



**Inland Norway
University of
Applied Sciences**

Including students in data-informed decision making to enhance inclusion

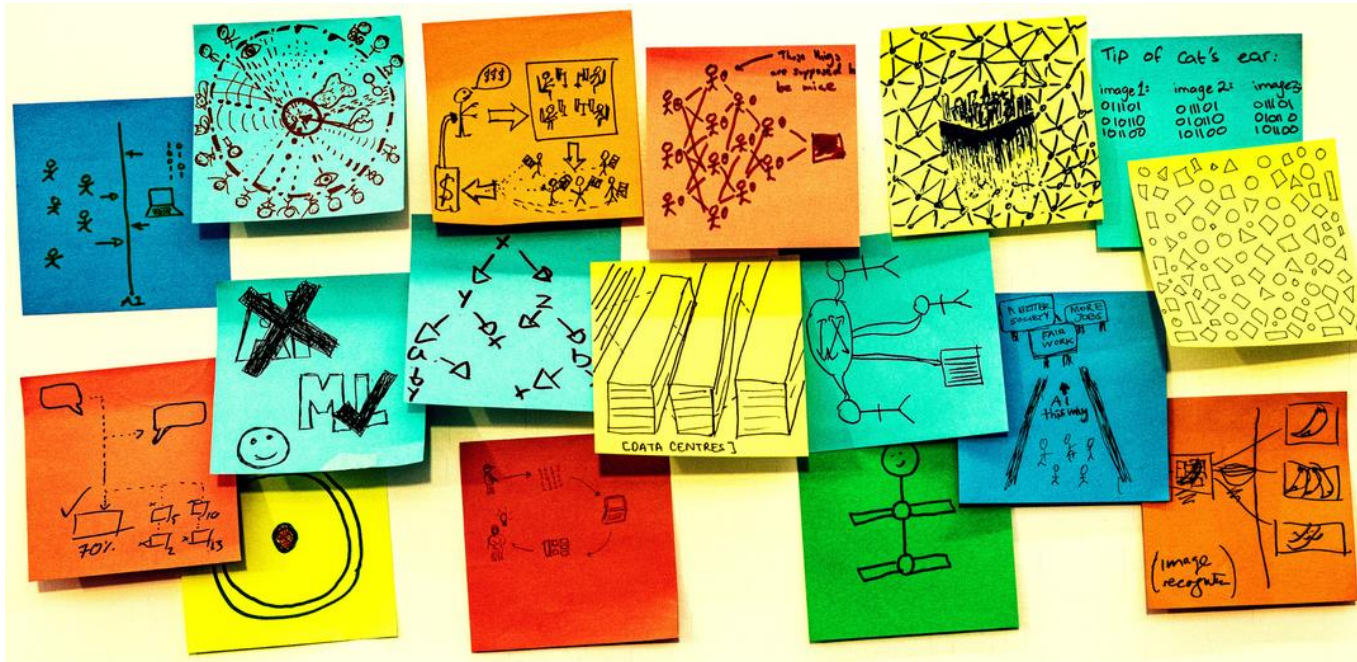
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In this presentation

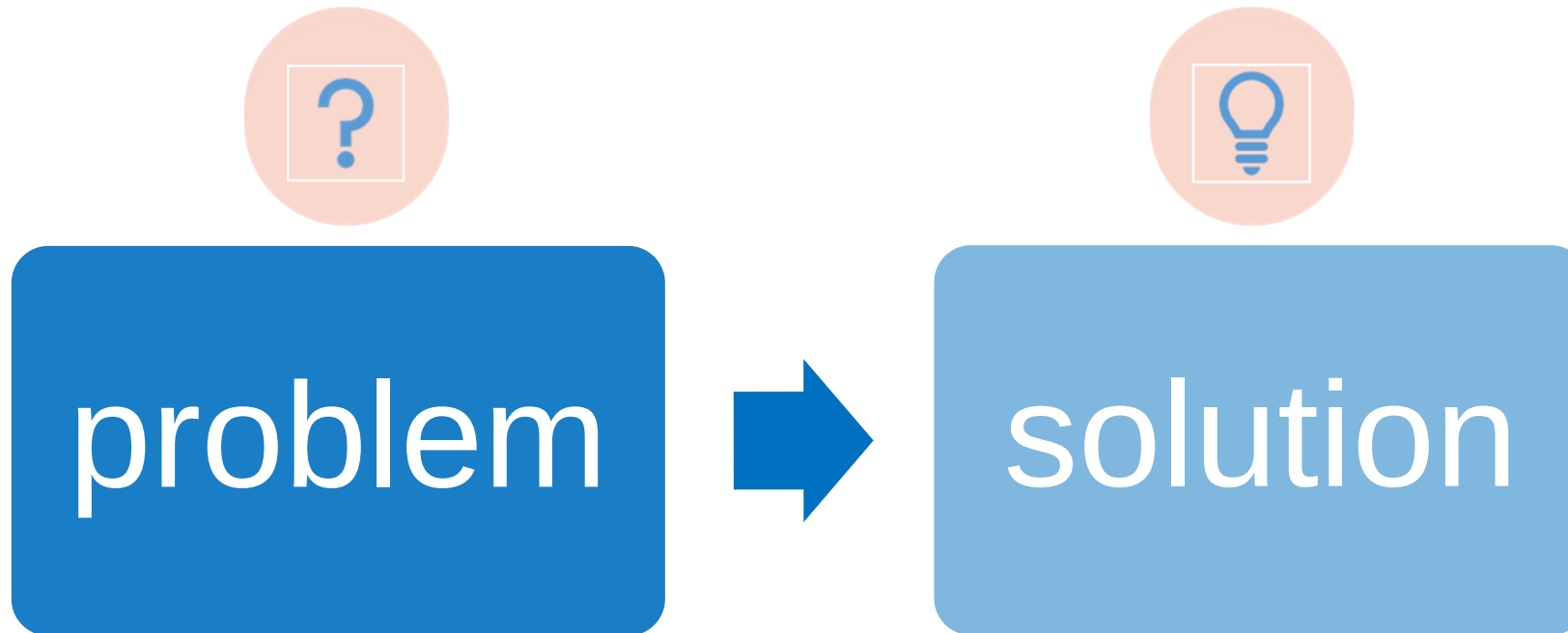
1. Data-informed decision making and students involvement
2. Study into student involvement without intervention
3. Study into student involvement with intervention



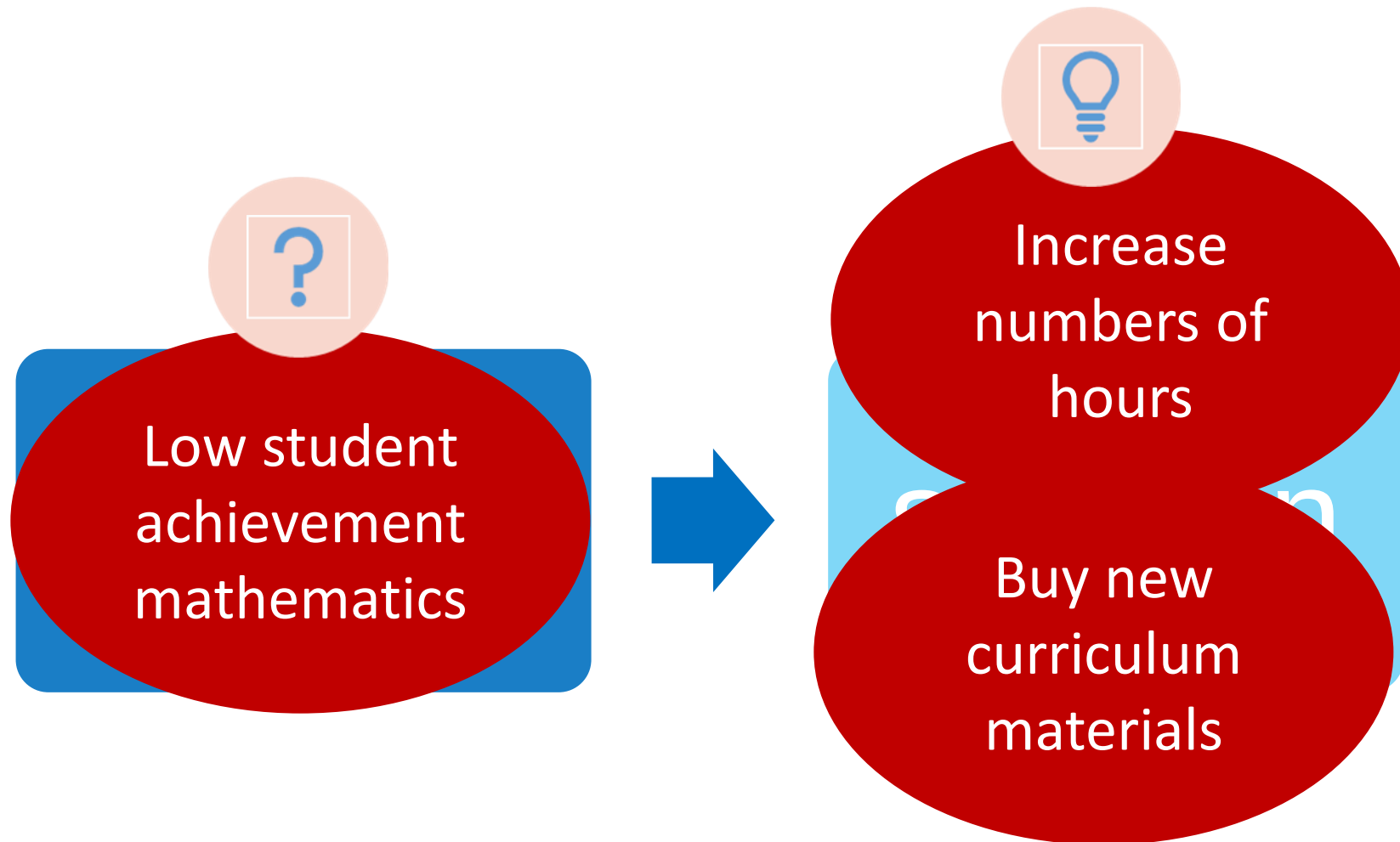


Part 1: Data-informed decision making and students involvement

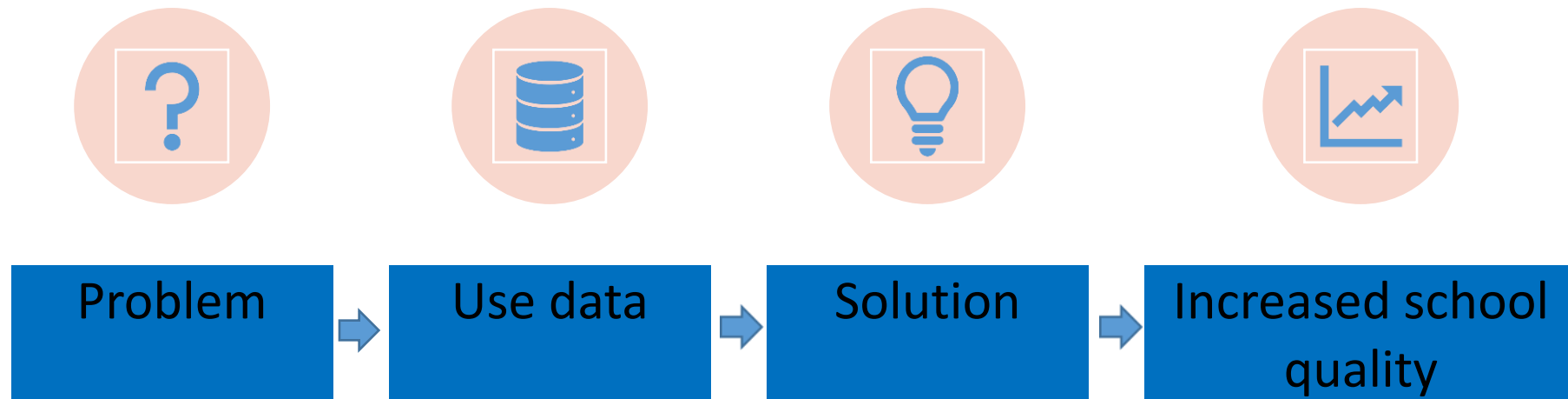
Data use for school improvement?



Data use for school improvement?



Data use for school improvement!



Data use for school improvement with students

Little attention for the role of the students in the data use process

Students as a source of data vs active stakeholder in the use of data

“The object of change” vs “creator of change”
(Yonezawa & Jones, 2007, p. 340)

Why and how to involve students in the use of data as active participants?

Why involve students?

- In groups of 2-4 discuss reasons for (not) involving students in the use of data
- Write down your answers via [menti.com](https://www.menti.com)

Why involving students?

Innovation: To understand and address educational problems (Mitra, 2004; Yonezawa & Jones, 2007); Students see different problems and see problems differently (Fielding, 2001)

Learning: To develop data literacy, a core competence (OECD, 2019); to provide input to teachers on how to improve quality of teaching and learning (Fielding, 2003)

Justice: Students right to access and have control over their data (e.g., GDPR, FERPA); Students not involved in matters that involve them and have little influence on decisions that impact them (Smit, 2013)

Social: "from objects of change to creators of change" (Yonezawa & Jones, 2007); "from objects of investigation to agents of their own transformation" (Fielding, 2004); Students as valuable partners in the actual use of these data, **inclusion**

Benefits for students

- Empathy, motivation, ownership
- Reflection and confidence
- Learning to collaborate, social skills, **inclusion**
- Democratic skills, citizenship
- Data literacy, research skills

Benefits for teachers and schools

- Reflection and impact
- Professional development
- Improved teacher-student relations
- Improved quality of education
- Improved school culture and climate

Passive involvement

Seeking opinion through student voice data

Institutional purpose (Kennedy & Datnow, 2011)

Improve certain indicators (Jones & Hall, 2021; Kennedy & Datnow, 2011)

Focus only on improving on accountability indicators (Datnow, Park, & Kennedy, 2008; Jones & Hall, 2021; Smyth, 2006)

Active involvement

Dialogic model (Fielding, 2004)

Active, early engagement (Fielding, 2004)

Agency, inclusion, motivation, wellbeing

Learning and achievement (Jones & Hall, 2021; Mitra, 2004; Yonezawa & Jones, 2007)

How can we involve students in the use of data?

- In groups of 2-4 think of ways in which you could involve students in the use of data
- Share your best practices!
- Write down your answers via [menti.com](https://www.menti.com)

Student involvement in data use



Goal setting



Data collection



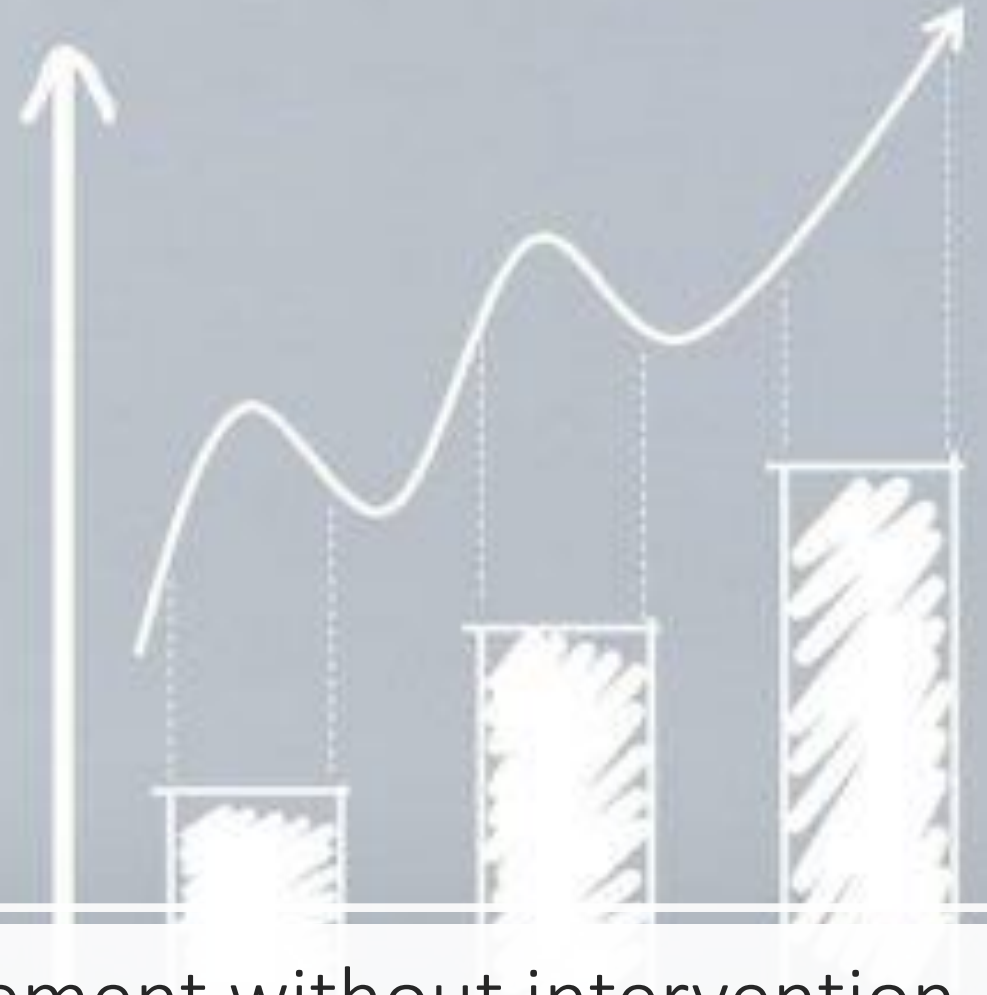
Data analysis
and
interpretation



Action planning
and
implementation



Evaluation



Part 2: Study into student involvement without intervention

Research questions

To what extent and how are students involved in the use of data at the school level?

What are the perceived effects of involving students in the use of data?

Method

- Small scale exploratory study
- National student survey in Norway (e.g., wellbeing, motivation, student participation)
- 3 purposely sampled (Cresswell & Clark, 2007) best practice schools
- 2 focus group interviews per school, one with students (2-3) and one with educators (2-3)
- Semi-structured interviews: goal setting, data collection, data analysis and interpretation, action planning and implementation, evaluation
- Interviews recorded via teams, transcribed via AmberScript, coded, case report for each school

Results: Goal setting

Student involvement in	School 1	School 2	School 3
Goal setting	Not involved	Not involved	Not involved

Results: Data collection

Student involvement in	School 1	School 2	School 3
Data collection	Filled in survey, rationale explained	Filled in survey, rationale explained	Filled in survey, rationale explained

Results: Analysis and interpretation

Student involvement in	School 1	School 2	School 3
Analysis and interpretation	Detailed results presented in the student council and well-being team. The results are also discussed in the classrooms (but without the actual report)	Results presented by the school leader and in the individual classrooms, in some classrooms in more detail than in other classrooms	Detailed results presented in the student council. Results discussed in the classrooms, sometimes full report on screen, other times orally focused on the goals set

I thought well-being and motivation would be higher. Now, there were 17 percent who didn't enjoy it and couldn't concentrate. That was pretty intense.

I remember a teacher went through it on a screen in front of the class and then like at least explained the things that was relevant to our class. It was usually in like a table where like it showed a number how positive or negative our class had responded and how positive or negative our school had responded

Results: Action development and implementation

Student involvement in	School 1	School 2	School 3
Action development and implementation	Teacher teams, student council and well-being team develop improvement suggestions. These are discussed in classrooms and implemented by teachers.	Teachers and students in the individual classrooms develop improvement suggestions, these are implemented by teachers and students	Teacher teams, student council and students provide improvement suggestions, these are implemented by teachers and students

We saw the result for like how we find ourselves in mathematics, for example. And then she ask us questions on how we can make like the students have more fun in like math or anything we find boring in class and how to improve the results from this year to next year.

The numbers of bullying and such, it is very important that we know that because it is mostly students who bully other students. So we got to be aware of it so that we can hopefully do something about it

Results: Evaluation

Student involvement in Evaluation	School 1	School 2	School 3
	Data use cycle (with other data), yearly check whether goals are reached. Teachers observe each other's classrooms. Students involved in evaluation, as passive data source.	Data use cycle (with other data), yearly check whether goals are reached. Students involved in evaluation, as passive data source.	Data use cycle (with other data), yearly check whether goals are reached. Students involved in evaluation, as passive data source.

Results: Effects

	School 1	School 2	School 3
Reasons for involving students	Student participation	Student participation Commitment Motivation Wellbeing Achievement	Student participation Ownership Wellbeing

*The numbers of bullying and such, it is very important that we know that because it is mostly students who bully other students. So we got to be aware of it so that we can hopefully do something about it..... And also when it is the students who are or some of the students who are bullying, then they are a part of the solution, too. **They got to be a part of solving the problem if they are the problem.***

Plus, we feel involved. Yeah. It's nice to kind of like be involved because then we feel like we kind of are a part of something too..... Because we're taking responsibility for kind of making sure that everybody in our class feels good”

Conclusion

- Students to some extent involved
- Involvement of students: student council, grade levels, individual classrooms, special teams
- Room for improvement, involving *all* students and involvement in goal setting (i.e., active and early involvement, Field, 2004)
- Importance of dialogue in each step of the data use process
- Missed opportunity to work on data literacy: by presenting the data analysis to students (graphs, tables etc.)
- Involve students in all steps of the data use cycle, from goal setting to evaluation: Students: “got to be a part of solving the problem if they are the problem”
- Can contribute to ownership, **inclusion**, wellbeing, and achievement

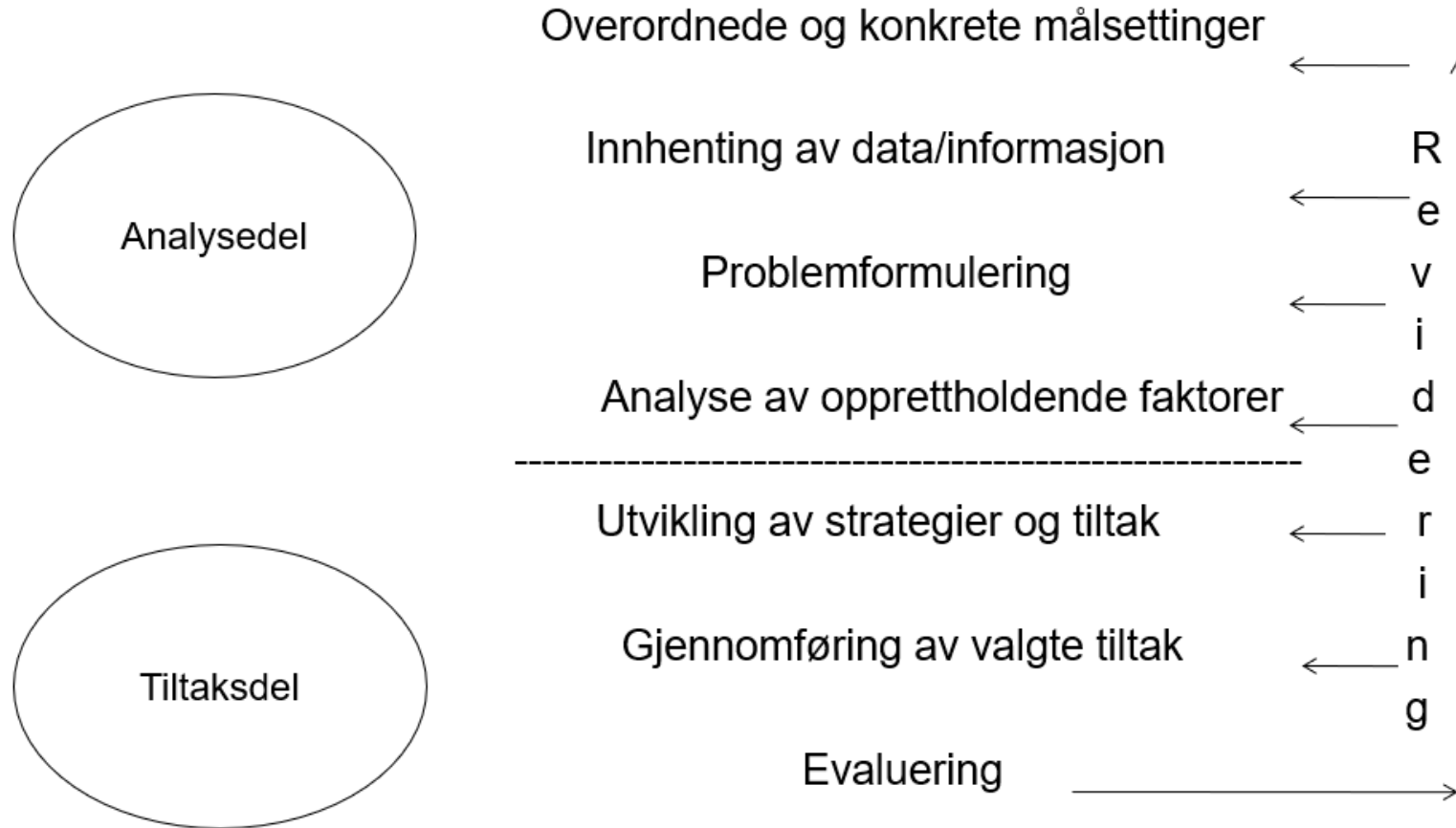


Part 3: Study into student involvement with intervention: PULSE project

Intervention to involve students in the use of data

- Data use via the PA model (Nordahl, 2016)
- Using a whole classroom approach
- Students are grouped in 4-6 (PLCs), they go through all the steps of the PA model in their PLC, supported by teacher
- Pilot with 5 schools, grade levels 5-9 (students age 10-15)
- Support of school leaders
- SePU coaches

The Pedagogical analysis model



Student involvement

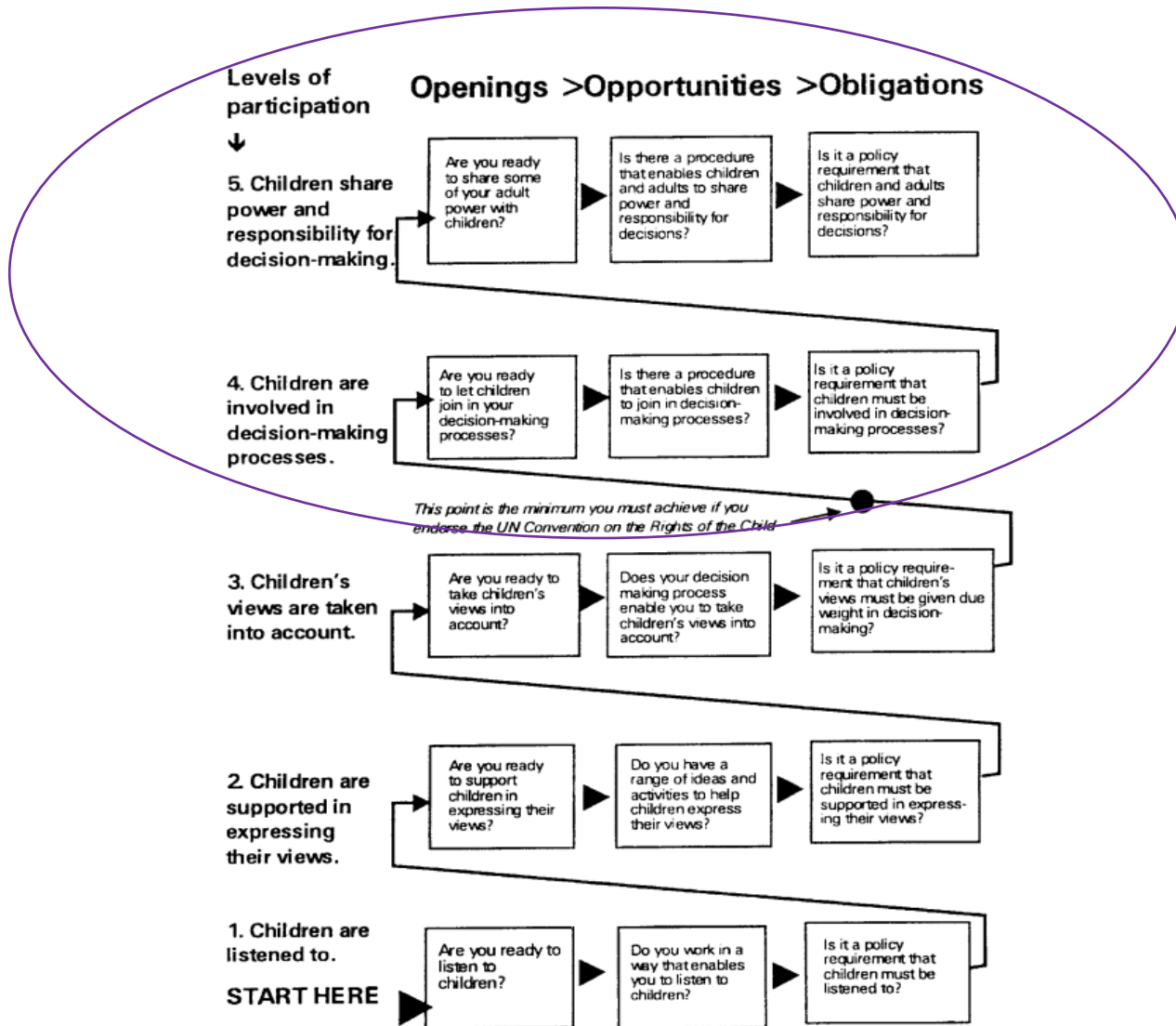


Figure 2: Pathways to participation.

Shier, H. (2019). Student voice and children's rights: Power, empowerment, and "protagonismo". *Encyclopedia of teacher education*, 1-6.

Preliminary Results

We talk about student involvement all the time, but we rarely really do it. Now we are actually doing it.

Overordnede og konkrete Målsettinger

- Each student PLC starts with establishing overall goal based on SePU survey, teacher collects the input from the students
- Teacher decides (level 4) on the goal based on student input or
- Teachers and students collectively decide (level 5) on the goal (e.g., via a whole classroom discussion, via voting)

Overordnede og konkrete Målsettinger eksempel

- The teacher presents 4 overall goals for the students. The teacher explains the objectives with examples that illustrate the objectives.
- The students talk in their PLCs which of the 4 goals they think is most important.
- The students put blue stickers on the goal they think is most important and red on what they think is second most important
- Topics: wellbeing, motivation, and low levels of learning.

Innhenting av data/informasjon

- Quantitative (e.g., surveys, assessment results) and qualitative data (e.g., classroom observations, interviews).
- Data quality check.
- The teacher (level 4) or the student PLCs together with the teacher (level 5) decide which data to collect and how to verify the quality of the collected data.
- One of the participants: “We were surprised that students were actually able to understand the numbers and graphs from the survey and were able to reflect on it”.

Problemformulering

- Related to the overall purpose and based on the data collected, a final problem and goal are formulated.
- Each student PLC can individually formulate a problem definition and goal, after which all the problems are collectively discussed in the classroom and a final shared problem definition and goal is formulated by the teacher (level 4) or the teachers and students together (level 5).
- Problem definitions are often phrased in the form of statements or why questions. Goals need to be measurable.

Analyse av opprettholdende faktorer

- Each PLC in the class can formulate possible factors that contribute to the problem and the data needed to investigate this. Then all the PLCs present this to each other.
- After the presentations, the teacher can decide (level 4) which PLC is going to be responsible for investigating which possible causes and which data to collect or
- Teachers and students could together decide (level 5) on which PLC investigates which possible causes.

Analyse av opprettholdende faktorer eksempel

- Students developed interview schedules and interviewed each other.
- Results analyzed and grouped in different categories with the support of teacher.
- Together with their teacher they decided on which factors to focus
- Contributing factors: boring lessons, lack of feedback from the teacher, too many distractions in the classroom (too much noise), and explanations not always being clear.

Utvikling av strategier og tiltak

- The development of strategies is based on the analysis of contributing factors.
- Select strategies based on research is advised.
- Student PLCs brainstorm about strategies based on identified sustaining factors or select from a top-3 suggested by teachers and/or school leaders. Either the teacher ultimately decides which strategies are going to be implemented (level 4) or this is collectively decided (level 5).

Utvikling av strategier og tiltak

Opprettholdende faktor og tiltak

LITE KREATIVE TIMER,
VI SITTER FOR MYE
STILLE, MER PRAKTISK

Litt mer etter ut. Den første halv timen kan vi bruke på
å være aktiv, så kan vi bruke litt av den lange timen.
Litt mer tegning i timene og det vi har. Pause i midte i
timen for eksempel just dance for å slappe av.
Akkurat på laptop, felleskap eller egen aktivitet, f.eks. tegning.
Just dance på slutten av timen. går ut en tur.
ha kahoot.
* Mer gruppearbeid.
* Løse oppgavene med spill, og aktivitet/natursti.
* Peke fra klasserommet/fritime.
* mer ute (mer fag ute) (startet i dag)

- After finding the contributing factors, the students wrote examples of actions for every sustaining factor
- Students worked in PLCs
- Moved around on stations
- Everyone wrote something on each paper

Gjennomføring av valgte tiltak

- When planning the implementation of strategies, careful consideration should be given to how they will be executed, who will be responsible for their implementation, and when they will be carried out.
- The teacher can plan and implement these strategies together with the student PLCs. Here is can again be the teacher who ultimately decides this (level 4) or this can be done with the students (level 5).

Gjennomføring av valgte tiltak eksempel

- Based on the contributing factors, the student PLCs formulated possible actions
- One teacher made a link to research
- Example strategies: more variation in activities (e.g., writing, a game, a video), more adaptive teaching (in the words of the students: explaining things in more different ways), more outside learning, more project work, more and different types of feedback (e.g., written and oral feedback, peer feedback), more group activities and cooperative learning, more breaks (i.e., paced lessons), and connecting homework more to what the students do at school.

Evaluering

- Planning and conducting an evaluation of the work performed increase the likelihood of realizing new practices.
- Regardless of whether the goals are achieved or not, it is important to evaluate the potential reasons for this.
- In this step, for example each student PLC can develop an evaluation plan, and then the teacher decides who does what (level 4) or teacher and students do this together (level 5).

Evaluering eksempel

- Schools are in the evaluation phase.
- At the last seminar: They were all very enthusiastic and wanted to continue with this work.
- One of the participants stated: “Students indicted that they never realized why they had to fill out these surveys, but now they get it and now they are demanding that they also want to be involved in the use of it. And it helps the school in getting better”.

Evaluering av tiltakene til 5.trinn

- Dere skal nå jobbe i grupper. Alle skal delta og samarbeide godt på gruppa si. Ingen skal snakke med andre grupper.
- Den eldste på gruppa starter å skrive – det er lov til å bytte på.
- Tiltakene har fått nummer foran seg, så dere trenger bare å skrive ned nummeret på tiltaket når dere skal svare.
- Tenkt dere godt om – og kanskje litt tilbake i tid – og svar nøye på hvert spørsmål.
- Dere trenger ikke svare med fullstendige setninger på hvert spørsmål i denne timen.
- Gi beskjed når dere er ferdige, uten å forstyrre andre grupper.



Hvilke av tiltakene har blitt gjennomført?

Hvilke av tiltakene har fungert godt?

5.trinn sitt kortsiktige mål:

Vi skal ha arbeidsro så vi fokuserer på oppgaven.

1. Har vi nådd det kortsiktige målet vårt?

- ☐ Ja
☐ Nei
☐ Litt/vet ikke

2. Hvis du svarte **ja** i spørsmål nr 1, hva er det som har blitt bedre?

3. Hvis du svarte **nei** i spørsmål nr. 1, hva må vi bli bedre på?

Our evaluation: Students

- “Because then the pupils can help decide how the climate should be at school, for example. So that everyone gets a better school day.”
- “Then we can decide how we want it to be in our class, with rules and things like that.”
- “I guess we get to decide a bit, so it's not just a rule that no one bothers to follow in class. That it is not just the teacher who hopes that the rule will be followed, but that students can help to, for example, decide a little bit of how this rule should be followed.”
- “Because then we will both see how we are all doing in our class, and what we are not so good at, we can fix that as we have done now.”
- “Yes, so that we get better at it”

Our evaluation: Teachers

- Benefits for students: "The ownership relationship. I think that they will be more engaged in something they do themselves than if we had come up with it. Otherwise, it would not have been so successful. Also, the understanding of the process, that it is not always so easy when you decide and make choices. And that everyone gets to say their opinion, that everyone is heard, and that everyone gets to hear what the others think."

Our evaluation: Teachers

- Satisfaction with the intervention: “ I am so satisfied that there has been a change, and that the students have seen it themselves, even if it has been a bit of hard work for them along the way. And that is really the most important thing, that there is a change, and that they (the students) are aware of what and why, that there are questions or data we use that the students have answered. That the students see that we are addressing surveys they have answered, and that we (teachers) are working together with the students on the results.”

PULSE in your school?

- In groups of 2-4: Would this work in your school? Why (not)
- What are conditions for success?

Conclusion

- Working with the PA model and the five levels of student involvement as a guideline.
- Preliminary results are promising, positive effects mentioned by teachers and students.
- Collaboration in PLCs and leadership crucial.
- Further study conditions for succes
- How can we enhance, scale-up and sustain this work?



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Thank you for your attention!

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