



Exploring the Role of Higher Education Institutions in Bridging the Implementation Gaps of Co-Production: A Case Study of TPS 3R Rejoagung

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Abstract. Despite its popularity, the implementation of co-production often faces challenges that create gaps in its implementation. By examining TPS 3R program which is a community-based waste management initiative, the research studied the implementation gaps that often emerge within the co-production practice. This paper focused on two major gaps found in TPS 3R Rejoagung: unequal power relations and responsabilization. This paper then explored the role of higher education institutions (HEIs) in bridging the gaps within the framework of *Tridharma*—education, research, and community service. The findings illustrate how scholars can incorporate political lens within their *Tridharma* activities to bridge the implementation gaps in TPS 3R Rejoagung. By doing such academic activism, they can influence policy and foster structural change to create a just and inclusive implementation of the TPS 3R program. This approach leverages the *Tridharma* to enhance the effectiveness of co-production initiatives and contribute to broader societal goals of equity and sustainability.

Keywords: Co-Production, Implementation Gap, Academic Activism

1 Introduction

The concept of co-production was first introduced by Elinor Ostrom in 1970s as the acknowledgement of the needs of citizen's active participation in public service delivery [1]. In the past, the Old Public Administration (OPA) paradigm focused on the division of politics and administration which was grounded in rules, formal regulations, and conventions that justify and govern administrative conduct [2]. Hence, in that era, citizen played passive and limited roles. Such practice was criticized because the process of service production and delivery should include the active engagement of the service users.

These past decades, as the trend of collaborative and participatory governance arise, the paradigm shifted into what we call as the New Public Governance (NPG). It highlights the importance of partnership and collaboration in achieving societal goals and

delivering public services [3]. This paradigm then brought back the popularity of co-production within the discourse of public service delivery.

Co-production refers to a collaborative approach in which public services are created or improved through active participation between service providers and users [4]. The term 'production' in co-production refers to varied meaning [2]. Some scholars described 'production' as scenarios in which state and public actors collaborate during the service delivery stage [5]. Other time, the term 'production' corresponds to any phase in the public service cycle [6] which includes co-commission, co-design, co-delivery, and co-assessment [7].

Besides its emphasis on collaborative and participatory approach, co-production is also seen as a way to promote inclusivity. This is because co-production offers a framework that brings individuals and state entities together to achieve common developmental goals [8]. Therefore, some argue that increased engagement in service co-production will lead to political inclusion, empowerment, equal access, and advantage [9].

Despite its growing popularity and theoretical promise, however, co-production is not without its critiques which later create gaps in the implementation. These gaps arise from the complexities of coordinating diverse stakeholder interests, managing conflicting priorities, and addressing power imbalances within the collaborative process. In many cases, those gaps have been overshadowed by the ideal promise of co-production. This creates a paradox of while stakeholders recognize the potential benefits of co-production, they frequently struggle with the practicalities of its implementation, leading to a disconnection between the aspirational goals and the on-the-ground realities.

In this context, Higher Education Institutions (HEIs) can play a pivotal role in bridging the gap between the co-production idealism and practice. With the resources, expertise, and commitment to knowledge generation, HEIs and research centers are uniquely positioned to support the concept of co-production while still being critical to the implementation process. By engaging in research, fostering dialogue, and organizing advocacy, these institutions can help to address the implementation challenges, refine strategies, and offer evidence-based solutions that enhance the effectiveness of co-production initiatives.

These are aligned with the *Tridharma Perguruan Tinggi* assigned to HEIs in Indonesia. *Tridharma Perguruan Tinggi* refers to the three fundamental roles and responsibilities of HEIs in Indonesia. The term translates to "Three Pillars of Higher Education" and encompasses the core functions that universities and colleges are expected to fulfill which includes teaching, research, and community service.

Given the above background, this paper wanted to focus on one specific case of co-production practice in the TPS 3R program, especially in TPS 3R Rejoagung. TPS 3R stands for *Tempat Pengolahan Sampah dengan prinsip 3R* (Waste processing facility with the 3R principle (reduce, reuse, recycle)) is one of the Indonesia's waste management programs designed to support the achievement of the ultimate goal of Indonesia Clean-from-Waste 2025.

The TPS 3R program was chosen as our case study because this is among the waste management program, institutionalized in a written minister regulation, that utilized community-based approach, especially the local community in which the TPS 3R facility is located. Such notion is explicitly mentioned in the Regulation of the Minister

of Public Works of the Republic of Indonesia Number 03/PRT/M/2013 concerning the Organization of Waste Infrastructure and Facilities in Handling Household Waste and Similar Household Waste which becomes the legal basis of TPS 3R. This approach mirrors the core tenets of co-production which is defined as the voluntary or involuntary involvement of public service users in any of the design, management, delivery and/or evaluation of public services [10]. Thus, three research questions explored in this paper:

1. How is the concept of co-production implemented in TPS 3R program, especially in TPS 3R Rejoagung?
2. What are the implementation gaps of co-production in TPS 3R Rejoagung?
3. What roles can HEIs play to bridge the implementation gaps of co-production in TPS 3R Rejoagung?

2 Methods

This study took place in TPS 3R program in Rejoagung Village, Jombang Regency, East Java, Indonesia. TPS 3R Rejoagung was chosen as the main subject of this study because TPS 3R was one of the pilot projects implemented in Indonesia. Besides, since its first establishment, TPS 3R has achieved several awards for its good practice of waste management.

This study employs a qualitative research design which centered around a case study approach to capture a detailed situation in one specific case. We utilized three primary data collection methods: observation, in-depth interviews, and focus group discussions. The observation was conducted for around six months, from January to June 2024. The observation aimed to capture real-time interactions and dynamics between the local governments, service providers, and users involved in co-production activities. Observations were carried out in various contexts, including service delivery activities (waste collection, sorting, and management in TPS 3R Rejoagung), collaborative planning meetings between stakeholders, and community engagement events (weekly bank sampah (waste bank) sessions). Field notes were meticulously recorded to capture contextual details and emergent patterns relevant to the study.

To explore individual experiences and perspectives, we conducted semi-structured in-depth interviews with a range of stakeholders, including the local governments (the Environmental Agency of Jombang Regency), the head and members of TPS 3R Rejoagung Jombang as the service providers, representative of the local communities as the users, and members of Sanggar Hijau Indonesia—a local NGO who has been actively advocating for waste issues in Jombang Regency. The semi-structured format facilitated a detailed exploration of each participant's views on the effectiveness and gaps of TPS 3R program as a form of co-production practice.

We also organized a focus group discussion (FGD) on Tuesday, July 9th, 2024, located in Rejoagung Village Meeting Hall aimed to capture collective viewpoints and clarify findings from the stakeholders involved. This discussion was attended by eleven participants consist of representatives of the two local government agencies of Jombang Regency (Environmental Agency and Community and Village Empowerment Service),

head and members of TPS 3R Rejoagung, Village Head and Village Government Representative of the Rejoagung Village, and a pulmonary specialist to provide with expert views. This FGD also served as a public consultation forum where we discuss bottlenecks and explore potential solutions as a way to advocate for the provision of social protection scheme for informal waste workers at TPS 3R Rejoagung.

3 Results and Discussions

3.1 TPS 3R program as a co-production practice

TPS 3R, stands for *Tempat Pengolahan Sampah dengan prinsip 3R* (Waste Processing Facility with the 3R principle (reduce, reuse, recycle)), is a program that is operated under the larger Indonesia Clean-from-Waste 2025 (*Indonesia Bersih Sampah 2025*) movement. The movement was all started by the alarming condition of waste problems in Indonesia. Based on the data collected by the Ministry of Environment and Forestry in 2022, Indonesia generated around 68.7 million tons of waste per year which is dominated by organic waste, especially food waste which accounts for 41.27% and mostly coming from households. Besides, it was also stated that 65.83% of our waste is still dumped in landfills [11]. That is why we are currently experiencing landfill crisis as some major landfills in Indonesia are at capacity.

Such conditions inspired the Indonesian governments to address this situation by launching an ambitious movement titled Indonesia Clean-from-Waste 2025 through the National Strategy Policy (*Kebijakan Strategi Nasional or Jakstranas*) on Waste Management and Reduction as stated in the Indonesian Presidential Regulation Number 97/2017 [12]. The ultimate goal targeted here is that Indonesia with 100% waste managed which is broken down into two main goals: (1) 30% waste reduction from its sources; (2) 70% waste management to prevent the waste ends up in landfills.

To ensure the success of the grand vision of the Indonesia Clean-from-Waste 2025 movement, the Jakstranas are cascading from the national level to the provincial and regency level through the Regional Strategy Policy (*Kebijakan Strategi Daerah or Jakstrada*) [12]. One of the many programs created to support the movement is TPS 3R. The program aims to establish a local waste processing facility in each densely populated urban village or village area in Indonesia run directly by group local community group called *Kelompok Swadaya Masyarakat* (KSM). By having TPS 3R in the smallest administrative units, the government intends to translate the national vision into tangible yet community-based actions. The government perceived that this localized approach not only reduces the burden on larger waste management systems but also empowers communities to take ownership of their waste. It helps to build a culture of sustainability at the grassroots level while contributing to the national objectives of 100% waste managed.

Based on the above explanation, the TPS 3R program corresponds with the concept of co-production in both two perspectives exist in the field of public administration: the Public Administration and Management (PAM) perspective and the Service Management perspective. The first is the Public Administration and Management (PAM) perspective believes that service providers rely so much on the citizens' contribution for

policy implementation and service delivery in the same way that the citizens rely on the service providers which became the conceptual root of co-production in public administration [10]. This explicitly shows that the TPS 3R program, with its focus on community-based waste management, is a clear reflection of the concept of co-production.

Whereas, the Service Management perspective considers that co-production is an integral part of a service delivery process. Service users do not have the choice to co-produce or not. The co-production happens regardless they opt to or not [10]. Therefore, this perspective implicitly saying that co-production inherently lies within any service delivery process, including the TPS 3R program.

		Locus of Co-Production		Towards the co-creation (or co-destruction of value)
		Individual Service	Service System	
Nature of Co-Production	Involuntary	I: Co-Production	III: Co-Construction	
	Voluntary	II: Co-Design	IV: Co-Innovation	

Fig. 1. A conceptual framework of co-production by Osborne, Radnor, and Strokosch (2016)

Moreover, as explained in the Introduction, scholars refer to varied meanings when talking about co-production. Some define it as the overall situation where public and governments collaboratively produce public value [6] while some others referring it as one particular stage or phase when the service is delivered [5]. Though, if we refer to the table above, we will see a different framework of co-production with four different quadrants built upon two indicators, the nature of co-production and the characteristic of value creation. In that context, TPS 3R may fall under the quadrant number III: Co-Construction or IV: Co-Innovation. This is because, in general, communities involved in TPS 3R program are in the service system level, not in the individual service. However, the nature of their involvements is varied across areas, some are still voluntary while some others already provide a paid scheme to those involved.

3.2 Implementation gap of co-production practice in TPS 3R Rejoagung

TPS 3R Rejoagung is located in Rejoagung Village, Jombang Regency, East Java, Indonesia. This waste management facility was first built in 2010 with the funding from the central government funds through the Indonesian Ministry of Public Works and Public Housing and started operating in 2011. In general, TPS 3R, as instructed in the Regulation of the Minister of Public Works of the Republic of Indonesia Number 03/PRT/M/2013, is run by a local community group called as KSM (*Kelompok Swadaya Masyarakat*). This group becomes a legitimate platform for the community individuals who would want to collaboratively running the TPS 3R. However, in TPS

3R Rejoagung, since the members of the KSM do not really have the resources to run TPS 3R, they appointed a team outside the group to manage the daily operations of TPS 3R Rejoagung which later we call them as the management team of TPS 3R Rejoagung.

In the beginning of its operation, TPS 3R served around 80 families which the number now develops into more than 1.000 families served. Besides, in earlier time of implementation, TPS 3R Rejoagung employed 3 workers and it is now growing to be 17 workers employed. The area coverage has also been expanding from 1 village covered to 4 villages.

Seeing the positive increase of the metrics in TPS 3R Rejoagung making people thinking that the co-production model seems to be running well there. The principle of collaborative and participatory governance inherent in co-production making it sounds like an ideal model for waste management field. However, in its actuality, TPS 3R Rejoagung face so many challenges. There are two major challenges discussed in this paper: unequal power relations and responsabilization.

Unequal power relations. The characteristic of TPS 3R program that is community-driven assumes that there would be power distribution in its practice, either horizontally among the citizens or vertically between the state and society. Such expectation is relevant with what is shown in Arnstein's Ladder of Participation (See Fig. 2). When the citizen is given control, there would be a redistribution of power from the government as the power holder to the citizen whose power is previously absent [13].

Citizen Control Delegated Power Partnership	Degrees of Citizen Power
Placation Consultation Informing	Degrees of Tokenism
Therapy Manipulation	Non-Participation

Fig. 2. Arnstein's Ladder of Participation (1969)

However, this power shift is often complex and nuanced, and it is not always specified which level of government is relinquishing authority and vice versa—which group of citizens deserve it. A notable case in TPS 3R Rejoagung highlights a significant challenge regarding this situation. It happened when TPS 3R Rejoagung received a financial allocation from the village government and they perceived this funding not merely as a grant for operational support but as an investment with expectations of financial returns. This expectation implied that, regardless their financial conditions, TPS 3R Rejoagung has the responsibility to share some amount of money (profit sharing) to the village government.

The expectation for profit-sharing, irrespective to the actual TPS 3R Rejoagung's financial conditions, placed additional pressure to the management team. The fact that

TPS 3R is expected to be community-driven exacerbated the situation because this demanded the management team to be able to financially survive with their own feet without any financial aid from the central government. In fact, running a waste management service while still generating income is not a simple thing, especially for amateurs in the field of waste management like the management team of TPS 3R Rejoagung. Based on our interviews, TPS 3R Rejoagung struggles financially as evidenced by its monthly financial reports, which rarely reflect any profit. Despite the target assigned by the village government to earn profit, its financial statements consistently show limited or no earnings. One of the biggest causes to this situation is its high operational cost.

On the other hand, village government ignored this fact as they perceived TPS 3R Rejoagung, which the physical building was built on the land owned by the village government, as a village-owned enterprise instead of a public service provider, and that they see the management team of TPS 3R Rejoagung is under the village government of Rejoagung instead of an equal partner in producing public service. This misalignment between the program's goals and the village government's expectations underscores the complexities of managing co-production initiatives within existing local power structures and financial perceptions. All of the above situations can lead to value co-destruction instead of value co-creation [14].

Responsibilization. Co-production envisions a process where diverse stakeholders come together to collaboratively deliver public service [10]. Responsibility sharing is inevitable among stakeholders in co-production. The same case goes in the implementation of TPS 3R. The implication of TPS 3R being community-based is that there would be responsibility sharing from the states to the society in terms of waste management. This condition is known as responsibilization—a process in which responsibilities shift from the state to individuals or communities [15].

Literature stated that when the states begin doing responsibilization, they are basically start depending to rely on unpaid or low-wage community individuals to perform public service delivery [15]. This situation possibly happens when the co-production activities are utilized as an instrument for reaching policy goals. These patterns correspond to what is applied in TPS 3R program, especially in TPS 3R Rejoagung. Based on the data collected, the wage paid to the communities working at TPS 3R Rejoagung were only 25% from the overall district minimum wage. Ironically, that low-paid contributions by the communities are actually done in order to achieve the national goal of Indonesia Clean-from-Waste 2025.

Moreover, what has been overlooked from the discussion was that certain field has higher level of health and workplace risks compared to others. Waste management sector is among the sectors categorized as high risk [16]. And, in responsibilization, while the responsibilities are distributed to other stakeholders, the risks are too [17]. That means, the communities involved in TPS 3R would have to deal with the workplace risks in waste management—which, again, is classified as high risk. Unfortunately, due to the nature of their community-based work, the workers of TPS 3R Rejoagung are working under the informal work scheme. That means, their current work agreements do not cover social protection, leaving them unprotected at work.

3.3 What roles can Higher Education Institutions (HEIs) play in bridging the implementation gaps of co-production

Higher Education Institutions (HEIs) in Indonesia are bound by the *Tridharma Perguruan Tinggi* (*Tridharma* for short or translated in English as Three Pillars of Higher Educations), as stated in the Law of Republic Indonesia Number 12/2012 concerning Higher Education [18]. This *Tridharma* framework outlines the core responsibilities that universities and colleges must fulfill—education, research, and community service.

The *Tridharma* activities possess substantial potential to influence policy and create to systemic change. To allow that to happen, scholars should not avoid being engaged in political activism. However, there are popular belief that views *Tridharma* as incompatible with political activism. Those who support such belief argue that scholars have to remain neutral, impartial, and objective [19]. This perspective overlooks the potential benefits of integrating political engagement into the *Tridharma* framework. Neutrality can sometimes result in missed opportunities to address systemic issues and drive meaningful change. Scholars, by virtue of their expertise and position, are uniquely equipped to contribute to policy discussions and advocate for reforms that align with their research and community service findings.

Therefore, in the context of gaps of co-production practice in TPS 3R Rejoagung, scholars can incorporate the political dimension of *Tridharma* within their works with the ultimate mission to influence policy and create systemic change. Below are the breakdown of how the political dimension in each *Tridharma* could look like.

Education as a Platform for Awareness and Advocacy. HEIs have a responsibility to educate students and the public on critical issues, including social, environmental, and economic policies. For example, HEIs can integrate topics around co-production, waste management, and academic activism into the modules and curriculum to raise people’s awareness about the issues and the importance of policy advocacy by HEIs. By integrating these topics, HEIs can gather grassroots collective power to strategize potential solutions and facilitate informed discussions. In the case of TPS 3R Rejoagung, scholars can engage all the stakeholders involve and make sure that they are exposed to the gaps we want to address.

Research as a Tool for Policy Influence. Through rigorous research, HEIs can generate evidence-based insights that can inform and shape policy decisions. In the case of the TPS 3R Rejoagung, scholars can conduct research to study and analyze how the gaps in co-production practice occurred. The research findings could be used as a proof in showcasing potential problems brought by the gaps. Research dissemination attended by stakeholders from various level of bureaucracies can be organized as a platform to disseminate and trigger further actions.

Community Service as a Mechanism for Engagement. Community service initiatives allow institutions to engage directly with local and broader communities, addressing pressing issues and advocating for improvements. In the case of TPS 3R Rejoagung,

can take bolder steps by collecting voices from both direct or indirect stakeholders and strategize advocacy plan upon them. Both grassroots advocacy or ‘high-level’ advocacy should be done to engage as much power as possible. Based on our findings, uncommunicated assumptions among stakeholders were the biggest driver that widen the gaps. Thus, as part of the community service, scholars can start by organizing forums that facilitate dialogue among all parties involved.

4 Conclusions

The study shows that despite the widespread adoption of co-production, its implementation frequently encounters challenges that lead to significant gaps. Through an examination of the TPS 3R Rejoagung, this research identifies and explores these implementation gaps and how it manifests in practice.

Crucially, the findings highlight two fundamental gaps found in TPS 3R Rejoagung as a form of co-production practice: (1) unequal power relations; and (2) responsabilization. Moreover, we argue that HEIs have the potential to bridge these gaps as they have the resources needed, not to mention the HEIs’ commitment to the *Tridharma*. In this paper, we offer to incorporate political lens in *Tridharma* as a form of academic activism within the co-production practice. The HEIs’ academic activism can then assume a proactive role in advocating for a just and inclusive working conditions for informal waste workers engaged in co-production activities. This advocacy aligns with their mission to support community welfare by targeting structural changes in policy level.

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