

Operational Note 2

Digging Deeper: Iterating Understanding of a Problem



Thrown off by their discovery that teacher certification was not as well correlated to student performance on the National Exam as they initially believed (see Operational Note 1, “*Keeping it Simple: Supporting Government to Use Evidence to Understand Problems*”), the government MELAYANI team in Belu district set out to better understand what was impacting educational quality in their district. This operational note documents their journey as they worked to first reorient their thinking on key challenges and then dig deeper into determinants of quality education. The note highlights key challenges facing local government actors not only in defining and understanding the problems that they face, but in articulating them in a way that helps them continue to keep sight of their broader goals. It also highlights the seductive pull of practiced ways of thinking along program or hierarchical tracks, and the need to consciously exercise problem-oriented ways of thinking.

This operational notes series aims to share experiences and practical lessons from MELAYANI – Untangling Problems in Improving Basic Services (*Menguraikan Permasalahan Perbaikan Layanan Dasar di Indonesia*).

MELAYANI is a program that builds local government capacity to address service delivery problems at the district level. It does so through helping district governments identify meaningful problems, break them down, analyze their parts, and develop and refine solutions. The methodology for problem solving builds on the problem-driven iterative adaptation (PDIA) methodology developed by a team at Harvard University. It focuses on building team ownership of problems and solutions, empowering local staff to innovate and experiment, using data to understand problems and their causes, and iterating to sustainable solutions. The program emphasizes that staff themselves must do the work to understand the problem and identify and implement solutions. MELAYANI provides tools to support the process, which is guided by a trained coach, who is supported by a mentor with expertise in the PDIA methodology.

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Where to start?

While the government team in Belu district initially thought that insufficient teacher certification was a key cause of poor learning outcomes, they were willing to question their assumptions when faced with evidence that there was little correlation between the presence of certified teachers and higher student test scores.¹

In addition, an examination of test scores indicated that some rural schools were doing better than expected and several urban schools were performing surprisingly poorly. Indeed, the secondary school with the highest scores was in a rural area with no electricity and the lowest-scoring primary school was in the middle of town, undermining many previous assumptions. This information made the group question their understanding of the issue, and they decided to go to the schools to gather more information.

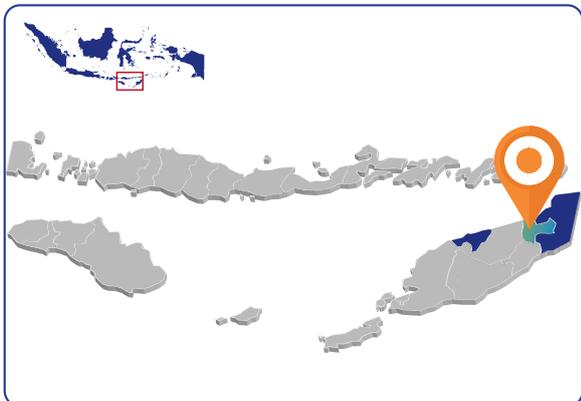
Though visiting a school to see what is or is not working might sound obvious, it is unusual for

the district government staff to visit schools just to learn from their experience. Usually they visit schools with specific program-related questions or monitoring objectives. Indeed, though there seemed to be agreement in principle that the team wanted to try to understand what was working to support student learning, group members struggled to articulate how they would approach the issue at a school, in part because it was so different to their normal “monitoring” approach. As a result, each member tried to make the goal more programmatically specific, resulting in very different ideas about what the objectives of the visit should be.

Ultimately, with some facilitation, the team decided to keep it very simple, with only two questions that would allow teachers and headmasters to share their experiences:

- What factors support you / your teachers in teaching students well? (*Faktor-faktor apa saja yang mendukung keberhasilan guru dalam mengajar anak sekolah?*)

Where is Belu?



Belu is located in East Nusa Tenggara Province, and sits on the border of Timor Leste. It has a population of just over 350,000 people, of whom 80% are living in rural areas, based on population projections from 2017. It has a poverty level of 15.7%, based on World Bank staff calculations using BPS data from 2018. Following local conflict, the district also has a population of displaced people.

¹ See “Keeping it Simple: Supporting Government to Use Evidence to Solve Problems” in this operational notes series.

- What obstacles do you face in teaching/ in supporting teachers to do well? (*Hambatan/ tantangan apa guru mengalami selama mendorong proses belajar mengajar?*)

Visiting Schools

The team member that visited the best- and worst-performing schools was a staff member from the education department's data section, supported by the MELAYANI coach and the mentor. The results were illuminating, highlighting both the importance of leadership by headmasters as well as support systems for teachers.

The difference between the high- and low-performing schools was tangible. In better-performing schools, teachers were keen to share their experiences and the new things that they were trying, as well as being more comfortable discussing the challenges that they faced. They described routine staff meetings, as well as supervision and support from the headmaster which sometimes involved other teachers to discuss or problem-solve as a group. This helped teachers learn from each other, find and share solutions. One teacher in a location without electricity noted, *"if I go to Atambua [the district capital city], I try to browse (the internet) looking for new things I can do in the classroom. Then I share with the other teachers here."* One high-performing school described their school monitor² as being reasonably engaged, but this was not the case in other schools.

In the low-performing schools, teachers were less willing to talk, and when they did, they focused less on describing what they were doing in the classroom than the fact that they felt demotivated and overwhelmed. There were often no staff meetings or supervision, and where they were happening, they were focused purely on administrative issues. Teachers felt on their own in interacting with students.

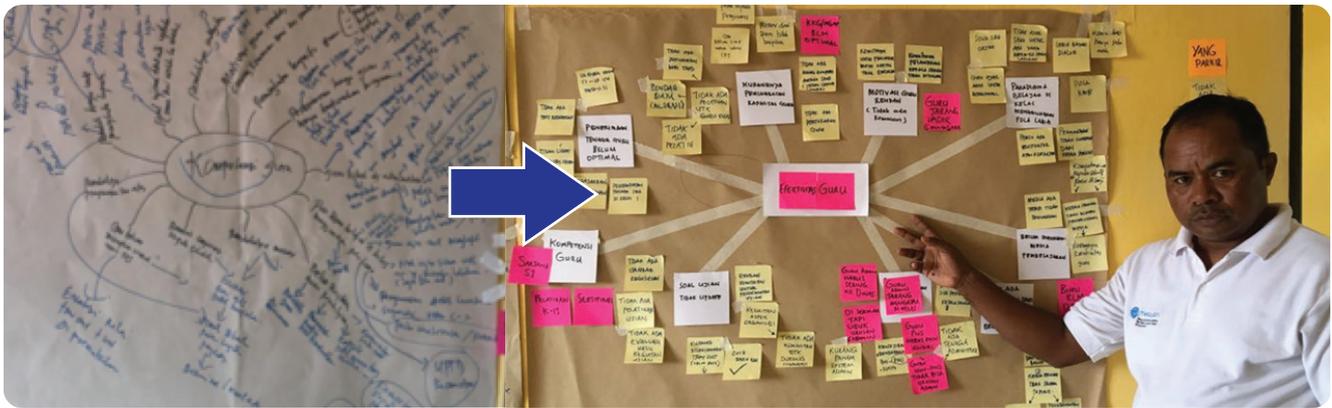
A new headmaster had recently been appointed to one high-performing school, and teachers were able to compare between previous leadership, which had been supportive and transparent and the new headmaster, who had yet to meet with teachers several months into her job, or to share the school budget with them. The teachers in that school explained the (negative) impact of the change on their own performance and desire to work and learn.

Sharing and iterating the problem – back to the fishbone

The small team which had conducted the school visits shared findings from the visit both with the larger education team and in a whole-of-department meeting that included headmasters and teacher representatives.

Within the team, the MELAYANI coach facilitated a more focused discussion on some of the issues that they had found in the field visit. In particular, the group talked in more detail about what they termed "teacher competency." This idea covered

² School monitors are employed by the district education department to provide technical support and oversight to groups of schools. In theory, they bring expertise both to headmasters and teachers and provide assistance through school visits and facilitating discussions across schools.



World Bank mentoring helped the MELAYANI coach to re-organize the fishbone diagram

a number of concepts, ranging from individual motivation to teach, to school management and leadership to testing practices. In all, the group had developed a list of 13 general concepts under the heading of teacher competency.

At this point, the coach and team struggled a bit with the process. Though the team had done some good thinking about different aspects of the problem, they were having trouble seeing where to go next. Part of the problem seemed to be grouping some of their ideas in order to interrogate them more clearly, as well as identifying where they might have some overlapping underlying issues. The World Bank provided mentoring support at this point, helping the coach create clearer clusters to take back to the team for discussion and to carry forward. Sub-themes were written on post-it notes so they could easily be moved.

Digging deeper by engaging with schools

As part of the discussion around the restructuring of their fishbone diagram, the larger Belu

education team decided that they wanted to dig deeper into three issues they thought were affecting the quality of learning.

The first issue they termed “studying and learning activities,” covering in-classroom activities. This was the most exploratory of the three, as the group was intrigued by the findings uncovered by the open questions in the previous round of school visits. They thought that there was likely more to learn.

The other two issues that they wanted to explore were (i) the effectiveness of the school committee and (ii) understanding how administrative burdens (particularly the administration of school operational assistance, or *Bantuan Operasional Sekolah (BOS)*)³ impact on teaching.

In the case of school committees, there was a broad agreed understanding that the committees were not functioning. While there seemed to be a general understanding as to why, the local planning department asked that the team talk to school committees and document challenges so that they could more easily include

³ BOS is a capitation-based school transfer paid by central government to schools, to supplement funding from the district government. From a funds-flow perspective, BOS is transferred from central government to provincial governments, which then disburse BOS to the districts. BOS expenditures and detailed reporting of spending are regulated by a Ministry of Education regulation and there is parallel reporting on absorption by districts to the Ministry of Finance.

responses in their planning documents. This decision immediately raised an interesting (and illuminating) dilemma: how to talk to school committees?

Over the past years, the Ministry of Education has stressed school committee independence, as there were concerns that they were being used to collect funds for schools following the abolition of school fees. While primarily aimed at schools, this has resulted in a wariness on the part of district education departments to engage with school committees on any topic, out of fear that they would be seen as out of line. In Belu, the education department had not formally spoken to a school committee, other than in cases of serious school problems, for years, if ever. Ultimately the issue of how to engage the school committee was addressed with a letter to the school and school committee explaining the goals of the discussion with the team, but norms had to shift to even begin the conversation.

Finally, the issue of BOS administration was pursued with a similar goal of documentation, though early findings showed that the issue was overstated. The initial problem breakdown had indicated that this was a challenge for all teachers, whereas initial school visits showed an impact only on the single teacher responsible for reporting. It became clear over time that this issue was both political and somewhat diversionary. It is political in that the Bupati has a proposal to put an administrator in each school, creating a new civil service position, and so there is an implicit expectation that staff need to identify this as a problem in order to justify their leader's desired solution. It is diversionary in that while there certainly are administrative burdens that pull teachers out of class (BOS administration being one of them), there is a

deeper problem of poor teacher attendance which is unrelated to administrative challenges.

With these topics in mind, the team worked through the design of this next phase of their investigation of the problem, including: (i) the development of a basic set of questions that they wanted to ask, (ii) factors in choosing schools to visit (including test scores, internally displaced person (IDP) populations, access, and parent engagement), and (iii) how they would present the work that they were undertaking to school staff and parents. This discussion evolved quickly into an excellent consideration by the group on how they might manage power dynamics (as education department staff coming to schools), remember to listen (rather than give instruction) and generally communicate effectively.

Formalizing problem statements

The design of the MELAYANI approach drew on previous World Bank experience in working with local governments. That experience indicated that local government actors were often interested in learning new things, but struggled to set out what they knew, articulate clear questions, and link those questions to the problem that they were trying to address.

While the PDIA process used in MELAYANI provides clear steps to address these issues, first in asking the group to clarify their overarching problem and in subsequent use of the fishbone diagram to break it down, the MELAYANI design team believed that a more detailed problem statement would be necessary. In response, any team undertaking additional analytical work was asked to develop a "concept note." To stimulate

the team to arrive at a clear and focused plan for their work, to the concept note format set out a series of questions that included:

- What do you want to learn about?
- Why is it important to this district? (e.g. how does it link to the “big problem” you are trying to solve?)
- What do you know already about this issue?
- What are your key research questions?

The concept note also included more detail on the methods the team would use to gather information, the data they would use (including how they might choose respondents if necessary), who would undertake analysis and how, what participants would be told about the work and any ethical considerations. In addition, it asked the team to set out a timeline and detail any resources that they might need.

While not part of the “pure” PDIA process, the concept note helped focus the team on what they were trying to achieve. The idea was that the team could flesh out the concept note out as they went along, and it would help them clarify the “story” behind their problem, while serving as a tool to help them be clear about what they wanted, and assist in communicating what they were doing.

A moment of confusion about problem definition

Interestingly, while the group was having good discussions about detailed aspects of the sub-problems that they had identified, both the coach and the team struggled to set out a succinct story about why they were pursuing

those issues in particular and what they wanted to know. In particular, articulating how the sub-problems linked to the overarching issue that they were exploring proved challenging.

One possible reason why articulating a clear narrative to link the sub-problems to the overarching goal of improving education quality was that the team had chosen to look at three issues, rather than just one. In the minds of both the team and the coach, the issues became linked to the actors in the education system to which they related. Teaching and learning was about teachers, functionality of school committees was about school committees and excessive demands of administration was about headmasters. This impacted how the team approached their questions: asking teachers about teaching, committees about their role, and administrators about theirs.

This focus on actors led to a tendency to list all of the potential problems related to each actor, rather than stick to the tighter issues that they had agreed upon. The tendency to “name” problems in a shorthand way by referring to the actors at the center of the sub-problem allowed for a wide variety of interpretations of the problem, what we might call “problem-creep”.

An example of problem-creep occurred when the team began to work through the issues related to why the school committees are not working effectively.

When the team had originally discussed problems related to the school committee, they were interested in how the committee supported a better school environment. This included helping ensure teacher attendance, and student discipline and working together

with the headmaster to make decisions in the interest of the school by overseeing the use of BOS funding (part of their formal role). In particular, many schools in Belu hire teachers using BOS funds, a process which should involve the school committee, but often does not.

However, with the sub-problem now captured by the heading “school committee”, the focus shifted to whether the committee was doing its job per the regulations, rather than on the effective function that it could perform, or what was stopping it from being effective. Looking back at the fishbone and remembering that the lack of a school committee was not a stand-alone problem, but a factor contributing to worsen or improve other problems helped the team sharpen their questions to focus better on school committee effectiveness.

Similar challenges emerged around “teaching and learning.” As an exploratory issue, the topic of teaching and learning had potential to link to many aspects of the classroom environment, so the group decided to tighten the definition of the sub-problem by focusing on what supported teachers to teach better. Initial interviews with teachers and headmasters showed that important elements included support from headmasters and other teachers, as well as potential for a larger role of school monitors. However, when the focus of the sub-problem was defined by the actor it related to—teachers—the other dimensions of the role of other actors in supporting teachers to perform was lost, and issues such as certification and use of required tools such as planning forms (rather than the usefulness of existing tools), re-surfaced as the focus of problem-definition.

There are several potential reasons why the team struggled as it did. The first is the dominance of compliance orientation in public management in Indonesia. Good performance is defined as meeting regulations, and shortcomings in performance are assumed to derive from failure to comply fully with regulations.

Articulating specific problems of whole-of-system performance, rather than focusing on programs to manage system components, was not something that came easily to the Belu education team. They were not used to articulating issues as problems and tended to slide back into programmatic thinking that tended to be focused on a single part of the system. This is linked to the fact that from the national to the local level, Ministries and departments are highly siloed.

Related to this, a considerable mental shift was required for the team to think about these system actors and the actions for which they are responsible jointly contributed (or not) to a desired objective, such as supporting teachers to be effective in the classroom. Finally, there was a tendency to quickly “name” a problem in a way that made it legible within the bureaucracy, which was useful in terms of internal communication, but risked losing sight of the problem the team had originally identified.

Bringing challenges to life and understanding “problems”

Though still struggling slightly with their problem statements, the coach and team needed to

continue with the school visits that they had decided upon.

Working with the World Bank mentor, the team undertook a very iterative approach to designing the question guide for their visits. The group developed an initial question guide, tested it in two schools, spent a day looking at initial lessons and refining questions, and then repeated the process. This turned out to be the watershed moment for them in understanding their own goals as well as thinking more clearly about how they would use the information that they gathered.

The key element in the process was the debrief of initial findings, particularly the question “Does the information we have gathered help us respond to our problems?” Having just gathered considerable information from schools, the team had to really consider what they wanted to know. This was very new for team members, who were used to collecting information without much regard to how it would be used—including writing down interview responses and then “giving them in” without thinking about whether the information was useful or not.

The process of conducting school visits was slightly different for the various issues. Following each day of school visits, the team sat together and wrote onto sticky notes the key lessons or new ideas about two of their issues: “teaching and learning” and the role of school committees. Following the first school visits, the questions for school committees were revised to focus more on understanding school-committee collaboration. The questions around support for teachers in the classroom were not revised, but the team started to group key issues, and was

able to then follow up on emerging themes such as supervision and feedback by headmasters, support from school monitors etc. On the third issue of administrative burden, the team worked across each school visit to build a map of the administrative processes by sharpening questions around each step in the administrative process and develop an accurate timeline of how much time teachers were spending on administrative procedures.

The first round of discussion from the school visits served to clarify the team’s goals and questions, and by the second round two days later, the team was already considering the best way to capture and present information so that it could be best used to drive change. With this work done, the team used the tools in six more schools.

What have we learned?

Breaking down problems is a skill, as is problem-oriented thinking. Even where the group understands key elements of a problem, finding a way through the details can be overwhelming. Grouping similar issues (for example, different aspects of teacher capacity development) or similar aspects of different issues (administrative challenges across the sector) can be challenging. MELAYANI experience was that this skill proved challenging for coaches too, and that coaches are likely to continue to need support and mentoring on this front as they develop this skill. The use of, and continuous return to, the fishbone diagram helps the government team to remember how the details that they are focusing on link back up to their larger goals.

Asking for a clear problem statement is useful as a measure of how well a problem is understood... The program request for a mini concept note illuminated challenges within the team. This type of tool can be useful as a measure of understanding without creating a large administrative burden on a government team, assuming that the discussions that they are having are sufficiently focused. It can serve as a useful red flag if the team is lost in the details.

... but problem statements should be dynamic and continue to be refined over time. As this case demonstrates, developing a “perfect” problem statement should not be a goal in itself, nor should it hold up the team from continuing work, which may help them to tighten their thinking. However, the process of refining a problem statement requires explicit discussions with the team that help them continue to link the details that they are finding/ working on to the broader issue that they are addressing.

How problems are described matters. Coaches and team members should try to balance being specific and succinct as they talk about their problems to reduce misunderstanding. There is always a tendency to simplify complicated issues by the use of shorthand terms (e.g. teacher competency), but these shorthand terms also potentially create confusion. In addition, there is also a tendency to use words and descriptions familiar to the bureaucracy, many of which frame actors (school committees, teachers, headmasters) rather than system characteristics (quality of classroom learning) as important. While using these concepts can be useful, generalizing problem statements permits co-existence of quite different concepts of a problem, both within the team and within government more generally.

Supporting the immediate use of data/information builds understanding and support. The approach of reviewing findings from the field visits in developing the question guide was originally used because the team was so unsure of its direction. It ended up being an incredibly useful approach, as it got team members immediately thinking about the implications of their work, rather than leaving it to the end of the “study,” as would normally be the case. The use of sticky notes of key findings was an easy way to visualize findings and start basic analysis by clustering.

There can be surprising value in the documentation of problems. A potential criticism of the Belu team’s process is that a lot of time and effort was spent documenting problems rather than working on solutions. Indeed, initially the mentors tried to encourage the team not to hold discussions about school committees but rather to move forward to find solutions for their lack of involvement. Interestingly, the request by the local planning body to document challenges with school committees was itself instrumental in revealing the lack of engagement between the Belu education department and the committees themselves. This proved to be a very important finding which might not otherwise have surfaced. In terms of developing a solution, the documentation process became part of a solution in the sense that it stimulated the first step in establishing a relationship between the education department and school committees, as well as stimulating development of support within the department for engaging the school committees in any way at all.

How to scale up

The sequence of steps followed by the Belu team could be converted into a tool other districts could use if they are undertaking more detailed analysis of a problem. This tool, modeled on the “concept note” designed for MELAYANI, would help local governments sharpen their thinking and ensure that the analysis that they undertake is fit for purpose based on their own needs.

Programs supporting local (or national) governments through the use of coaches or facilitators can learn from the experience in Belu. In particular, this case suggests:

- A need to provide coaches with training on not only supporting the formulation of an overarching problem, but basic analytical skills such as grouping information to help the team navigate through the details of any particular problem.
- The importance of ongoing, potentially on-demand, assistance to coaches for

assistance as they help teams work through a problem. An external view can often be helpful in seeing the “red thread” that ties issues together or issues that lack clarity.

Central government can support quality improvement by local governments in the following ways:

Central government program managers can encourage local government staff to dig into priority service delivery challenges. The role of central government program managers should be focused on supporting local governments to better understand their own local context and challenges in order to ensure that nationally mandated services can be delivered effectively.

Central government program managers can look for ways to explicitly fund the gathering of information on key service delivery challenges. Looking more closely at local challenges takes staff time and operational money. This type of work is currently difficult to budget and therefore rarely undertaken.

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