

The process of implementing an internal formative evaluation

Denne artikel handler om implementering af et formativt evalueringsprogram på erhvervsskoler i forbindelse med et kvalitetsudviklingsinitiativ. I artiklen analyserer vi samarbejdet mellem forskere og skoleledere i implementeringsprocessen. Vi undersøger, hvilke faktorer der er vigtige, når eksterne parter vil implementere et evalueringsprogram på skoler. Vi finder fire faktorer: etablering af en fælles forståelse, tydelig kommunikation, skabelse af incitament og redskaber til refleksion, som alle bidrager til en succesfuld implementering af evalueringsaktiviteter på skolerne. Artiklens pointe er, at implementering af evaluering som en del af en skoleudvikling er en omfattende og krævende proces; men at det styrker kvalitetsudviklingen, når skoleledelserne reflekterer, evaluerer og lærer af deres erfaringer.

Nøgleord: erhvervsuddannelse, skoleledelse, formativ evaluering, skole-/ universitetssamarbejde, kompetenceudvikling.

Introduction

It is common practice to combine school improvement with the use of internal evaluation (Arney, 2017; Fullan, 2006; Hopkins et al., 2014). In this article, we study the factors important for implementing an internal evaluation programme in schools conducting development work.

Based on experiences from our work with implementing a large-scale evaluation programme at eight vocational schools, this article presents an analysis of the factors important, when external partners are to implement an evaluation programme at schools. During the process, our

research team supported school leaders in learning how to conduct a systematic evaluation of the new practice introduced at their schools.

We analyse the process of introducing and applying an internal evaluation programme. We present four factors important when external partners are to implement such programme: 1) *building a common understanding*, 2) *clear communication*, 3) *creating an incentive to evaluate*, and 4) *tools for reflection*. During the analysis, we demonstrate the demanding nature of implementing an evaluation programme that ultimately has a significant impact on school development.

Background

In 2019, the Velux Foundations launched a seven-year programme to improve the quality of the vocational and training systems in four Eastern European countries: the Czech Republic, Hungary, Poland, and Slovakia.

As a part of the programme, development projects have been initiated at eight vocational schools – two in each country. Each of the schools has received funding of between 0.5 and 1.5 million euros. The aim is to improve the quality of vocational education at these schools. We – a research group from Aarhus University – have worked with the school leaders at each school to support the projects' development at the local level and to implement a programme for evaluating the development process at each school. As a part of this implementation, we trained the school leaders to evaluate progress when implementing new activities.



One key to understanding the collaboration between the school leaders and us in this project is the establishment of a collaboration between researchers and practitioners. It was one of several requirements stipulated by the Velux Foundations in the schools' grant letters. This collaboration was a mandatory part of the schools' participation in the broader quality development programme.

Collaboration between school leaders and researchers

Leadership is pivotal for organizational change and the development of new school structures (Schein, 2010; Gillon, 2018). School leaders must be committed to clear goals and strategies (Jabri, 2017). It is important that they are willing and able to implement change initiatives. Often, such initiatives are conducted in collaboration between school practitioners and researchers. Therefore, the collaboration between school leaders and researchers is an important starting point for these kinds of school improvement initiatives.

Several studies have analysed the collaboration between school leaders and researchers. A study by Karagiorgi et al. (2018) showed how school leaders were able to transform the experiences they gained from a research project into modified and improved educational practices. With support from researchers and through systematic reflection in diaries, the school leaders were able to improve their own practices and the school's educational outcomes. Other studies have analysed the conditions of collaboration between researchers and practitioners, highlighting motivation, trust, mutual respect, and resources (particularly time spent) as important conditions for successful collaboration (James and Augustin, 2018, p. 333). In addition, the practitioners' ability to reflect has been shown to be an important factor (McIntosh, 2010).

A study on the facilitation of evidence-informed teacher practices underlines how stakeholders' different expectations must be negotiated, and how practitioners must be involved in the process of translating research-based knowledge into guidelines for practice (Flynn, 2018). Another study explores the development of a relationship between researchers and school leaders, referred to

as a school/university alliance. As part of this alliance, the researchers asked school practitioners to reflect on and write down their thoughts and feelings about being part of a research project, using these reflections to strengthen the alliance (Solvason et al., 2018).

A study by Barnett et al. (2010) has explored the processes of building such partnerships, emphasizing that building trust is a slow and demanding process, but highly worthwhile as it can ensure a solid foundation for successful interventions and valid research. A research project centred on leadership training demonstrated that such training made educational leaders more efficient. However, a lack of support from participating researchers in the form of "critical companionship" reduced the effect (Manley and Titchen, 2017).

Collaboration between researchers and school leaders has thus been shown to be a vital element of efforts to improve schools. However, previous studies have indicated the need to address potential obstacles such as different goals, a lack of professional respect, and a lack of support if such collaborations are to be successful.

The evaluation perspective

In this project, we qualified the processes of eight school improvement projects by introducing an evaluation model inspired by a theory-based approach to implementing and evaluating new practices at schools (Chen, 2013). The approach focuses on the mechanisms linking objectives and outcomes (Patton, 2011; 2012; Stufflebeam and Coryn, 2014). According to the approach, qualified development of practice is based on ongoing evaluation of the initiated activities. Such evaluation requires the definition of specific goals and procedures for collecting data that can be used to assess whether improvements have been successfully realized. Accordingly, one of the core elements of our collaboration with the school leaders was to support them in learning how to conduct a systematic evaluation of the new practice introduced at their schools. The foundation for this work was the development of an evaluation plan.

As part of this process, we introduced what we term the *reflection circle*.

This circular model, inspired by Schön (2016) and Kolb (2015), includes four aspects of change processes: planning, acting, observing, and reflecting. In the model, development is a continuous process of reflection that starts with the identification of goals and implementation of new activities, resulting in new and improved practices through reflection on new experiences.

To support the school leaders in learning how to conduct a systematic evaluation, we adapted and simplified the model to fit their projects. In drawing up their evaluation plans, we asked them to describe each of the four aspects of the model.



Figure 1. *The circle of quality improvement.*

Consequently, the school leaders started the process of developing the evaluation plans by clarifying the goals for the improvement projects at the schools. What did the school leaders mean when they talked about improving quality at their schools? What did they want to achieve? Here, it is important to note that the understanding of quality, the goals, and the content of the projects are decided solely by the schools. Our role was to make sure that the school leaders were clear about their understanding. The next step was to

realize these goals by planning relevant activities. Consequently, the leaders were asked to reflect on why and how the planned activities were expected to improve quality. The school leaders were then asked to plan a formative evaluation of the activities. Which activities proved successful, and which did not? How could activities be improved to be more successful? Finally, the school leaders were encouraged to implement these new and improved activities at the schools. The key element in this circular process is continuous reflection on experiences.

Our contribution to the improvement processes at each school was to implement the model in practice, as outlined in the following.

Drawing up and implementing the evaluation programme

As the first step in our collaboration with the school leaders, we asked them to reflect on the evaluation plan, posing the following questions:

- What do you regard as high quality education?
- Which activities will lead to the desired high-quality education?
- How will you assess improvements in the quality of education?
- What data will the institution collect for this purpose?

The school leaders developed the first draft of their evaluation plan based on their original project application and these four questions. In our collaboration, the school leaders were made aware of the necessity of thoroughly describing the goals of the projects at their schools. Even though the overall goals were stated in the project applications, these had to be elaborated and specified more precisely to allow assessment and evaluation.

We provided feedback on these first drafts, considering the different understandings of quality and local school contexts.



The plans were revised and refined during this process to reflect the school leaders' understanding of the overall improvement process and the need to implement the experiences gained within the local context.

In the next step, we introduced the concept of continuous evaluation. We developed a data collection tool – that we named *reflection papers* – which the schools were asked to use to continuously evaluate their activities. Every second month, the school management teams answered the following questions in these reflection papers: *what has been done; what have we learned; and how do we know whether it was successful?* We chose the bimonthly schedule to ensure continuous reflection on how the projects were progressing. The tool was primarily used to provide a short description of what school leaders had learned from the process of implementing the various activities to improve educational quality. We asked the school leaders to give examples of improvements and to reflect on their experiences. In some cases, the use of reflection papers was solely a management activity. In other cases, the project team or other members of school staff were involved in reflecting on and answering the questions.

The third step involved two evaluation meetings. At these meetings, the school leaders presented the progress of their projects. Their presentations were based on an extended reflection paper, in which we had posed questions to help them elaborate on their responses to previous reflection papers. The first meeting focused on what the projects had already achieved and what still needed to be improved, while the second meeting focused on developing the schools' change capacity based on the results of their evaluations.

To sum up, the collaboration with the school leaders was a highly structured and planned process based on continuous feedback and dialogue over a lengthy period, in which we commented the draft plans and posed questions for further elaboration. The ongoing feedback was rooted in the school leaders' initial ideas concerning how to improve and assess quality at their schools. The collaboration resulted in the drawing up of an evaluation plan incorporating developmen-

tal objectives and a strategy for compiling and assessing experiences, and a continuous series of systematic reflections on the outcomes of the new activities at the schools.

Data

To understand the factors important when external partners are to implement an evaluation programme at schools, we collected the following data:

The different versions of the *written evaluation plans* drafted by the schools and our feedback to the schools. The eight participating schools each drafted between two and four versions through dialogue with the researchers. Comparing the different versions give insight into how our feedback has influenced their plans.

We conducted *interviews* with school leaders concerning their reflections on the process of developing local evaluation plans for improving educational quality and the dialogue with researchers. The interviews were conducted as semi-structured interviews focusing on 1) how the school leaders experienced the collaboration with researchers, 2) their work with the local evaluation plan for quality development, and 3) their reflections on the usefulness of the learning process. Two rounds of interviews were conducted: the first after drafting the final evaluation plan and the second after the two evaluation meetings.

We recorded our dialogue with the school leaders at the two *evaluation meetings*. These recordings give insight into the discussions concerning the collaboration – regarding implementing the evaluation programme. The analysis draws on statements from school leaders from these meetings.

Written reflection papers were provided by the school leaders. A total of 65 papers of 1-4 pages each showed the progress in reflecting and evaluating the initiatives at each school. The analysis of the answers to the different questions we have tested throughout the process gives an insight into the types of questions that provide room for reflection.

Drawing on the different forms of data, our analysis shows four factors important when external partners are to implement an evaluation programme at schools.

Factors important for implementing an evaluation programme

In the following, we present four factors important when external partners are to implement an evaluation programme at schools: 1) *building a common understanding*, 2) *clear communication*, 3) *creating an incentive to evaluate*, and 4) *tools for reflection*. With a starting point in our experiences, we show the demanding nature of the process, and how the factors contribute to the successful implementation of the evaluation programme.

1. BUILDING A COMMON UNDERSTANDING

The first factor is that of a common understanding as a stepping stone for collaboration during the implementation of an evaluation programme. It should not be assumed that such understanding already exists.

Our data shows that initially, the school leaders did not see the point in drawing up an evaluation plan and found it difficult to understand what we had in mind. In the interviews, the school leaders expressed a degree of scepticism regarding the researchers' role and the need for an evaluation plan. When asked about their experiences with compiling a plan, one school leader answered: "It was a mixed experience. However, that was our first time – the first time we produced such a document. Later, it was easy because we had the goal at the back of our minds."

When another school leader was asked if he understood the researchers' reasons for requiring the development of an evaluation plan, he replied: "The answer is no (...). In March or April, we did not really understand what the researchers communicated to us. We read it, we translated it (to the national language), but we didn't get it.

It might as well have been in Swahili. Now, I understand a lot more about your way of thinking than I did at the time". This school leader explained that it was difficult to understand what we had in mind, and it was not clear what the researchers expected of the school: "It is quite stressful when you want to do your best. When I don't know what is expected of me, I become stressed. That was what happened back then, but now, I understand what you expect of us."

The general experience from the dialogue between researchers and school leaders was that, after a turbulent start, the leaders began to recognize the advantages of drafting an evaluation plan for quality improvement. They found the plans useful in guiding their work. As one of the school leaders put it: "The plan is a must. We must have a clear view of the goal and all the activities leading to it. The plan helped us in identifying all the points for data gathering."



In our dialogue with the school leaders concerning the local evaluation plans, it was crucial that they developed an understanding of the importance of ongoing formative evaluation. Our findings suggest that such an understanding developed as the project progressed. As mentioned by a school leader: "What you have helped me to understand is that the process is more important than the goal itself. It was difficult to understand, but now I do."

Feedback must be based on concrete questions and the school leaders' responses. Our data shows that asking specific and concrete questions leads to a better understanding. For instance, positive examples from other projects or ideas as to what could be done were not effective when commenting on the draft plans. Instead, it is important to ask questions that make the school leaders reflect on their own project within the context of their school. Our continuous feedback to the school leaders was a vital part of establishing a common understanding. Building a common understanding is an important factor when external partners are implementing an evaluation programme at schools.

2. CLEAR COMMUNICATION

The second factor is clear communication. It is important to communicate in very concrete and precise terms. For instance, we told the school leaders: "It is important that you make clear what you perceive to be an improvement in quality – not in general terms, but specifically in relation to your school." The school leaders were thereby asked to reflect on the concept of "quality" in relation to the context of their schools' educational practice.

For instance, one school works on "encouraging and maintaining student and teacher motivation", another on "becoming a prestigious school", and yet another one focuses on aligning "new study programmes with Industry 4.0 needs". Articulating and discussing the understanding of quality in relation to the school context helps making the goals of the initiatives clearer for both management and staff. The researchers presented the circle of quality improvement (figure 1) to illustrate how goals, actions, experiences, and implementation are interrelated. The

idea was not "to describe what you do", but instead "to reflect on what you have learned from what you are doing". As such, the focal point was a reflection on action. The circle of quality improvement proved key in communicating the process of formative evaluation in relation to quality improvement work. Hence, our results show that clear communication is vital when external partners are implementing an evaluation programme at schools.

3. CREATING AN INCENTIVE TO EVALUATE

The third factor is creating an incentive to evaluate. A common understanding of the needs of evaluation does not necessarily lead to schools accomplishing evaluations. Instead, we found that it is important to build in an incentive to evaluate.

In our project, the reflection paper tool and two evaluation meetings played a valuable role in ensuring that the school leaders maintained a focus on formative evaluation throughout the development process. One leader described this at their first evaluation meeting: "You made us think and made us do things we wouldn't have done [ourselves]. For instance, we are forced to find time to sit down and talk things through. [Things] that we would normally postpone." A leader from another school also described the use of evaluation as somewhat forced, yet useful: "We feel we have to do it, but we also go into it very successfully because we think it is useful." Generally, the project teams at the schools consider evaluation activities to be time consuming, yet useful. They see it as positive quality that their collaboration with the research team pushes and motivates them to engage in evaluation activities.

With regards to the evaluation meetings, preparatory questions (that were part of the extended reflection papers) played a vital role in establishing a common understanding between us as researchers and the school management teams. One school leader noted: "The preparation questions helped a lot; they gave us time to prepare (...) It was interesting what [parts of the answers] you highlighted. We all feel that we understand each other. We understand you and you understand us." Using these questions as a jumping-off point for the evaluation meetings helped them and

us in focusing the dialogue on matters relevant to the local school context. The dialogue hereby revolves around the leaders' carefully considered reflections and how we as researchers read and understand the projects.

The meetings brought to light the preliminary results of the various projects and gave direction to subsequent activities. One leader described the importance of the meetings: "We don't usually see the changes that clearly because we're in [the middle of] it every day. Therefore, it is nice to have somebody from outside helping us to get an overview." Another leader commented: "The general idea is that cooperating with you makes us a bit more aware. You notice things that have never previously caught our eye. We get a second look." Through dialogue, the school management teams become conscious of the positive preliminary outcomes – and shortcomings – of their projects. Broadly speaking, the evaluation meetings are seen as valuable in supporting the progress of projects, creating an incentive to keep evaluating the progress along the way.

4. TOOLS FOR REFLECTION

The fourth factor is that of introducing concrete tools for reflection. Implementing an evaluation programme at schools unfamiliar with evaluating progress, requires support with regards to data collection and reflection. It should not be assumed that schools already know exactly how to begin evaluating their projects. Instead, bringing in tools to guide their work is an important factor.

In our experience, the introduction of reflection papers had a major impact on the implementation of the evaluation programme. As described earlier, the reflection papers were used as a simple tool for ongoing evaluation of how the projects were progressing. In the reflection papers, the management teams focus on *what has been done and what they have learned* in their projects during the preceding two months. One leader described the reflection papers as crucial for understanding the purpose of the evaluation programme: "It was actually from your reflection [papers] that we understood what you were ask-

ing originally and why these reports and reflections were important."

Testing different types of questions, we found that the quality of the answers in the reflection papers was dependent on how the questions were formed and how closely they related to the progress of the school improvement projects. Simple formulations give room for different interpretations and reflections.

Our data show that the reflection papers rarely capture the actual *process* of reflection, as they are presenting the *results* of the school leaders' reflections rather than the thoughts that led to these results. In interviews with the school leaders, they talked about the process leading to the answers they provided in the reflection papers: "First, I collect the ideas, we make a draft and then we discuss it in a meeting [within the management team] and it is only after this that we present it to you," as one school leader explained.

This tells us that the main function of the reflection papers is to initiate a continuous reflection process at the schools. Despite the very simple form, reflection papers prompt reflection among school staff. One question – *what have you learned?* – seems to be especially fruitful in this regard. As expressed by a member of a school management team: "To be completely honest, the questions [in the reflection paper] are very complicated, and it is not easy for us to answer them. We really must work together as a team to be able to answer them." Here, the difficulty of the questions and the contractual requirement of answering the reflection papers requires collective reflection. The reflection papers thus support teamwork and collaborative reflection.

Introducing an applicable tool for reflection and evaluation helps schools implement evaluative activities at management level. In some cases, the teachers were involved.

Conclusion

Implementing an internal evaluation programme in schools requires an understanding of the importance of evaluation among school leaders and the will and ability to carry out evaluations on an ongoing basis. In short, implementing a programme of internal evaluation requires competencies.

The implementation of the evaluation programme proved to be a time-consuming task. Nevertheless, the outcomes are notable. The eight schools eventually succeeded in compiling qualified evaluation plans and now make use of ongoing reflection and evaluation, which supports their projects in improving the quality of the schools' educational practice.

We found that school leaders do not always have the necessary competencies to conduct formative evaluation. We have analysed how we implemented the evaluation programme, and we have shown that this process can be a long and difficult learning process. Our findings point to four important factors when external partners are to implement evaluation programmes at schools: 1) *building a common understanding*, 2) *clear communication*, 3) *creating an incentive to evaluate*, and 4) *tools for reflection*.

First, building a common understanding of the needs of evaluating progress is the starting point of the implementation. We did so by a continuous process of collaboration and feedback as the school leaders were to draw up their evaluation plans. The common understanding provided a foundation for the leaders' evaluation activities. Aligning goals and activities and planning ongoing evaluation and implementation processes strengthened the content of the projects.

Second, clear communication is pivotal when implementing the evaluation programme. The communication must focus on the school context as the leaders are to define and give content to their understanding of quality. The role of the researchers implementing the evaluation programme is to provide support in the form of critical companionship, posing questions instead of providing best practice examples.

Third, creating an incentive to evaluate is of great importance. Understanding the need is not enough. Instead, the programme implementation must provide the leaders with an incentive to evaluate. In our case, the collaboration with the research team pushes and motivates them to engage in evaluation activities. Here, the reflection papers and the evaluative meetings impels leaders to evaluate.

Fourth, introducing an applicable tool for reflection and evaluation helps schools implement evaluative activities. In our case, using reflection papers supported the leaders in conducting formative evaluations of how their projects were progressing. The question "*what have you learned?*" introduced a different way of thinking about project progression and ensured that management teams and other school staff met to reflect upon their experiences.

During the implementation of the evaluation programme at schools, the leaders are trained to conduct formative evaluation processes. However, our data shows that such implementation takes time and great effort – far more than we had anticipated. When external partners are to implement an evaluation programme at schools, it requires a lengthy and highly structured process in which all four factors contribute to the success.

As such, our research has several practical implications. Implementing an evaluation programme requires that those who are to perform and use the evaluations possess or develop certain competencies. Therefore, consultants and researchers must consider: 1) what competencies are needed by those participating in the evaluation programme, and 2) how can they be supported in acquiring these competencies. When external partners are introducing and implementing an evaluation programme at schools a focus on the four factors is beneficial.

Ensuring that participants acquire the necessary will and ability to evaluate takes time and effort, but it ultimately pays off by enabling them to perform and use formative evaluation to strengthen their activities and to *learn from what they are doing*.

References

- Arney, E. (2017). *Learning for Organizational Development: How to Design, Deliver and Evaluate Effective L&D*. London: Kogan Page.
- Barnett, M., Anderson, J., Houle, M., Higginbotham, T. & Gatling, A. (2010). The Process of Trust Building Between University Researchers and Urban School Personnel. *Urban Education* (Beverly Hills, CA), 45(5), 630-660. <https://doi.org/10.1177/0042085910377297>
- Chen, H.T. (2013). The roots and growth of theory-driven evaluation: An integrated perspective for assessing viability, effectuality, and transferability. In Alkin, M.C. (Eds.) *Evaluation Roots: A Wider Perspective of Theorists' Views and Influences*. Los Angeles, CA: SAGE.
- Flynn, N. (2018). Facilitating evidence-informed practice. *Teacher Development*, 23(1), 64-82. <https://doi.org/10.1080/13664530.2018.1505649>
- Fullan, M. (2006). The future of educational change: system thinkers in action. *Journal of Educational Change*, 7(3), 113-122. <https://doi.org/10.1007/s10833-006-9003-9>
- Gillon, A.C. (2018). *The Nature of Contemporary Organization Development*. New York, NY: Routledge. <https://doi.org/10.4324/9781351106818>
- Hopkins, D., Stringfield, S., Harris, A., Stoll, L. & Mackay, T. (2014). School and system improvement: a narrative state-of-the-art review. *School effectiveness and school improvement*, 25(2), 257-281. <https://doi.org/10.1080/09243453.2014.885452>
- Jabri, M. (2017). *Managing Organizational Change*. London: Palgrave.
- James, F. & Augustin, D.S. (2018). Improving teachers' pedagogical and instructional practice through action research: potential and problems. *Educational Action Research*, 26(2), 333-348. <https://doi.org/10.1080/09650792.2017.1332655>
- Karagiorgi, Y., Afantiti-Lamprianou, T., Alexandrou-Leonidou, V., Karamanou, M. & Symeou, L. (2018). 'Out of the Box' leadership: action research towards school improvement. *Educational Action Research*, 26(2), 239-257. <https://doi.org/10.1080/09650792.2017.1310052>
- Kolb, D.A. (2015). *Experiential Learning: Experience as the Source of Learning and Development*. Upper Saddle River, NJ: Pearson Education.
- Manley, K. & Titchen, A. (2017). Facilitation skills: The catalyst for increased effectiveness in consultant practice and clinical systems leadership. *Educational Action Research*, 25(2), 256-279. <https://doi.org/10.1080/09650792.2016.1158118>
- McIntosh, P. (2010). Action research and reflective practice: creative and visual methods to facilitate reflection and learning. Routledge. <https://doi.org/10.4324/9780203860113>
- Patton, M.Q. (2012). *Essentials of Utilization-Focused Evaluation*. Los Angeles, CA: SAGE.
- Patton, M.Q. (2011). *Developmental Evaluation: Applying Complexity Concepts to Enhance Innovation and Use*. New York, NY: Guilford Press.
- Schein, E.H. (2010). *Organizational Culture and Leadership*. San Francisco, CA: Jossey-Bass.
- Schön, D.A. (2016). *The Reflective Practitioner: How Professionals Think in Action*. London: Routledge. <https://doi.org/10.4324/9781315237473>
- Solvason, C., Cliffe, J. & Snowden, M. (2018). Researching in school – creating a meaningful school/university alliance: a reflection. *Educational Action Research*, 26(4), 589-602. <https://doi.org/10.1080/09650792.2017.1388828>
- Stufflebeam, D.L. & Coryn, C.L.S. (2014). *Evaluation Theory, Models, and Applications*. San Francisco, CA: Jossey-Bass.