill gap exists particularly for older people who are not familiar with IT. It does not mean that the quality of planning is more participatory. It depends on who has access to the IT and is able to input the information. It is still driven by government officials who think they know more than the poor. A revision is needed to make it more participatory and accessible for poor and older people. The new planning mechanism is only efficient for the government who controls the resources, but it does not help the poor or the disabled to be included in the planning process.

Participatory planning gave people an opportunity to say what they want; observation of the planning processes reveals that the data is not used as decisions are made up the line (Widianingsih, 2018; Widianingsih & Paskarina 2018; Widianingsih & Paskarina 2019). The Unpad team conducted 16 interviews with programmers in Bandung at the district, sub-district, and village levels. The results revealed that the participatory process as implemented does not mean that the quality of the planning is better. The team also conducted observations at three different meetings for planning at these levels, with follow-up informal interviews with people at the meetings. The respondents reported that one problem is that government supports changes that are easily seen, i.e., progress that can be measured. But empowering people is invisible because it is not a product that can be seen. The problem is still there. They say they are using participatory planning but the situation is not changed. There is

no connection between what the government offers and what people need.

The interviews with local government officials revealed that they are encouraged to be more professional; they developed performance indicators to measure what the government offices accomplish. In the past, government workers did not have to do much work to get paid; however, this has changed. After the reform era, they introduced a system based on a performance index to measure the work in each department. For example, the department of trade and industry set up goals and then their salaries are based on achievement of the goals. This has backfired because if they set up a high goal, they may not make it and then they would not get paid. So, they set very low goals that are achievable.

Education for Government Officials: The university is trying to increase the capacity of local government to use evidence-based strategies for policy decision making in Bandung. Local government agreed to send some students to the university to study the real problems in their region and how they can use evidence to support policy decisions. Local government has experience with the communities and if they can add their ability to use data, they can jointly develop an agenda for SDGs in West Java (BP2D & Flinders University 2017).

The local government officials who come to attend the university program offer hope for change in the future. This is a new program and so its impact is not known vet (Unpad 2018). Document reviews and interviews of the participants at the beginning of the program revealed a lack of understanding of inclusive planning - they talk about gender and think that means their plans are inclusive. Programmers from 20 different departments were interviewed; the participants said they did not want to look bad. There is a need to have an intervention to understand what it means to do inclusive planning. In local government, most of the money is used for salaries and administration; very little is used to support actual development programs. There is very little cross department communication, so they are not aware of what is being done by other departments or at different levels. Some of the programs, like transportation or water cannot be handled by one department; it takes work at several departments and at different levels to solve the problems (Widianingsih & Paskarina 2018; Widianingsih & Paskarina 2019).

Service Courses for Students to Engage with Communities. Unpad has also made changes in their curriculum and requirements for students to conduct research based on an increased connection with people living in the local villages. The students work in local villages so that the university is not isolated; they work with people from the rural areas. As a part of their program of study, students go to the village and talk with the people. Every Friday for one semester, they go to the field and have direct discussions with community leaders using participatory strategies. This has been going on for 4 years in order to build a bridge between youth and community members. Additional curriculum changes include a focus on transformational leadership. The students learn to map development problems; stimulate economic growth, address the needs of poor people, and give hope for those who suffer from persistent problems (DRPMI, 2017).

The first author (Ida) conducted interviews with 6 local leaders from one village, 3 in another village, and a group of 12 women in another village to gather information about their perspectives of the importance of being inclusive in development and how to do that. The leaders say they have a desire to learn more about how to influence the head of the planning board and his staff. Ida's interviews and survey were used to ascertain their understanding of inclusive development. The leaders say they want to see more visibility of inclusive development in their planning documents. Ida will do focus groups with the development planning board to gather more insights into their understandings of inclusive development. For example, the documents mention the importance of including women in the process as leaders (Widianingsih & Paskarina 2018; Widianingsih, Tunawan & Rusyidi, 2019).

Advancement of Women in Public Sector Leadership: With regards to women's leadership in the public sector, the first author conducted a collaborative project with Dr. Helen McLaren and Dr. Cassandra Star from Flinders University in Australia. The competitive grant, funded by the Department of Foreign Affairs and Trade Australia, aims to build collaborations between the two countries and support the advancement of women in public sector leadership in Indonesia (IAA-DFAT 2019). As part of the collaborative project, the university plans to establish a Women's Leadership Forum to support collaborative work and to change things. Fifty women came to South Australia for leadership training and they will continue contact after they return to West Java. The intent is to encourage more women in leadership in the public sector. The university hopes to invite 50 women from different districts to discuss issues of culture; religion; gender roles; expectations for the role of the wife and husband; and lack of support amongst women for each other. At this stage, the research team with Unpad students are conducting face-to-face surveys with women officials in West Java Provincial, Bandung Municipality, and Bandung District governments. To date, 174 questionnaires have been returned and analyzed (unpad.ac.id 2019). This survey is still in process and more responses are expected.

Interventions for Economic Development: The transformative ontological assumption holds that different versions of reality exist and that these versions of reality come from the different social positions of the stakeholders. Some versions of reality continue to support an oppressive status quo and other versions of reality have the potential to lead to increased justice and human rights. Focus groups with farmers, the farmer's wives, young people, and local government officials that included 45 people, along with observations of farmers working were conducted over a full semester, meaning that the observers were present 24 times during one year. This provided an example in West Java that revealed that powerful economic interests view the needs of people in West Java differently than do those from different levels of government, and different from the villagers and farmers. The example of the different versions of reality regarding economic development and textile factories has already been presented. Another example that extends the example given previously related to feeding the large population of people in West Java. The government wants farmers to increase rice production and to increase production by using more pesticides and fertilizers. Farmers say that rice production requires more water than raising other crops and, as we have seen, clean water is difficult for farmers to get. The increased use of water leads to land degradation and further reduces the level of water available for other things. The farmers believe that growing more vegetables using the organic farming methods of the past is the best way to produce food. There is also a growing number of farmers who are raising cows for milk, but not in a sustainable way. The animals are kept in cages which is not healthy for the animals and the cows create air pollution. The government tried a biogas project but it did not work well. In addition, the waste from the cow cages goes into the river, polluting it even more (Widianingsih, 2018).

Based on the same data collected with farmers, their wives, young people, and local leaders, one solution that is being explored in a partnership between the university and the farmers is supporting the development of their skills to increase their abilities to market their coffee. The farmers also want to increase their connection with local government in order to get access to the resources they need to plant more coffee so that they can support themselves while they are waiting for the coffee to be harvested and sold. The farmers say that they know how to grow good coffee but they do not get a good price for their coffee. Local leaders have identified a need to develop markets for their coffee. The establishment of small coffee shops in the area could provide more jobs for the youth. The farmers also want to develop an online market for their coffee. This requires building the capacity of youth in terms of the use of technology for this purpose (Widianingsih, 2018a).

Intervention for Reducing Environmental Pollution: Students at the university studied waste water and solid waste in Bandung by means of reviewing documents from the water companies and the government, and observing the treatment of water and solid waste in their communities. Their results revealed that local governments started a water treatment facility in the area; local governments had to work together to turn waste water into clean water. The disposal of solid waste is another problem that has surfaced because there is no room in Bandung to treat the solid waste, therefore; there is no recycling (Waskitawati, Widianingsih & Gunawan 2019). For many years, rubbish was dumped in one area, however, this resulted in a rubbish landslide in 2005 that killed almost 150 people. That area was closed, but where can they put the rubbish? Provincial government has introduced a recycling center but it has not started to work yet because they need more money. They want to do public private partnership. They introduced the bio-digest system but it has not worked well.

6.4 Phase 4 and 5: Scaling up interventions and implementation of utilization plan

The case study in West Java is still in flux. It is not a finished project. In fact, an insight that the authors reached was that it might not be possible to have "an intervention that is scaled up" because of the need to be responsive to the complexity of the context. As understandings of the nature of the problems and the limitations of interventions become clearer, the teams need to be responsive to these changes.

While use of the findings from this case study has been made throughout the course of the study, it is premature to think of a final phase for utilization of their findings. This represents another insight from the case study: In complex contexts, utilization needs to be planned throughout the study and then plans need to be adjusted as the study progresses. This is the strategy that is being implemented in the West Java case study; results of each data collection effort are used to inform the next steps.

One solution for the utilization phases might entail dissemination of findings in creative ways to stimulate action. For example, a video was made by French students about the Citarum River; it became an international issue. Now the government is supporting a 7-year project to address the issues of pollution in the river. The government has also asked farmers to plant coffee in the region, however there is still tension regarding the need to increase planting of vegetables in the area.

7 Conclusions

The conditions in West Java provide a real-life example of a context in serious need of transformative change. The researchers who are working in this area are using a transformative approach that is multi-pronged. They incorporate the viewpoints of stakeholders from different parts of society and bring to visibility the voices of those who are marginalized, including people from rural areas, women, youth and people with disabilities. They use data gathered from a wide range of stakeholders to provide a contrast between the versions of reality held by some in power with those who are not in formal positions of power.

As we saw in West Java, the researchers organized coalitions of farmers and youth to develop solutions that seem to have potential for addressing issues of social, economic, and environmental justice. The university is also in a partnership with the government and with youth and rural people to improve solutions through the use of evidence-based planning. The issues of power that control economic decisions are not simple, nor are they all solved by the use of a transformative approach to research and program development. However, such an approach has been able to contribute to redressing power imbalances and to the development of culturally responsive interventions.

The transformative approach allows for data collection that documents the complexity of societal level change; it also makes visible the power relationships that are supportive or inhibiting that change. The implications of the case study reported in this article are broad because multi-lateral organizations such as the United Nations and International Development Evaluation Association (IDEA) are working with countries around the globe to support the transformation needed to achieve the SDGs. IDEAS (2019) has chosen Evaluation for Transformative Change as the theme for their 2019 Global Assembly. IDEAS did this based on the rationale that:

"*transformational change* is needed for our societies, economies and our relationship with the environment to become sustainable. On many fronts the world needs transformational change to be able to reach the aspirations expressed in the SDGs and the Paris Agreement: a world free of poverty; leaving no one behind; and ensuring a prosperous and equitable future in diverse and inclusive societies, with economies that increase wealth but not while undermining our food, clean air and living circumstances, with a climate and biodiversity that safeguards the future of humankind. A transformational change is one that reshapes models, policies, structures, practices, culture and management."

As the leaders and citizens of the world strive to achieve the SDGs, researchers need to adopt a transformative lens to support development of interventions that align with these goals. The case study presented here provides one illustration of the complexity and challenges of adopting a transformative stance in research designed to support the achievement of SDGs. This can serve as an example of innovative approaches to research that are needed for transformational change on a global level.

References

- AII-DFAT (2019). Women's public sector leadership: Learning from what works. https://dfat.gov.au/ people-to-people/foundations-councils-institutes/ australia-indonesia-institute/grants/grantees/Pages/ womens-public-sector-leadership-learning-from-what-works. aspx (Accessed 7 June 2019).
- [2] BP2D & Flinders University. (2017). Policy Capacity for Evidence-based Policy Making in West Java Provincial Government, Flinders, Australia. Flinders Australia: Flinders University and Universitas Padjadjaran.
- [3] Guba, E. & Lincoln, Y.S. (1989). Fourth generation evaluation. Newbury Park, CA: Sage.
- International Development Evaluation Association. (2019).
 Evaluation for Transformative Change. https://ideas-global. org/award/ (accessed 3 August 2019).
- [5] Irawati, I., Widianingsih, I, Hermawati, R., Runiawati, N., & Kudus, I. (2013). Survey Kepuasan Pelanggan Perusahaan Daerah Air Minum (PDAM) Tirtawening Kota Bandung Tahun 2012, Bandung: Laporan Penelitian Kerjasama Fisip Unpad & PDAM Tirtawening.
- [6] Mertens, D.M. (2009). Transformative research and evaluation. NY, NY: Guilford.
- [7] Mertens, D.M. (2018). Mixed methods design in evaluation. Thousand Oaks, CA: Sage.
- [8] Mertens, D.M. (2020). Research and evaluation in education and psychology. (5th ed.) Thousand Oaks, CA: Sage.
- [9] Mertens, D.M. & Wilson, A.T. (2019). Program evaluation theory and practice. (2nd ed.). NY, NY: Guilford.
- [10] Tarahita, D. & Rakhmat, M.Z. (2018). Indonesia's Citarum: The world's most polluted river. The Diplomat, April 28, 2018. https://thediplomat.com/2018/04/indonesias-citarum-the-worlds-most-polluted-river/ (accessed 21 August 2019).

- [11] Pemerintah Provinsi Jawa Barat. (2019). Rancangan Akhir Rencana Pembangunan Jangka Menengah Provinsi Jawa Barat, unpublished document. Bandung: Unpad Press.
- [12] Pusat Riset Citarum Unpad. (2019). A research program for a restored Citarum River, Internal document. Bandung: Unpad Press.
- [13] United Nations. (2018). Sustainable Development Goals 17 goals to transform our world. Retrieved May 28 2019. https:// www.un.org/sustainabledevelopment/sustainable-development-goals-retired-link/
- [14] Unpad. (2018). Program Pascasarjana Transdisiplin Kebijakan dan Pembangunan Transformatif (PPTKPT), Kerjasama Unpad dengan Kabupaten Bandung, power point presentation. Bandung: Unpad.
- [15] Unpad. (2019). Lakukan Riset Penguatan Peran Perempuan di Pemerintahan, Raih hibah kompetitif di Australia. http:// www.unpad.ac.id/profil/lakukan-riset-penguatan-peran-perempuan-di-pemerintahan-ida-widianingsih-m-a-phd-raih-hibah-kompetitif-di-australia/ (accessed 10 March 2019).
- [16] Waddell, S. & Oliver R. (2017). Creating a global SDG framework. http://futureearth.org/sites/default/files/forum_ description_-_short_17-05-23.pdf (Accessed 28 May 2019).
- [17] Waskitawati, D., Widianingsih, I., & Gunawan, B. (2019). The effectiveness of metropolitan infrastructure development for waste-water service in Indonesia: Case of Bandung Municipality. Journal Tataloka, 21(2), 20-27. DOI: 10.14710
- [18] Widianingsih, I. & Morrell, E. (2007). Participatory Planning in Indonesia: Seeking a New Path to Democracy. Journal of Policy Studies, 28(1), 1-15.

- [19] Widianingsih, I. (2018). Catatan Lapangan Kajian Kebijakan dan Tatakelola Pembangunan Berkelanjutan di DAS Citarum Hulu, bagian riset ALG Prof Oekan Sustainability Science in The Context of Rural Urban Linkage: Case Study on The Impact of Ecological Change in the Upper Citarum Watershed to the Food Security and Food Sovereignty in West Java-Indonesia. Bandung: Unpad Press.
- [20] Widianingsih, I., Gunawan, B., & Rusyidi, B. (2019). Peningkatan Kepedulian Stakeholder Pembangunan dalam Mencegah Stunting di Desa Cangkuang Wetan Kecamatan Dayeuh Kolot Kabupaten Bandung, BANDUNG Kumawula: Jurnal Pengabdian Kepada Masyarakat, 1(2), 120-130.
- [21] Widianingsih, I, McLaren, H., & McTyre-Mills, J. (2017). Decentralization, participatory planning and the Anthropocene in Indonesia, with a case example of the Berugak Dese, Lombok, Indonesia. In J. McIntyre-Mills & Y. C. Nantes (Eds.), Contemporary System Thinking: Balancing Individualism & Collectivism to Support Social and Environmental Justice. (pp. 230-278). London: Springer.
- [22] Widianingsih, I., & Paskarina (2018). Perencanaan Pembangunan Inklusif di Kabupaten Bandung, Laporan Penelitian Kerjasama Bappelitbangda Kabupaten Bandung dengan Pusat Studi Desentralisasi dan Pembangunan Partisipatif, Fisip Unpad. Bandung: Unpad Press.
- [23] Widianingsih, I., & Paskarina. (2019). Defining Inclusiveness in Development: Perspective from Local Government's Apparatus, Bina Praja Journal, 11(2), 23-36.
- [24] Yusuf, A.A., Komarulzaman, A., Alisjahbana, A.S., Anna, Z., Ghina, A.A., & Megananda, A.S. (2018). Seri Menyongsong SDGs: Kesiapan Kabupaten/Kota di Provinsi Jawa Barat, Bandung: Unpad Press.