NETHERLANDS INITIATIVE FOR EDUCATION RESEARCH

Guide

Professional Learning Communities in Higher Education

Preparing, **implementing** and sustainably **embedding** Professional Learning Communities (PLCs)

What works and why



strengthening education together

Guide

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What works and why

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Colophon

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NETHERLANDS INITIATIVE FOR EDUCATION RESEARCH

Contents

Preface 5

Summary 6

Introduction 9

Part 1: Supporting and sustainably embedding PLCs

Recommendation 1 Embed PLCs within the organisation during the preparation phase **16**

Recommendation 2 Support PLCs **23**

Part 2: Participating in and/or coaching the PLC process

Recommendation 3 Establish a clearly defined collective focus for the PLC **26**

Recommendation 4 Encourage learning during and between PLC meetings **30**

Part 3: Monitoring the PLC process and evaluating its outcomes

Recommendation 5 Monitor collaboration and progress between meetings, and make adjustments as necessary **36**

Recommendation 6 Evaluate the PLC's outcomes against the collective focus, communicate the findings with all stakeholders, and decide how to move forward with the PLC **38**

References 43

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ONDERWIJSKENNIS
van het NRO

Preface

This guide, *Professional Learning Communities in Higher Education*, is intended for teaching staff and their managers, facilitators/coaches, consultants and policymakers who use evidence from research as a basis for teaching. The purpose of this guide and others like it is to connect education research to the institutions' practices. Each guide presents understanding gained from research in a practical and accessible manner. All guides focus on an important topic identified by education professionals, managers and policymakers as areas where they would like to improve their expertise and understanding.

To maintain and improve the quality of Dutch higher education, it is vital for education professionals to continue their professional development. One of the most important features of effective professional development is close and constant collaboration. Learning together makes it possible to discuss complex problems and develop and share relevant learning materials. One of the forms that collaborative learning can take is through Professional Learning Communities (PLCs), where participants learn to work together to solve problems in education and so improve their students' learning and/or wellbeing.

This guide is not intended as a step-by-step manual. It does not provide a single recipe that works in every situation. Different circumstances and contexts demand different approaches. Instead, we encourage education professionals to reflect, and we encourage institutions to make the best choices in the specific context.

Our guides are developed by teams of scientists and education professionals, including teaching staff, managers and policymakers. Each guide is based on the most recent and most relevant research into the topic. A quality committee checks the scientific quality of the guide and its relevance to and accessibility for the target groups.

We hope that this guide inspires you to reflect, for professional discussions in teams and for making careful choices about professional development and education improvements.

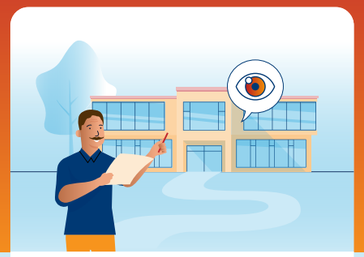
Gerard Baars
NRO Director

HE

Professional Learning Communities in Higher Education

In PLCs, education professionals work on education improvement in a systematic way. PLCs contribute to education quality and improve results for students, teachers and their organisation.

Supporting and sustainably embedding PLCs



Recommendation 1
Embed PLCs within the organisation during the preparation phase

- Align the PLC with the institution's policy and vision on education.
- Check what qualities participants should possess in terms of motivation, expertise and roles/seniority, and what diversity of roles, seniority and backgrounds is required.
- Allow participants room to change their own practices as they relate to the vision and implement the PLC's findings in their practices.
- During the process, communicate and disseminate information about both the process and the findings.
- Provide support for the PLC from the institution's executive management and line managers, and establish policies for Recognition and Rewards.



Recommendation 2
Support PLCs

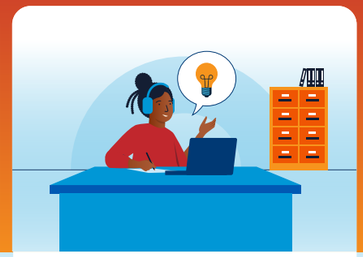
- Provide time and resources: for meetings (online and face-to-face), meeting preparations and follow-up; block out this time in the participants' calendars.
- Provide facilitators/coaches (or external experts) to support the PLC's progress.

Participating in and/or coaching the PLC process



Recommendation 3
Establish a clearly defined collective focus for the PLC

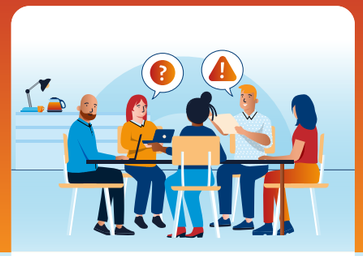
- Decide on the subject matter or thematic focus.
- Decide what specific approach best fits the PLC's focus.



Recommendation 4
Encourage learning during and between PLC meetings

- Foster positive relationships within the PLC that are based on respect, trust and safety; make arrangements about the participants' attendance at meetings.
- Encourage a critically reflective dialogue, with active participation from all participants.
- Experiment with the ideas produced by the PLC's efforts and implement the ideas that work.

Monitoring the PLC process and evaluating its outcomes



Recommendation 5
Monitor collaboration and progress during the process between meetings, and make adjustments as necessary

- Collect and document feedback about the PLC's goals, the cyclical approach, collaboration and progres.
- Adjust the form of collaboration during the process, based on feedback and reflection on that feedback.
- Communicate the approach and findings arising between meetings with direct stakeholders, management and the institution as a whole.



Recommendation 6
Evaluate the PLC's outcomes against the collective focus, communicate the findings with all stakeholders, and decide how to move forward with the PLC

- Evaluate whether the PLC has achieved its goals, and document its research into the impact on teaching pratices.
- Communicate with direct stakeholders, managers and the institution as a whole about whether the approach and findings will be embedded within the organisation.

Explanation of text boxes

The boxes provide more details and information about the scientific basis of the recommendations. Text in the red and yellow boxes concerns practices.

Detailed information 

What the research says 

Case study 

Get started 

Introduction

A Professional Learning Community (PLC) is a group of education professionals who use systematic and collaborative learning with a collective focus with the goal of improving education. PLCs are considered to offer a promising approach for professional development of education professionals, including in higher education. However, some questions remain. What exactly do PLCs intend to achieve? Do they really work? What does it take to make a PLC effective? What are the potential pitfalls? And what are some successful examples? The present guide seeks to answer these questions, by presenting research-informed recommendations for managers, policymakers and education professionals to support working with PLCs in higher education.

PLCs in higher education

To maintain and improve the quality of higher education, it is crucial for education professionals to continue their professional development.[1,2] One of the most important features of effective professional development for education professionals at different levels of education is close and regular collaboration.[3,4,5] Collaborative learning produces positive outcomes for students, teaching staff and their institutions. Teaching staff, for example, benefit through greater efficiency, improved communication, critical reflection, improved instruction, a greater sense of team spirit and more motivation.[6,7] Students are reported to experience improved learning and achievements, and institutions have the opportunity to achieve a research culture.[8]

Collaborative learning

PLCs are a form of this collaborative learning. Participants in a PLC (see page 13) work together to learn how to solve a particular education problem, and to improve student learning and wellbeing. The complex challenges and frequent innovations also mean that collaborative learning is an important feature of effective functioning and professional development in higher education.[9,10,11,12] Close and constant collaboration and sharing knowledge and experiences are key to handling the challenges, many of which are interdisciplinary.[13] Learning together provides opportunities for discussing complex problems and for developing and sharing relevant learning materials. This helps to create a collective professional culture where results of learning together can be sustainably embedded within the institution's organisation.[14] The collective reflection on education challenges allows participants to support each other both intellectually and emotionally. PLCs are less suitable for dealing with urgent problems that require immediate solutions, or as a way for individuals to acquire specific knowledge and skills.

How this guide defines a PLC

Collaborative learning in PLCs is receiving more and more attention in higher education.[15,16,17,18] However, professional literature does not agree on how to define a PLC, with some major differences between the definitions used.[19] To avoid confusion, this guide defines a PLC as follows:

> A *group of education professionals*, such as lecturers, sometimes working in collaboration with managers, researchers and/or policymakers, with a *collective focus* who *meet regularly to learn together* and *work together* for *education improvement*, using a *systematic approach that also draws on data* and literature.[20,21,22,23,24,25,26]

Various different approaches can be used for PLCs, such as Lesson Study (LS),[27,28] Teacher Design Teams (TDTs),[29,30,31] the Data Team™ Procedure [32,33] and Communities of Practice (CoPs).[34,35] For additional details, see the framework on page 10-12.

PLCs are not only about exchanging experiences or coordinating and carrying out work activities: the systematic approach, the critical reflection and the act of learning together with the aim of improving education set PLCs apart from other collaborative efforts such as work groups, project teams and communities. Effective collaborative learning in a PLC requires an approach that is more thorough, intensive and long-term than one-time workshops, conferences, lunch meetings, etc.[36,37]

Effective features of professional development are inherent in PLCs:[38] the focus on problems in daily practice, the long-term approach and close and frequent collaboration. However, the problem for many institutions and prospective participants is that starting and participating in a PLC is not an automatic endeavour. Positive results are likely only if specific conditions are met. Moreover, both the process of collaboration and its outcomes are affected by a range of factors.[39,40,41]

This guide draws together the conditions and influences identified by previous research to present some concrete recommendations for effective PLCs. For existing PLCs, the recommendations can also help to improve the process as a whole or individual parts of it.

Examples of different PLC approaches

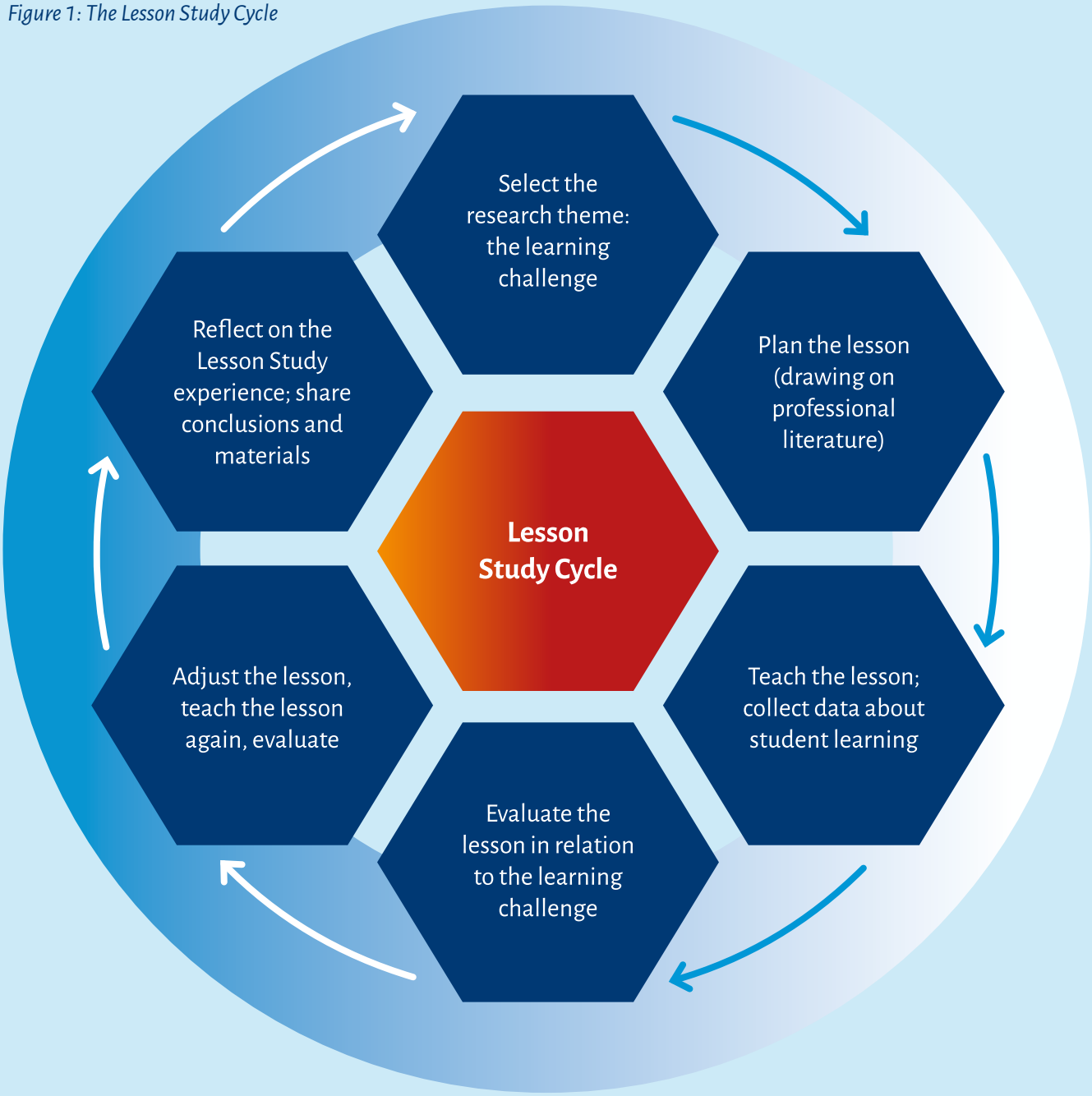
Lesson Study

A Lesson Study team is a PLC that develops expertise through a cyclical process of design and research.[42] Lesson Study originated in Japan (in the second half of the 19th century), and has been used in primary and secondary education for several decades.[43] The cyclical approach improves the lessons and student learning.[44,45,46] According to a review of Lesson Study in higher education[47] teaching staff gain a better understanding of their students' needs and have less difficulty connecting to them thanks to Lesson Study.

The Lesson Study process consists of the following steps:

1. The PLC selects a research theme: what is the challenge in student learning?
2. The PLC prepares a lesson to address the learning challenge, drawing on scientific literature.
3. One of the teaching staff teaches the lesson while the others observe. They collect data about how the lesson evolves and how the students respond and perform.
4. The PLC evaluates the lesson to determine to what extent the learning challenge has been addressed.
5. The PLC documents the findings and adjusts the lesson accordingly. The lesson is taught again to a different group of students, and is again evaluated.
6. The PLC reflects on the Lesson Study experience: conclusions and the updated lesson plan are shared with others, including the rationale for the design and reflections of teaching staff.

Figure 1: The Lesson Study Cycle



An example of Lesson Study in practice

At a research university, a group of teacher educators teaching the same subject are working together in an LS team. The main theme is "asking for, receiving and using feedback in student teachers' learning". Based on this broad theme, they designed and taught a lesson series using the LS method.

Together they recorded and observed their lessons. They reported that they saw great value in the experience of designing a lesson together based on a collective goal, observing each other's lessons, sharing their own practices, being curious about each other's feedback and learning together.

Teacher Design Teams

Teacher Design Teams (TDTs) are teams of two or more lecturers of the same or similar subjects, who work together regularly to design (or redesign) and realise shared curriculum components.[48]

Binkhorst & Poortman's handbook for a practical approach to TDTs (2017)[49] draws on a mixed-methods PhD study in secondary education[50] to describe a working method based on agile management. The long-term end goal is determined at the start. However, because it is hard to plan the development process in advance, the teams should work in flexible iterations, and use shorter steps to work towards the envisioned end product:

1. Brainstorm about the team goal and define the goal.
2. Brainstorm about tasks and formulate a list of tasks.
3. Brainstorm about the short-term plan and articulate that plan.
4. Carry out individual tasks (between meetings).
5. Carry out collaborative tasks (during meetings).
6. Finish the term and reflect.

Gast et al.'s review (2017)[51] of team-based professional development in higher education includes references to findings from case study research into TDTs. The authors report on findings concerning teacher learning, critical reflection and quality of learning materials.[52,53,54]

Faculty Learning Communities

Professional literature uses a number of different terms for what we consider to be a PLC working method. Faculty Learning Communities[55,56] are a general approach, and can be applied to PLCs in higher education.

Features include:

- sharing a theme and challenge, for example online assessment or game-based learning
- drawing on literature sources
- convening to have discussions
- designing and sharing instruction materials, experimenting with those materials and evaluating them[57]

Guest speakers are sometimes also invited as part of the process.[58] Outcomes are not confined to a design or materials for participants' own practices; conference papers and scientific articles may also be part of the outcomes.[59]

Faculty Learning Communities are also called Communities of Practice (CoPs) or Faculty Inquiry Groups[60,61,62]
(see *rug.nl/about-ug/organization/service-departments/teaching-academy-groningen/communities-of-practice/new-research-into-higher-ed*).



CoPs at higher education institutions can be used in various contexts, for example the Scholarship of Teaching and Learning (SoTL) and the Senior University Teaching Qualification (see also page 21) about Recognition and Rewards in teaching). The information on page 25 discusses an example of a Faculty Learning Community. Mixed-methods research shows[63,64,65] that participants report valuable outcomes in terms of their own learning and applicability to their education practices, in the area of their professional growth and/or student learning. Significant differences exist in approach, type of research and manner of reporting outcomes.

For whom is this guide intended?

The purpose of this guide is to help education professionals in higher education to prepare and participate in PLCs and implement them in a sustainable form. Although the separate recommendations might be relevant to each role in the education profession, below we explain what parts are more relevant to specific groups.

Higher education teaching staff

Teaching staff, teacher educators and researchers with a teaching task, such as full professors and associate professors, are the primary participants in the PLC process, together with a facilitator/coach. Recommendations 3 and 4 focus mainly on this process. Recommendations 5 and 6 are intended to support the collaboration, progress and communication in the process, and implementation of the approach and outcomes. To ensure their successful participation, participants should satisfy the parameters described in Recommendations 1 and 2.

Trainers, advisers, consultants, educators, facilitators/coaches and other support staff

Centres for teaching (and expertise in teaching) and learning staff sometimes take on the task of facilitating/coaching or advising PLC participants. Recommendations 3, 4 and 5 focus on this process. Recommendations 1 and 2 are relevant as parameters. Recommendation 6 supports the sustainable implementation of the approach and the outcomes.

Managers of PLC participants

Education directors, chairs, team leaders and deans take the lead in satisfying the parameters described in Recommendations 1 and 2. Only if the conditions of those recommendations are met can Recommendations 3, 4 and 5 be carried out properly. Managers also play an important role in communication, as part of Recommendations 5 and 6.

Policymakers

Policymakers such as strategy, policy or HRM staff also play a leading role in respect of the parameters described in Recommendations 1 and 2. Recommendations 3, 4 and 5 are contingent on the conditions listed there.

Policymakers use PLC outcomes and the reported findings from the process, as described in Recommendation 6, to define future policies.

What the research says

Studies into the effects of collaborative learning (specifically in PLCs) are more frequent for secondary education than for higher education. Where no literature relating to higher education was available to make concrete recommendations, this guide draws on sources about secondary education and about innovation and professional development in general. The list of sources and references indicates the sector and type of study (e.g. "HE – systematic literature review"), and whether multiple sources and/or methods were used.[66,67]

For higher education, it is mostly qualitative case studies that are available, and some systematic reviews. Some of that research relates specifically to PLCs, and sometimes it has a broader scope of application and deals with multiple forms of professional development and collaborative learning. The recommendations in this guide are also supported by sources from secondary education that are cited in literature about higher education.[68,69,70]

At least three systematic reviews or meta-analyses about secondary education show effects of collaborative learning in PLCs in terms of teaching staff learning and/or application and/or of student learning.[71,72,73] In total, those reviews covered 29 studies. Most concerned pre- and post-designs, quasi-experimental or correlation studies. The majority present results at the teaching staff and/or the student level. At the teaching staff level, for example, outcomes include new teaching strategies and/or applying new learning materials in lessons. Results at the student level include improved performance in mathematics, reading, chemistry and history.

Besides those reviews, several other large-scale quasi-experimental studies and Randomised Controlled Trials (RCTs) also show PLC effects, such as improved lesson quality,[74] and improved learning for reading, writing and mathematics.[75,76] Those studies, conducted at the secondary education level, refer to core characteristics of PLCs that are also described in this guide for higher education.

The PLC intervention in one of the RCTs in secondary education[77] was also carried out in higher education.[78] The results were studied using both individual and group interviews. Participants reported, among other outcomes, a better understanding of good teaching practices. A review focused on higher education[79] showed in what situations team-based professional development such as PLCs is effective. That review analysed 18 studies (qualitative and mixed-method) and described only findings that had been found in multiple studies. Results at the teaching staff level include changes in how lessons were approached, a better understanding of students and what support they need, and a better understanding of the professional self. Various components that are important to team-based professional development and that are also related to the definition of a PLC as used in this guide were highlighted as important in that review as well, for example collaboration and collective goals. The recommendations about the importance of support from the organisation, facilitation and Recognition and Rewards (see page 21) were also confirmed.

One review[80] specifically concerned the Lesson Study approach in higher education. That review covered a total of 21 studies. Findings included that teaching staff better understood their students' needs and how to connect to those needs. Another review, this time of qualitative and quantitative studies in secondary education, vocational education and higher education focused on educator learning as peers and also highlighted the effectiveness of PLCs.[81] Many of this guide's recommendations are confirmed by that study.

Detailed information

What works for education professionals' learning in primary, secondary, vocational and higher education?

The study "Teachers learning as peers" provides a number of recommendations about what is important for teachers/lecturers to learn together in groups. Those recommendations align well with this guide, although they are based on multiple education sectors and a broader set of collaboration forms. Recommendations include: create enough time for participants to learn together at the same pass; work on trust; and organise feedback and reflection.

Two of the English-language papers related to the project are:
tandfonline.com/doi/full/10.1080/13803611.2018.1509719
and:
tandfonline.com/doi/full/10.1080/00131911.2017.1281226

Detailed information

How do teaching staff learn in the context of educational innovation?

A study into how teaching staff learn in the context of educational innovation (23 higher education institutions were included) revealed a number of possibilities, including PLCs. The most important forms are: learning in the context of a specific innovation, such as challenge-based learning; learning by working together (e.g. in a PLC or theme-specific group); and learning by creating innovation space, e.g. using funding grants.

A paper about the study is available at
tandfonline.com/doi/full/10.1080/07294360.2023.2246412

The three parts of this guide

The six recommendations are divided into three parts:

1. supporting and sustainably embedding PLCs
2. participating in and/or coaching the PLC process
3. monitoring the PLC process and evaluating its outcomes

Part 1, about supporting and sustainably embedding PLCs, addresses matters that require attention long before any PLC activities begins. The information in that section is important for all groups of users, but especially for line managers and university leadership.

Part 2, which deals with participating in and/or coaching the PLC process, focuses on what participants, advisers and facilitators/coaches need to know to ensure success.

Part 3, which concerns monitoring the PLC process and evaluating its outcomes, is important at the end of the process, but not just then: the information there is also vital early on. Monitoring during the process makes it possible to make adjustments as necessary. Evaluating does not refer to assessing individuals or the PLC's results. Instead, it is about showing all stakeholders whether it is worthwhile continuing to invest time, resources and energy.

Each recommendation is accompanied by details of the importance and concrete steps. In reality, the process is not linear, and does not have one fixed order. Steps may take place at the same time or in a different order, depending on the situation. Each recommendation also includes tips for further reading and concrete tools for the process.



1 **Embed PLCs within the organisation during the preparation phase**

2 Support PLCs

3 Establish a clearly defined collective focus for the PLC

4 Encourage learning during and between PLC meetings

5 Monitor collaboration and progress between meetings, and make adjustments as necessary

6 Evaluate the PLC's outcomes against the collective focus, communicate the findings with all stakeholders, and decide how to move forward with the PLC

1 Embed PLCs within the organisation during the preparation phase

A PLC does not become sustainably embedded by itself.[82] The steps of the process require more time[83] than many other professional development activities such as training courses and workshops.[84] This recommendation explains how to sustainably embed PLCs even before the participants begin their PLC activities.

Just as careful team composition and good communication, leadership, vision and support are essential for the success of a PLC. This is borne out both by studies focusing on PLCs in higher and secondary education and by broader studies of team learning and professional development in higher education. Another important requirement is a learning culture that supports working with and participating in PLCs in a safe learning environment.[85,86,87,88,89] This requires a long-term vision on PLCs.

1.1 Align the PLC with the institution's policy and vision on education

The institution's vision on education is leading for teaching in general. That vision, translated to the department or team level, allows executive management and line managers to derive themes and subthemes for their staff's professional development. Such themes should be related to the institution's agility and innovative capabilities. Examples include interdisciplinary collaboration, digitalisation, student wellbeing, business understanding, diversity, learning paths and sustainability. A reason for working with PLCs might be that education professionals need to develop competencies or learning materials to support their students in achieving goals deriving from the institution's vision on education.

The first step is for executive management and line managers to define how the reasons for working in PLCs aligns with the institution's vision on education and the separate themes within that vision. By doing so, they acknowledge the importance of PLCs. The next step is to clarify how working in PLCs will help to achieve the vision and its related goals,[90,91,92,93] including in the long term. PLCs need to be conducted over an extended period, often with multiple stages of 'maturity'.[94,95,96] The start-up stage focuses on shared standards and values. In the implementation phase, the focus shifts to student learning and wellbeing. In the institutionalising phase, the focus is on changing teaching and student learning in practice.[97]

Case study

PLC as part of a quality agreement

A university of applied sciences has defined the overall goal for a PLC as aligning school and workplace more closely. Participants are facilitated by being allowed the time to participate. They also have individual personal goals, for example in terms of interprofessional collaboration. They have defined a collective goal relating to school-workplace alignment. This makes the PLC part of the quality agreements to ensure a better sustainable implementation.

Case study

No sustainable embedding without a clear vision on education

At a university of applied sciences, lecturers are invited to take part in a Lesson Study PLC. The subject deals with improving students' self-regulated learning. However, no clear vision on that theme has been defined to connect it with the PLC. Moreover, no procedures are in place for determining who should be part of the PLC. One of the teachers is participating mostly because of expectations set by the study programme. Although Lesson Study requires teachers to design (or redesign) their own lessons, and to observe and adjust them, the lecturers are not actively teaching during the period when meetings are held. Although they value the team's discussions, the meetings do not result in any concrete improvements.

1.2 Check what qualities participants should possess in terms of motivation, expertise and roles/seniority, and what diversity of roles, seniority and backgrounds is required

PLCs require close and frequent collaboration with additional work between meetings, so it is important for participants to be properly motivated. Motivation and commitment will depend on the PLC's relevance to the participant's own education practice. Moreover, participation should be voluntary. Participants need to have an open mind to an evidence-informed approach. The composition of the PLC should be varied in terms of expertise, roles and seniority. Besides teaching staff (including researchers with teaching duties), the PLC might also include policymakers, PhD students, library staff and IT staff, depending on the theme. The organisers may decide on a profile for participants that aligns with the vision, a more specific theme and/or the envisioned working methods and investment of time. For example, if the organisers decide to use the Lesson Study approach, the participants will need to be teaching during the period when the PLC's meetings are scheduled. If a specific subject is the central theme, it make sense for at least some of the participants to have an involvement with that subject, for example as lecturers or programme directors. Critical participants from related subjects or with different roles (e.g. managers) may also provide relevant input.

Case study



Developing educational leadership

A PLC has participants from multiple universities of applied sciences, drawn from different roles and duties in education, such as a course coordinator, programme director, innovation project leader and support staff. They all work on educational innovation and are all regarded as frontrunners in their field. The main PLC theme is to deal with obstacles in the innovation process, including as they relate to educational innovation and didactics.

During the PLC's meetings, participants discuss the challenges in order to learn from each other. Those discussions form the basis for the programme: what to do, when to do it and with whom. Although they occasionally invite guest speakers from outside to present a seminar or workshop, the interactions between participants are always central. Those interactions concern the perspectives of different actors in the innovation process, how they might become involved, and what type of leader the participants are or need to be. This leads to a broader understanding of the participants' roles in innovation and helps them to develop their educational leadership: in terms of increased context understanding, greater flexibility, a broader professional identity and more perceived agency.

For example, one participant experienced innovation resistance as a factor beyond their control. From the broader perspective developed as a result of the PLC's meetings, the participant is now more proactive about talking to others about such issues. He feels as if he has more influence on the matter, yet at the same time accepts what he cannot change.

Participants report that the PLC's diversity is a significant factor in their professional development. Thanks to the safe environment, the distance from their day jobs and the sense of community, they feel comfortable discussing their challenges. This helps them to make optimum use of the full range of different perspectives and so to learn together.

Detailed information



Working together in larger and smaller PLCs

We have been unable to uncover any research into the effects of PLC group size. In secondary education, PLCs often consist of 6-12 participants;[98,99] in higher education, however, PLCs show a much greater variety (4-200). Where the group is very large, the PLCs appear to be concerned more with forming a network with a broad theme, organising colloquiums, providing online platforms or using social media to communicate.[100] Closer actual collaboration subsequently occurs in connection with subthemes, and in smaller groups of 5-25 people.[101,102]

Participants come from a single institution or from multiple institutions. If the participants come from different departments or faculties at a single institution or from different institutions, the PLC is sometimes called a Professional Learning Network (PLN).[103] On the one hand, this offers the opportunity to learn from different perspectives and backgrounds;[104,105] on the other, it is important to ensure a collective theme and focus.

1.3 Allow participants to change their own practices as they relate to the vision and implement the PLC's findings in their practices

A vision for the long term (see 1.1) becomes concrete when participants share ideas about how their PLC relates to that vision and how to implement and evaluate their findings in practice. If the PLC's participants work on student wellbeing, or assessment in challenge-based learning, for example, but have no possibilities for implementing their findings, they will soon become frustrated.

Recommendations 3 and 4, which concern participating in and/or guiding the PLC process (see page 26-36), show how participants can take action and make a proactive contribution. Learning results from experimenting and fine-tuning. However, this approach needs to align with the institution's policy. To use the PLC and its results, the participants and the facilitator/coach need to trust each other, and they need to experience a learning culture. Such a culture[106] is created through shared leadership,[107,108] combined with positive participant qualities such as positive motivation and open communication. It is also essential for meetings to be facilitated/coached (see Recommendation 2).

Case study



Frontrunner professional role models

Over the past two years, a university of applied sciences has developed the frontrunner professional role. A frontrunner professional is an educator who serves as a role model and coach for colleagues. They work in groups of five, and are responsible for designing education and teaching that education to students. They support their select educators with formative assessment, self-regulated learning and broader quality development. For example, they ensure that students receive proper supervision during feedback and peer feedback moments. This improves the attention to subject-integrated education.

The expert role of the frontrunner professional is based on the institution's quality agreements, which encourage lecturers to learn together about challenges in their education practices. As the frontrunner professional role is new, the institution encourages them to share experiences. They meet with the project leader ten times per year, and they share their experiences to learn together what the role entails; for example, about what activities can be used for formative assessment. Theory and practice are brought together and the frontrunner professionals find new ideas to share with their colleagues. The meetings fulfil the frontrunner professionals' need for deepening their understanding through development as part of their own education. As one of the frontrunner professionals reports, "What helps me most is knowing that you experience the same as other frontrunner professionals in the challenges of sharing knowledge about research capacity and of developing it with colleagues. By working together, we become aware of how much we have in common. We then work together to think about the next steps."

1.4 During the process, communicate and disseminate information about both the process and the findings

Learning in teams and establishing a learning culture both require communication.[109,110] This also extends to PLCs.[111,112] It is important to communicate and discuss the knowledge resulting from the PLC process.[113] To involve colleagues from outside in the process and the findings, participants in PLCs should communicate about the approach and the process, the advantages, the organisational aspects and the findings.[114] This will also help to sustainably embed the PLC and its findings.

Leadership makes a difference here, and specifically how much the PLC's participants trust the person leading the communication. Communication should not be one-way only, and it should be both written and unwritten, and connect the institution or department with the PLC. For example, it could take place during department meetings.

1.5 Provide support for the PLC from the institution's executive management and line managers, and establish policies for Recognition and Reward

Executive management needs to appreciate participation in PLCs. Besides simply expressing their appreciation, they should facilitate time and resources. Continuous practice improvement in collaboration with colleagues – as happens in PLCs – can be an integral part of the framework of the teaching staff's Recognition and Rewards. To promote this, education professionals

need concrete tools and guidelines to document their achievements and evidence. HR staff, managers and career committees should use these tools and, if necessary, participate in training to use them. Raising awareness of role models shows others what they can do to take further career steps of their own. Rewards for educational innovation need to be spotlighted, such as Comenius and teaching academies/communities.

Relating research and education, as PLCs do, also helps with recognising and rewarding teaching.[115] This might be done by providing teaching staff with resources and funding for innovating in their teaching practice. A policy of Recognition and Reward provides opportunities for executive management and line managers to show their support,[116,117,118,119,120,121] while making participants responsible for the findings.

What the research says



A review that covered 44 qualitative and quantitative studies into the sustainability of professional development interventions in several different education sectors revealed that leadership is one of the most important factors.[122] Vision and facilitation play a central role, as do individual qualities such as the motivation, knowledge and skills of education professionals. Collaboration with, support by and feedback from colleagues (which are inherent in working in PLCs) are also important factors.[123]

Mixed-methods research into leadership for sustainable innovation in education, based on PLCs in secondary education, shows how important it is to have a vision, and how important the relationship is between the PLC and the vision. This also applies to the facilitation, clear communication and support provided by leaders.[124] Other reviews that address effective implementation in education and related sectors also highlight the importance of leadership, facilitation, shared focus and encouragement of learning.[125,126,127]

Research into leadership in various sectors shows that a clear vision and policy, combined with concrete goals, are essential for change to succeed in education.[128,129,130] Qualitative research into innovation in higher education confirms the importance of having a long-term vision, collaborating, communicating and providing support.[131] That same research also shows how important it is to recognise and reward the staff involved and to provide opportunities for them to influence their own practices.

Reviews of team-based professional development of teachers in higher education report that facilitation, leadership and recognising and rewarding are factors that impact effectiveness.[132,133] Those reviews refer to qualitative case studies of participants' opinions and experiences. Other case study research also highlights the importance of recognising and rewarding.[134,135] The importance of individual qualities such as motivation, attitude and commitment is demonstrated in Gast et al.'s review (2017)[136] and in mixed-methods research into PLCs in secondary education.[137]

Moreover, higher education institutions are in the process of further developing their policies for teaching excellence.[138,139,140] For example, Lesson Study in higher education may be used for the Scholarship of Teaching and Learning (SoTL).[141] Programmes such as the Senior University Teaching Qualification (SUTQ) and the educational leadership programme often have a central focus of innovating together/learning together using an evidence-informed approach.[142] Those programmes give participants the evidence that they need to move their careers forward. At the same time, universities of applied sciences also want to offer more opportunities for lecturers to develop in research, for example through research professorship, PhDs and research circles. Similar to research universities, they can use PLCs to improve their education by researching education. Policies for Recognition and Rewards should be shaped accordingly.

Get started

Reflection tool for leadership for sustainable innovation with PLCs

Leadership plays a crucial role in transforming innovation at higher education institutions into an organisational routine. This tool helps teams to reflect and so analyse what leadership is needed for sustainable implementation of innovations. Staff discuss what is going well and what more is needed to implement the innovation.

The tool is based on research into the role of school leadership at schools (secondary education) that have sustainable practices for working with interventions for educational improvement.[143] That research showed the importance of the aspects of 'Organising and designing/redesigning the organisation'; 'Managing the teaching and learning programme'; 'Understanding and developing people'; and 'Organisational structures and social and cultural interactions' in making innovation sustainable both in the institution's policies and in its practices. The tool addresses each of those aspects.

The themes and recommendations derived from working with this tool can also be applied in the context of higher education.

pro-u.reflectiontool.utwente.nl/en

Get started

Sustainability Meter for educational innovation

Innovations become sustainable once they are embedded in an institution's organisational routine. However, this is not easy to accomplish. The Sustainability Meter is a tool for reflection and discussion to generate concrete improvement actions that support sustainable innovation in the user's specific situation. Although it was developed from PhD research in the context of secondary education, it has also been piloted in higher education.[144]

pro-u.duurzaamheidsmeter.utwente.nl/en/home



1. Embed PLCs within the organisation during the preparation phase
2. **Support PLCs**
3. Establish a clearly defined collective focus for the PLC
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6. Evaluate the PLC's outcomes against the collective focus, communicate the findings with all stakeholders, and decide how to move forward with the PLC

2 Support PLCs

Participation in PLC meetings and the related work between meetings costs time and energy, which participants cannot be expected to invest on top of their day-to-day responsibilities.[145,146] Preparing to embed PLCs therefore also requires ensuring facilitation and resources, for both face-to-face meetings and the preparations in between.[147,148,149,150]

It is important that daily practices do not to supplant PLC work and instead the momentum is kept going in the PLC meetings. To ensure this, participation should be confirmed in the participants' calendars and work loads.[151,152,153,154] Being coached is important for the professional development of teaching staff;[155,156] this extends to facilitating/coaching PLC meetings to ensure a more sustainable result.[157,158,159] Participants consider support from a facilitator/coach or an external expert crucial for the PLC's progress.[160,161,162,163,164]

2.1 Provide time and resources: for meetings (online and face-to-face), meeting preparations and follow-up; block out this time in the participants' calendars

Map out how much time is needed, and how much time each participant can spare. Research does not indicate a specific minimum amount of time, only that a PLC takes up a substantial amount in terms of contact hours and duration.[165] Literature about higher education shows a range from ten weeks[166] to multiple years.[167,168] Regular meetings are needed to keep the momentum going; various sources quote a meeting frequency of approximately every 3-4 weeks.[169,170,171,172,173]

2.2 Provide facilitators/coaches (or external experts) to support the PLC's progress

The role of facilitators/coaches is to coordinate the collaborative work of the PLC. Facilitators/coaches create a suitable environment to support the participants' professional development and improve the PLC's capacity so that the participants can generate knowledge about their own educational practice.[174,175,176]

Facilitators/coaches provide:[177]

- coordination: sufficient time for scheduled meetings, a meeting space, materials and resources to carry out the work
- a suitable learning environment: mutual trust, a positive learning culture within the team and the institution (see Recommendation 1)
- focus: stimulating the learning process by asking open questions and, specifically, "why" questions, focusing on student learning as it relates to the PLC's focus (see Recommendations 3 and 4)[178]

The purpose is for all the participants to have input and develop trust, respect and a "shared language".[179,180]

Facilitators/coaches need to guard the balance between challenges in the participants' daily practice, the deeper learning process[181] and theory about student learning based on scientific resources. They also need to monitor the participants' practical experiences and active participation. Coaches should initially emphasise coordination and a safe learning environment for collaborative learning, before shifting to reflection in a later stage.[182]

Based on these responsibilities, facilitators/coaches need expertise in terms of:

- process guidance, such as listening, asking critical reflection questions, encouraging and connecting
- community building in their PLC
- stimulating learning (see Recommendations 3 and 4)
- coordination skills, such as ensuring that participants have the necessary time and spaces and communicating this to their managers[183,184,185]

The facilitator/coach does not necessarily need to possess expertise relating to the subject matter if the participants are already competent. An external facilitator/coach, for example someone from a teaching & learning centre or a researcher-facilitator, could help to create a safe learning environment and encourage critical reflection, simply because they come from outside.[186,187]

However, subject-matter expertise could be useful if the participants still need to develop their knowledge.[188] Facilitators/coaches who do not possess such expertise could draw on professional literature or invite experts to one or more PLC meetings.[189,190,191]

What the research says

The review supporting Recommendation 1 about sustainable professional development[192] shows that facilitation is important for effective interventions. Mixed-methods research into leadership for sustainable development with PLCs in secondary education also shows how important good facilitation is.[193] That study involved close observation across an extended period of time, and conducting interviews and social network analysis. The importance of facilitation is further confirmed by reviews of effective implementation (both in education and in related sectors).[194,195,196]

The facilitator role for educational interventions is also highlighted.[197] A review of empirical studies[198] reveals that facilitators/coaches have a positive impact on PLCs in secondary education. This is confirmed by qualitative research[199] into innovation in higher education.
A review of team-based professional development in higher education has also confirmed how important facilitation is.[200,201]

Case study

Facilitation and an evidence-informed approach
A PLC with 15 participants from a service unit, various faculties of a research university and a university of applied sciences focuses on student and staff wellbeing. The PLC draws on a defined vision, mission and related goals. The plan explicitly includes facilitation and an evidence-informed approach. The group has defined three subthemes as well, based on research into supporting student wellbeing: individual focus, interpersonal focus and didactical focus.

The group meets four times a year, with meetings lasting three hours; the agenda is decided beforehand. Subgroups also meet between meetings. Findings and products are presented in workshops at the research university's annual event to celebrate education. Interested colleagues are invited to join the PLC there. The group has been expanded, with the addition of several special interest groups that organise regular events on the matter of wellbeing. See also the example of CoP wellbeing on page 35.

To find out more, visit:
rug.nl/about-ug/organization/service-departments/teaching-academy-groningen/communities-of-practice/new-wellbeing



1 Embed PLCs within the organisation during the preparation phase

2 Support PLCs

3 **Establish a clearly defined collective focus for the PLC**

4 Encourage learning during and between PLC meetings

5 Monitor collaboration and progress between meetings, and make adjustments as necessary

6 Evaluate the PLC's outcomes against the collective focus, communicate the findings with all stakeholders, and decide how to move forward with the PLC

3 Establish a clearly defined collective focus for the PLC

The first step in participating and/or guiding PLCs is to determine a collective focus. That focus should align with the institution's vision on education and the resulting themes that it pursues.

Themes such as innovation, diversity, student wellbeing, digitalisation, self-directed learning and learning performances are often decided before the PLC starts. Sometimes the PLC's participants are invited based on the selected theme.[202,203,204] Next, the approach is determined based on the subject matter or thematic focus.

3.1 Decide on the subject matter or thematic focus

The PLC's focus should align with the institution's vision on education, should result in education improvements and should draw on data about the underlying problem and envisioned outcomes.[205,206,207,208] To determine the collective focus, the PLC's participants first explore the current situation for students:

- What are current successes and challenges?
- Why does this need to change?
- What do we want to achieve?

Often, when the PLC starts, the assumptions and prejudices about possible causes or solutions are unconfirmed or have been rejected by data. For example, students might appear to be unmotivated. In reality, however, the problem might lie in the lesson timetable or the teaching format. Perhaps it appears that some subjects within a course need more time, whereas other ways of working and learning could prove more successful. With the help of data – including data collected from stakeholders such as students – and professional literature, PLC members can investigate what the actual problem is. This then helps them to define the PLC's concrete focus. Only once the focus has been decided will it be possible to form ideas for the PLC's further work.

3.2 Decide what specific approach best fits the PLC's focus

Before the PLC starts its real work, the participants have to decide what specific approach they will adopt. For example, if the focus is to develop a new curriculum, module or subject, the best approach would be the Teacher Design Team approach. Faculty learning communities work better with a more general evidence-informed approach.

What the research says



Factors explicitly reported to contribute to a successful PLC are a collective vision and consensus and commitment from the participants: in other words, whether the participants agree with the value and goal of the contemplated innovation.[209] High participant commitment is also reported as important in general.[210] According to reviews of PLCs in secondary education, a collective focus (particularly on student learning) is important.[211,212] One review addressing the effects and influences of collaboration between teaching staff (mainly in secondary education)[213] found that a focus on the students, combined with a clear direction and shared goals, were important factors in collaboration. The underlying premise of all these reviews was that true collaboration is possible only if the participants work together on shared goals and tasks. A qualitative case study into the role of facilitators/coaches in higher education[214] highlighted the importance of shared standards and values, as well as proper support that allows teachers to focus on student learning.

Get started

Handbook for Teacher Design Teams
A handbook for facilitators/coaches has been produced that is based on research into Teacher Design Teams (TDTs). Although it was developed primarily with secondary education in mind, researchers[215] have also applied the principles to higher education.

The handbook identifies the following characteristics of successful TDTs:

1. participation: voluntary, intrinsically motivated and with an open mind to innovation
2. conditions: time, space and support
3. organisation of the TDT: regular meetings, held with a sufficient frequency and in suitable locations
4. goal: a clearly defined collective focus
5. activities: design, discussion, expert knowledge (input), plus activities outside the TDT
6. team interaction: openness, feedback, coherence and equal investment
7. leadership: shared and top-down

The PhD thesis in English is available here: *research.utwente.nl/files/17393668/thesis_F_Binkhorst.pdf*

Get started



PLC checklist

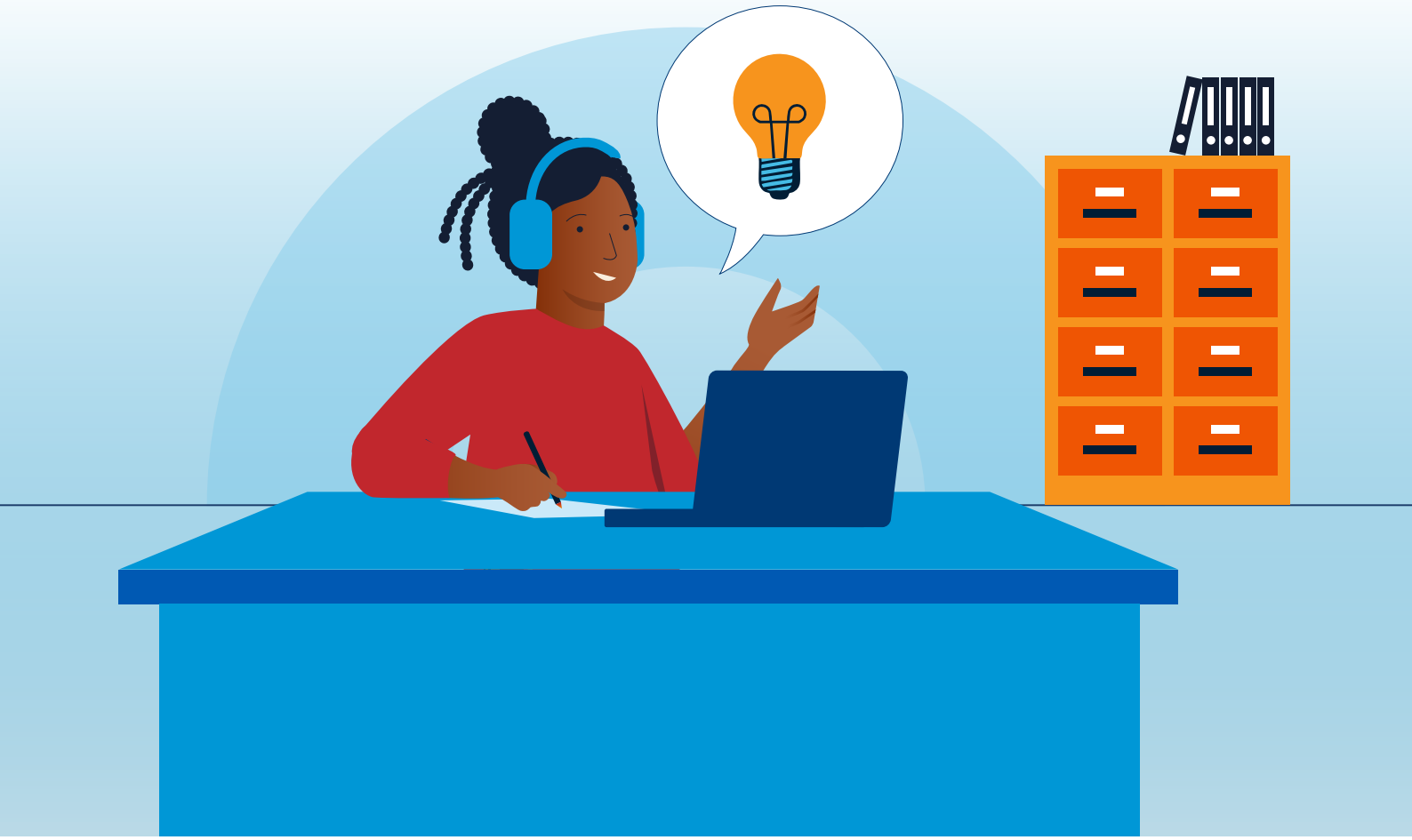
How can educational institutions make sustainable use of innovation in education? What role does leadership play? Research at the secondary education level has yielded a checklist that is also useful for higher education.[216]

Before the PLC starts:

1. Focus: deliberately discuss the goal, the link between goal and vision, and how the goal relates to the participants' own practices, and give the goal more concrete shape.
2. Collaboration: decide on the PLC's composition (i.e. frontrunners, critical friends, expertise, motivation), select the chair and minutes taker, decide on the meeting frequency, agenda and action points, choose what media to use for communicating within the PLC.
3. Leadership: decide on time and resources, schedule time, and define goals and priorities for the short term and the long term, communicate progress, share knowledge with colleagues, ask colleagues for input for the PLC, discuss and apply the findings and support teaching staff.
4. Reflective inquiry: shift from exchange to reflection, understand the reasons for changing, know how to change, identify the underlying data and literature for change.

During the PLC process:

1. Focus: make sure that everyone understands the short-term and long-term goals.
2. Collaboration: stick to agreements, be on time, focus during collaboration, balance researching-designing-developing together, apportion the work, discuss the effects on education and learning, balance individual and group learning.
3. Reflective inquiry: clarify the why and the how of the change, discuss the underlying data and literature for change.
4. Leadership: make sure that everyone understands the vision, goals, priorities and subject matter, communicate with other colleagues about the PLC, share findings, apply the findings, support teaching staff, be a role model.
5. Boundary crossing: communicate and share knowledge, seek input from outside the PLC, share findings with others, ask outside colleagues to actively participate, explain what collaboration is taking place and why.



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4 Encourage learning during and between PLC meetings

Effective learning in PLCs requires an approach that is more intensive, in-depth and long-term than standalone workshops, conferences and lunch meetings.[217] To properly work together, participants need to encourage each other to discuss the current situation and should not avoid constructive conflict.[218]

For collaborations, a distinction is often made between storytelling, aiding and assistance, sharing, and joint work.[219] What gives true collaboration its depth, however, is discussing, evaluating and critically reflecting on practices with colleagues.[220]

Brown & Poortman (2023)[221] discuss in-depth collaboration in what they call 'learning conversations'. Learning conversations entail everything from PLC conversations during meetings and the process as a whole. During the process, participants draw on knowledge, for example from data and literature, and combine it with their expertise regarding the problem and goal that they are working on. They systematically generate ideas to solve problems or achieve goals and test them. This process yields a critically reflective dialogue that encourages constructive dissonance. This means that participants might experience changes in their opinions, in this case about teaching. Data analysis protocols can serve as tools in these conversations.[222,223]

4.1 Foster positive relationships within the PLC that are based on respect, trust and safety; make arrangements about the participants' attendance at meetings

Several different factors influence collaborative learning, including trust, safety and respect.[224,225,226,227,228,229] To satisfy the PLC's parameters, participants need to start by discussing what their motivation is to participate, relative to the vision of the PLC and the institution (see Recommendation 1). They should discuss the standards, values and approach, and make arrangements about attendance and roles. During the initial phase, exchanging ideas and helping each other builds trust; in later phases more in-depth collaboration with critical reflection supports learning.[230]

To realise the factors that have a positive influence on collaborative learning, it is vital to have a facilitator/coach role.[231,232,233,234,235,235,236] The facilitator/coach can highlight respectful communication as and where necessary, creating an environment where participants feel safe sharing their experiences and ideas. Some PLCs have a chair who determines the agenda before meetings and monitors progress. A minutes taker documents discussions, outcomes and actions. A digital learning environment can also help with monitoring and supporting progress. Participants should monitor the collaboration and conditions during the process.

4.2 Encourage a critically reflective dialogue, with active participation from all participants

The PLC approach is cyclical: it is reflective and systematic, with participants discussing, planning, designing and evaluating. The approach draws on data, literature and experimentation, and is adjusted as and where needed (see also Recommendation 5).[237,238,239,240,241]

After the participants have decided on the collective focus for the PLC, three further phases follow in the process:

1. Determine what change is needed and why, to realise the collaborative focus, drawing on data, literature and other sources.
2. Experiment with the change.
3. Review and reflect, and adjust as necessary.

See also the examples of how PLCs work on page 10-12.

A PLC should base its ideas for change on the actual cause of a specific educational problem in the current situation, or on the reason why the desired outcome has not been achieved previously. Usually, these ideas are initially based on intuition. A critically reflective PLC process involves gathering data and/or literature. To stimulate the dialogue, facilitators/coaches might recommend literature on the topic, for example. They could also provide an overview of possibilities, ask questions, encourage discussion, identify conflicts and help to solve them (see the example below).

The PLC phases involve multiple meetings, plus activity between meetings. It is important for the PLC's participants to actively contribute. For example, they might work together to identify where students are struggling, what is unclear and what can be done about it.

They can do this through interviews or observations, or by studying students' project work or assessments.

As awareness of student wellbeing and commitment increases, the attention for their active commitment in educational improvement is also rising.[242] A PLC might involve students as passive data sources.[243] However, it could also ask them to make an active contribution to the improvement dialogue[244] or even involve them as equal partners alongside teaching staff.[245] The PLC's participants can encourage active involvement by students, for example by organising focus groups or panel meetings with them.

Case study



Experiences of facilitators/coaches
The following are quotes from facilitators/coaches about encouraging a reflective dialogue:[246]

"To help the group focus on the theme they were inquiring about, I provided them with references to relevant literature about problem-based learning and collaborative learning. By showing them an overview of possible pathways, I hoped to encourage dialogue and debate and help them to further develop their practical knowledge." (p. 164)

"My primary way of supporting reflection is just to ask questions. For example, they regularly complained that students were passive. So I asked: if they are passive, what can you do to help them become more active and self-regulating? This type of questions helped them to reflect about what they were doing or to think about what they were not doing and what they could do." (p. 164)

"My approach to intervening is to ask questions, encourage them to ask questions of their own and to identify contradictions and identify and resolve conflicts." (p. 165)

4.3 Experiment with the ideas that result from the PLC's efforts and implement the ideas that work

The systematic approach (which also draws on data and literature) and learning together to achieve educational improvement are what distinguish PLCs from other forms of collaboration such as working groups, project teams and networks, where systematic learning and working do not form the essence of the work. PLCs use various different approaches, such as Lesson Study, Teacher Design Teams and the Data Team™ procedure (see page 10-12). These systematic approaches are documented according to their steps or format. The examples on page 33-35 explain how the learning conversation phases work.

What the research says

Positive relationships based on factors such as trust are reported to be important, according to reviews concerning collaborative learning in secondary and higher education (see also Recommendation 3).[247] A literature review aimed at higher education[248] that addressed the question of when team-based professional development (including PLCs) is effective reported results at the teaching staff level, e.g. about how to better support students.

Reviews of effective implementation in education and related sectors show the importance of encouraging learning (see also Recommendation 2).[249,250] A PLC review at the secondary education level[251] reported reflective dialogue as one of the qualities with an impact on teacher learning.

One study at the higher education level mentions reflection, analysis, discussion about the individual's practice and possible improvements as valuable components of the intervention.[252] A higher education case study into collaborative learning by teaching staff[253] showed how insufficient encouragement of reflective dialogue will detract from the depth in learning and the collective vision.

Reviews concerning implementation,[254] team-based professional development in higher education[255] and the effects of PLCs[256] highlight the importance of facilitating/coaching as a core component of teacher development. Research also confirms the importance of implementation and experimentation[257] (see Recommendation 2).

Case study

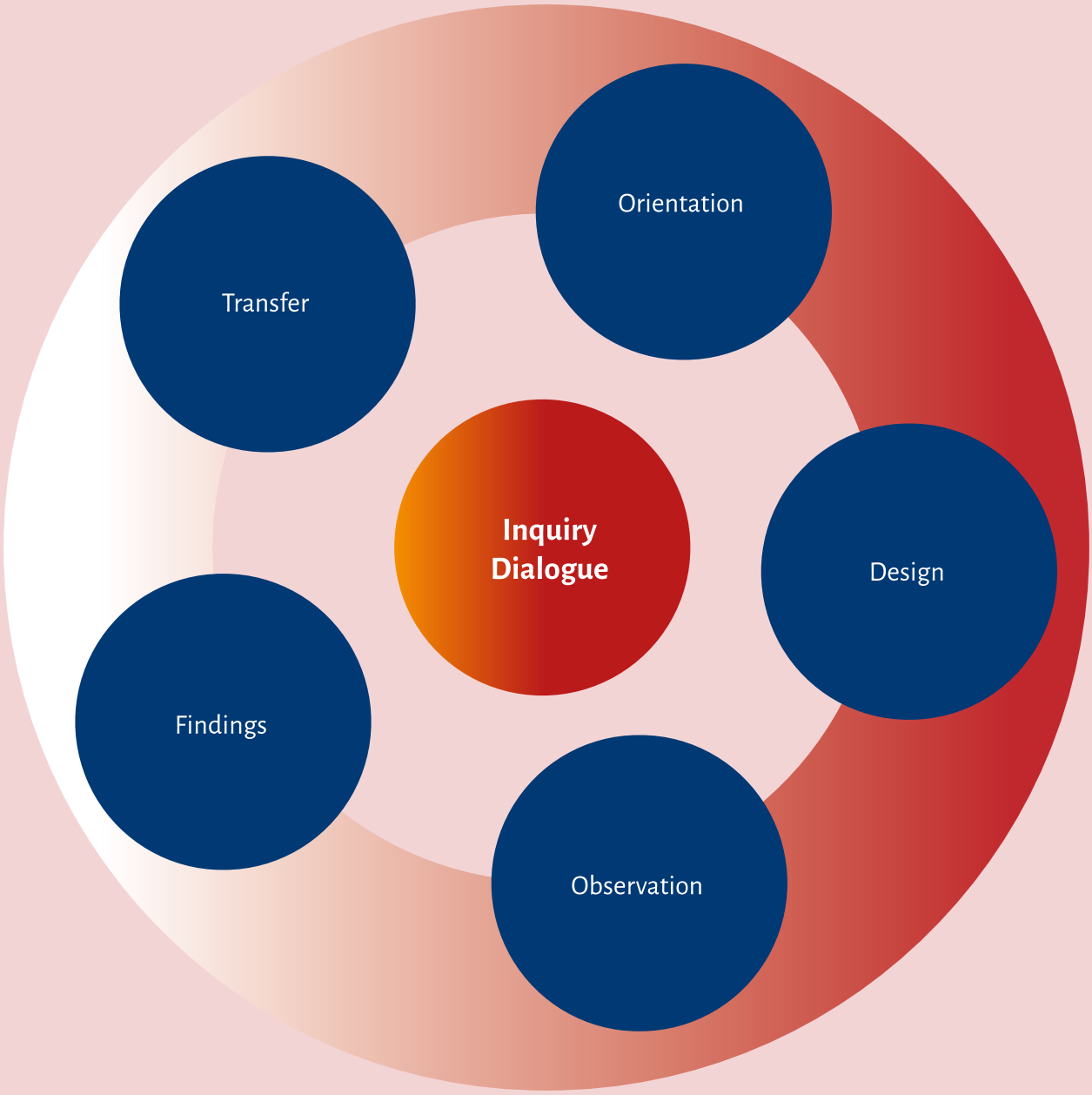
Design-Based Learning Study

In 2018, a university of applied sciences embraced Design-Based Education (DBE). In DBE, students, teaching staff and professionals from the field work together in studios revolving around learning, researching and designing. Working together, the participants design solutions for authentic societal challenges. A lecturer facilitates these processes. This role requires new didactical skills, and PLCs were set up to support the lecturers. The lecturers learn, work and innovate in the same manner as students do in DBE. The PLCs use the Design-Based Learning Study (DBLS) method specifically designed for lecturers facilitating DBE.

DBLS is an iterative and cyclical process of collective learning in PLCs, where teaching staff discuss their challenges with DBE via inquiry dialogues. They then design didactical activities, having determined first what their expectations of student learning are. They apply those activities in the studios, and study the impact on their students, for example through observation, interviews, logs (data) and literature. Together, the lecturers evaluate to what extent their expectations about student learning were met and share their findings both within the PLC and beyond.

The PLCs consist of 15 to 20 participants plus a team leader. DBLS uses a series of five 3-hour meetings. Between those meetings, the teachers construct assignments, conduct literature reviews, and design and observe each other's classes.

Figure 2: Design-Based Learning Study



The following are some of the challenges that the teachers have addressed:

- Self-regulated learning: what can I do as a facilitator to boost the students' intrinsic motivation?
- Design-based learning: what can I do as a facilitator to help students engage properly with their role as stakeholders in the design challenge?

The following are quotes from participants:
"We're finally talking about education again, instead of organisational stuff."

"Now I know what the students go through. I'm better able to facilitate DBE now that I have experienced this way of working for myself."

Case study

Community of Practice: Wellbeing

A research university facilitates Communities of Practice (CoPs), where learning is encouraged using literature and data. In 2022, for example, the CoP Wellbeing was started. Lecturers, researchers, trainers and students from different faculties work together to improve student and staff wellbeing. They share their expertise, insights and results about small-scale experiments to further develop the understanding of wellbeing. The goal is for students and staff to benefit from a healthy academic culture that supports their wellbeing. This includes having a safe and inclusive environment that supports commitment and motivation.

The CoP's goals are:

- Build a network of stakeholders (lecturers, trainers, support staff and students from all faculties) with expertise in wellbeing.
- Encourage collaboration within that network, between both teaching and research staff.
- Share existing practices, specifically best practices.
- Develop evidence-informed teaching, tools and advice.
- Actively participate in the development of university and faculty policy.

Three working packages were established, based on a literature review by Deunk & Korpershoek (2021):[258]

1. The individual domain: how can we equip students and staff with tools to support their wellbeing in the academic context?
2. Interpersonal domain: how can we equip students and staff with tools to work together in a way that supports their wellbeing?
3. Educational organisation domain: how can we improve our organisation so that it supports a culture of wellbeing for students and staff?

Within each work package, activities are developed and reported on during the CoP's meetings. The CoP started with seventeen colleagues from eight different faculties, a student service centre colleague and one colleague from a university of applied sciences. The participants come together four times per year, for 3-hour meetings with an agenda that is set beforehand. It uses an evidence-informed approach.

The community platform has a list of 15 papers that the different work groups use. A journal club also discusses one paper every month. The Individual Wellbeing work group has collected data from all the university's faculties (staff and students) and has identified 71 possible interventions to support student wellbeing, from training and a coaching platform to a wellbeing learning community.

For more information, see:
rug.nl/about-ug/organization/service-departments/teaching-academy-groningen/communities-of-practice/new-wellbeing?lang=en



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5 Monitor collaboration and progress between meetings, and make adjustments as necessary

The PLC's progress is monitored to adjust the process as and where necessary. This extends not only to the outcomes for students, teaching staff and the institution (see Recommendation 6), but also to the process itself.[259,260]

During the PLC, its progress should be documented and analysed, and communicated with stakeholders outside the PLC. After the first few meetings, for example, it could emerge that tweaks might make the goal more relevant and/or easier to achieve. Participants should also make sure that the approach and their collaboration are optimal, and make adjustments if they need to. In their experience, is the approach adopted the best way to achieve the goals? Are all participants making an equal and active contribution? Do they feel that the PLC offers a safe learning environment (see also Recommendation 4 about learning during meetings)? In conclusion, the participants' experiences and the PLC's progress (or lack of progress) could trigger adjustments to both the approach and the collaboration.

5.1 Collect and document feedback about the PLCs goals, the cyclical approach, collaboration and progress

Defining the PLC's collective focus demands time and effort. However, that focus, and/or the PLC's goals, might need to be changed based on input from stakeholders and the participants' reflection on that input. This makes it important to start early with collecting and documenting feedback about the goals, the PLC's approach, the collaboration and the progress made.

5.2 Adjust the form of collaboration during the process, based on feedback and reflection on that feedback

The PLC's participants should review their own methods, if necessary with help from the facilitator/coach. This includes the activities to date, the frequency of meetings, discussions, how conflicts are handled and how feedback is given.[261] Participants should adjust their efforts towards collaboration and their methods based on that evaluation and their reflection.[262]

5.3 Communicate the approach and findings arising between meetings with direct stakeholders, management and the institution as a whole

Another useful practice for PLCs to adopt is to communicate the approach and results produced between meetings with direct stakeholders, managers and the organisation as a whole.[263,264] These communications could be formal or informal, and could be shared in newsletters and/or at moments such as seminars, study days, celebrations and teacher meetings.[265]

What the research says



For the PLC's process to be adjusted, and for the adjustments to be communicated, feedback needs to be collected first.[266] Reviews about implementation studies that have been used for previous recommendations[267,268] confirm how important monitoring is. This involves regularly gathering data about the approach used to achieve the goal and what progress towards that goal is made.[269,270] Adjustments are made as necessary, based on the results.[271,272] A review of team-based professional development provides additional confirmation.[273]



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5. Monitor collaboration and progress between meetings, and make adjustments as necessary
6. **Evaluate the PLC's outcomes against the collective focus, communicate the findings with all stakeholders, and decide how to move forward with the PLC**

6 Evaluate the PLC's outcomes against the collective focus, communicate the findings with all stakeholders, and decide how to move forward with the PLC

Evaluation and reflection in PLCs are not about external accountability.[274] They are about the internal process, where education professionals come together to initiate and carry out improvements.

However, many PLC initiatives still lack objective long-term evaluation.[275,276,277,278,279,280] Moreover, most studies focus on outcomes for teaching staff;[281] compared with the teacher level, relatively little research is available about the outcomes at the student level or the organisation level.

6.1 Evaluate whether the PLC has achieved its goals, and document research into the impact on teaching practices

PLCs need to show their findings in terms of educational change and student learning.[282] For example, participants in a PLC could survey their students after they have implemented the change and collect the findings. In the LS example on page 11, participants use video recordings to collect data. Other possibilities include asking with students about their experiences with the designed lessons, assignments or questions answered during the lesson.

A PLC evaluation can show whether the participants are pleased with their collaborative learning. It can also reveal what the participants have learned, both about this method and about the goal: to what extent have they applied what they have learned, to what extent the PLC has achieved any organisational change, and to what extent it has achieved its stated goal.[283,284] See also the evaluation framework on page 41.

PLCs create value in various different ways:[285]

- direct value: from the help that participants give each other during meetings, in the form of tips and case studies
- potential value: from strengthening the network
- applied value: from the change in practices, for example improved student learning
- reframing value: from generating new perspectives, visions and/or policies through reflection

A PLC can, therefore, yield impact at different levels. However, this also means that it is only possible to achieve impact at "higher" levels if impact is achieved at specific "lower" levels as well.

6.2 Communicate with direct stakeholders, managers and the institution as a whole about whether the approach and findings will be embedded within the organisation, relative to the collective focus that was determined beforehand

For PLCs to become sustainably embedded in the organisation, it is vital not to leave communication until the end of the process. It is important to regularly highlight the advantages of this method, and both the organisational parameters and individual requirements, from the very beginning.[286] A small-scale personal and interactive approach works better than generalised (often written) communications about PLCs.[287]

As Recommendations 1 and 2 show, organisational management is an essential part of supporting PLC communication. This applies especially to the people who are responsible for the communication.[288] While all the participants in the PLC have an active role to play in communicating, some members could be assigned specific communication duties. Those duties might be apportioned based on relevant experience and expertise.[289]

What the research says

Reviews about the effects of PLCs in secondary education[290,291,292] refer to studies that use pre-post-tests, experimental and quasi-experimental research or correlation. RCTs[293,294] can only be informative if the research underlying them provides reliable information about their interventions[295] and if the related findings can be translated into practices. In other types of research, the aim is to use different sources, e.g. data from both teaching staff and students, PLC notes and/or observations, surveys, the materials developed as products of the PLC and the experiences of various stakeholders.[296,297,298,299] Kirkpatrick's (1996, see example on this page)[300] and Guskey's (2024)[301] frameworks can be used for reporting learning outcomes at different levels. Where the satisfaction, learning and application by teaching staff resulting from professional development align, it is plausible that student learning outcomes are the result of the professional development, in this case the PLC.[302]

Detailed information

Evidence-informed innovation
A team of higher education researchers published a series of studies about evidence-informed innovation based on reviews and empirical papers. They refer to evidence-informed innovation to mean that the innovation is based on experience, research knowledge and school data, organisation data and systems data. The related evaluation process is cyclical and systematic, based on a research cycle of identifying the problem, formulating hypotheses and making plans, executing the plans and evaluating them.

The first evaluation framework that they include is the CIPO model[303]: context – input – process – output, with a distinction made by level, from the individual to the group organisation and the system.

The second framework is Kirkpatrick's evaluation model[304], including satisfaction (of participants/ stakeholders), learning (change in learners' knowledge, skills and attitude), behaviour (change in participants' behaviour) and organisation (changes that impact the organisation).

Lastly, they include the University of Warwick model[305], which consists of:

1. the context in which the innovation takes place
2. the problem or driver for innovation
3. details of the innovation and how it was intended to trigger change
4. activities and interactions related to the introduction and roll-out of the approach
5. learning that results from engaging in the activities/ results of interactions
6. changes in behaviour (and the extent to which outcomes are used)
7. differences that result from the behavioural changes
8. reframing value: reassessing what possibilities the innovation yields

The materials can be found here: *versnellingsplan.nl/en/Kennisbank/field-labs-evidence-informed-effectiveness-of-educational-innovations/*

Get started

A framework for evaluation in higher education

Over 100 course innovations by teaching staff and teaching teams at Wageningen University were studied to create a framework for identifying/evaluating innovations.[306] The framework serves as a tool for mapping out innovations (specifically course innovations) in terms of their content, their process and how they relate to policy. It is intended for individual teaching staff who want to improve their own education and for PLCs deciding on a focus. Leadership and policymakers can also use the framework to decide whether the work of individual teaching staff and PLCs aligns with the institution's plans and policies, and to update their support or facilitation and procedures accordingly.

The framework covers the following topics:

1. Which courses and what level (BSc, MSc, PhD) are the focus of the innovation, and at which department, group or faculty is the innovation taking place?
2. Does the innovation come about through collaboration between multiple teaching staff, groups or faculties, and is the innovation supported or facilitated by an education support department or teaching and learning centre?
3. What are the most important reasons for the innovation (demands from the education process itself, from society, from changes in the student population or from relevant parameters)?
4. To which goals or themes that the institution has defined or that are part of its the vision does the innovation connect?
5. Are the innovation's rationale and design based on theory, existing data or research findings?
6. Which elements of education are the subject of the innovation: goals, course content, learning activities, teaching activities, materials, teaching methods, time, location, assessment?
7. How new is the innovation: it is more experimental or more exploitational?
8. How deep/radical is the innovation? How many of the elements listed at point 6 are affected by a single innovation?
9. Which dimensions of learning does the innovation address: cognitive, affective, motoric, metacognitive, social?
10. What competencies or learning outcomes of learners does the innovation target?
11. To what degree is the innovation concerned with collaborations or relationships with society or external actors beyond the institution, and how far does the collaboration or relationship go?
12. How will the innovation be evaluated or researched?
13. How will the results of the innovation be shared or communicated within the institution?
14. What concrete products or tools are being created as part of the innovation?
15. What is the consistency between the innovation as it was intended, as it was implemented and as it was achieved?
16. To what degree will the results and products of the innovation remain in use/visible after funding ends?
17. To what degree is the innovation embedded in the organisation, and is the innovation also used in other courses or contexts besides those that the initial innovation targeted?

The scientific underpinning of the framework and its explanation can be read in an article at:
tandfonline.com/doi/full/10.1080/07294360.2021.1985089#abstract

In conclusion

Learning together in PLCs for educational improvement is not a quick and easy process. Even so, collaboration is one of the most important features of effective professional development for teaching staff, their students and the organisations where they work. Considering how many challenges arise, and what form those challenges take, higher education calls for an intensive and properly considered approach. PLCs offer opportunities for participants to discuss complex challenges together, and to develop relevant learning materials and strategies and share them with broad user groups. This helps to establish a professional culture where the results of learning together can be sustainably embedded.[307] PLCs also fill a need in a landscape where attention is increasingly shifting to the quality of teaching and to Recognition and Rewards. This guide provides participants, facilitators/coaches, leaders and policymakers with the means to make PLCs work effectively for their institution and so to work together to improve education.

Figure 3: Professional learning communities



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The references below provide details about the education sector and type of study e.g. [HE systematic literature review]. Other sources used for this guide are also listed, such as policy reports, policy papers and chapters, handbooks and conceptual/theoretical papers, for example to highlight a specific policy area. This is noted as and where applicable.

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Summary

Professional Learning Communities in Higher Education

The purpose of this guide is to support education professionals in their evidence-informed efforts to systematically improve education in the Netherlands. Professional Learning Communities (PLCs) contribute to education quality, and help to create positive outcomes for students, lecturers and their institutions. This guide explains how best to sustainably support and embed PLCs, how to participate successfully in the PLC process and, lastly, how to monitor and evaluate the outcomes.

The information contained in this guide draws on Dutch and international academic literature. It provides six recommendations:

1. Embed PLCs within the organisation during the preparation phase.
2. Support PLCs.
3. Establish a clearly defined collective focus for the PLC.
4. Encourage learning during and between PLC meetings.
5. Monitor collaboration and progress between meetings, and make adjustments as necessary.
6. Evaluate the PLC's outcomes against the collective focus, communicate the findings with all stakeholders, and decide how to move forward with the PLC.

Each recommendation is accompanied by concrete steps and recommended reading to support education professionals who work with PLCs.

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