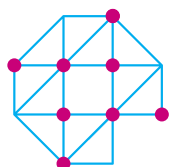# Experts on Evidence-informed Educational Innovation with IT
Summary report 2

An inventory of current evidence-informed practices
for educational innovation with technology
in Dutch higher education institutions

Acceleration plan
Educational innovation
with ICT

evidence-informed

Experts on Evidence-informed Educational Innovation with IT
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An inventory of current evidence-informed practices for educational innovation with technology in Dutch higher education institutions

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1 Summary

Evidence-informed educational innovation is one of the themes of the four-year national Acceleration Plan for Educational Innovation with IT. The aim of the Evidence-informed educational innovation with IT (hereafter: EIEI) zone of the Acceleration Plan[1] is to stimulate and facilitate collaboration and the exchange of knowledge in the field of evidence-informed educational innovation with IT. Higher education institutions in the Netherlands are in varying phases of the adoption of evidence-informed educational innovation with IT, while they also differ in terms of culture, organisation and approach (Forgie et al., 2018). No research has as yet been carried out in the Netherlands into the implementation of evidence-informed educational innovation in higher education institutions. This report therefore focuses on the question: "Which factors influence the development of an evidence-informed approach to educational innovation with IT in higher education institutions?"

Surprisingly, the extension 'with IT' did not receive very much attention in the interviews. Despite the increasing number of IT applications in education and the need to facilitate their use, it is apparent from the interviews that evidence-informed educational innovation with IT remains a niche area and is not yet the subject of much discussion. The respondents did, however, have plenty to say about evidence-informed educational innovation in general. For the sake of readability of this report, we have chosen in the results section to use the general term *evidence-informed educational innovation* rather than the more specific *evidence-informed educational innovation with* or *without IT*. We note in the report that evidence-informed educational innovation with IT builds on the methodology developed for evidence-informed educational innovation in general, and that much that applies to evidence-informed educational innovation in general also applies to evidence-informed educational innovation with IT. However, the recommendations made in the report apply specifically to evidence-informed educational innovation with IT, as this is the remit of the EIEI zone.

The research question has been split in five sub-questions, which address: 1. A description of evidence-informed educational innovation; 2. A vision for evidence-informed educational innovation; 3. Resources and conditions for evidence-informed educational innovation; 4. The evidence-informed educational innovation process; and 5. Collaboration and exchange of knowledge for evidence-informed educational innovation. The aim of the study is to achieve greater insight into the practice of evidence-informed educational innovation with IT in higher education institutions and the factors that contribute to its acceleration.

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[1] www.versnellingsplan.nl/evidence-informed-onderwijsinnovatie-met-ict.

1.1 Recommendations

Based on the results, nine recommendations concerning evidence-informed educational innovation with IT were formulated for higher education institutions. These recommendations are described in more detail in the report.

1. *Identify as an institution what you understand by evidence-informed educational innovation.*
2. *Develop a vision for evidence-informed educational innovation with IT and communicate it throughout the organisation.*
3. *Shape the evidence-informed educational innovation with IT process by combining a top-down with a bottom-up approach.*
4. *Shape the evidence-informed educational innovation process by applying a validated process model (e.g. the ADDIE or the EDR model).*
5. *Demonstrate leadership and act as a role model for evidence-informed educational innovation with IT.*
6. *Ensure that sufficient time and resources are available for the implementation of evidence-informed educational innovation with IT.*
7. *Increase the visibility of information resources and facilities to support lecturers in the development of evidence-informed educational innovation with IT.*
8. *Strengthen evidence-informed educational innovation with IT by facilitating internal collaborations.*
9. *Focus in the first place on internal collaborations and knowledge exchange; external initiatives can come later, according to identified needs and progress made.*

1.2 Summary per sub-question

What is evidence-informed educational innovation?
It became apparent during the interviews that four of the five participating institutions make a distinction between evidence-based and evidence-informed approaches. All of the institutions acknowledged the importance of consulting the scientific literature, implementing practical knowledge and expertise correctly and encouraging the sharing of knowledge. Three of the five institutions also said that they used a validated process model and study data. Generally speaking, the participating institutions consulted some (though not all) of the literature sources when developing evidence-informed educational innovation. All of the institutions emphasised the importance of considering the specific educational context of the institution. Furthermore, they all identified transparency, verifiability and repeatability as necessary conditions for evidence-informed educational innovation. Only two of the five institutions have developed an institution-wide description of evidence-informed educational innovation; in the remaining three institutions, this is limited to a few domains.

What is the vision for evidence-informed educational innovation?
The institutions have differing visions for evidence-informed educational innovation or practice-oriented research, each of which has its own challenges. The visions can be found in policy documents, design principles, the institution plan and the strategic plan, and are reflected in the institutions' innovation centres. Two of the five institutions have developed a formal, institution-wide vision for evidence-informed educational innovation, and both of these have developed a vision that is based on design principles and that provides general guidelines but allows room for interpretation. The other three institutions have not yet developed a formal, institution-wide vision for evidence-informed educational innovation. In these institutions, the vision is applied in various areas of the institutions (domain-related). One of these institutions said that their vision for evidence-informed educational innovation is currently being amended: they want to combine top-down innovations with bottom-up innovations in the new vision, to provide more room for interpretation. This institution is the only one to have included the IT element in their vision. The other two institutions said that they aim to develop a formal, institution-wide vision for evidence-informed educational innovation, but that there are as yet no concrete plans for this.

Which resources and conditions apply?
All of the institutions have a budget for evidence-informed educational innovation; however, the budgets vary between the five institutions and one institution said that the budget is insufficient. The facilities that are specifically provided for evidence-informed educational innovation are in most institutions funded from a central budget. One of the institutions said that the organisational level of the innovation influenced the budget: the more central it was, the higher the budget. Another institution said that the budget available for evidence-informed educational innovation varied per faculty. The same institution also said that there was little budget available for lecturers to implement the educational innovations. The five institutions vary in the facilities available to support evidence-informed educational innovation. While all of the institutions noted the importance of sufficient support for lecturers, several institutions identified a lack of awareness of facilities for lecturers as a point for improvement. All five institutions have implemented projects and programmes that contribute to the development of evidence-informed educational innovations, with or without IT.

What does the educational innovation process look like?
The evidence-informed educational innovation process varies between institutions. The most popular approach is to base the process on scientific research. Most institutions also

examine their own teaching practice, for example using evaluations. However, two institutions were keen to point out that they find it important to do more. Some lecturers are involved in the evaluation of their teaching practice as a researcher and all five institutions use both qualitative and quantitative methods, although insufficient use is still made of validated methods and instruments. No reason was given for this. Finally, all five institutions identified various challenges (e.g. time and resources) and areas for improvement (e.g. a shared language and vision and the presence of a research culture) regarding the development of the evidence-informed educational innovation process.

How do collaboration and the exchange of knowledge take place?
All of the institutions said that internal collaborations and the internal exchange of knowledge are going well, and that they are working on developing these collaborations further. According to one institution, this need for internal collaborations can be explained by the coronavirus pandemic. One respondent said that it helped if they could work closely and efficiently with the IT department. All of the institutions are involved in external initiatives, although to differing degrees. Three of the five institutions expressed a need to take part in external initiatives and knowledge exchange, and one institution said that the value of external initiatives was partly determined by the level at which the collaboration took place. Finally, one institution said that they had no interest in external initiatives and knowledge exchange. All of the institutions set criteria concerning collaborations: the collaboration should address current questions or problems in the institution, it should be easily accessible (particularly for lecturers) and there should be sufficient time and capacity available to take part.

1.3 Background and research question

Educational innovations[2] are still largely implemented based on gut feeling rather than on research (Bakker, 2021). This is a shame, because evidence-informed educational innovation is more objective, more efficient and helps to improve the quality of education. Furthermore, it prevents students from being the subject of experiments that have little chance of success (Galan Groep, 2021; Pellegrini & Vivanet, 2021). Evidence-informed educational innovation is, however, far from the norm in the Netherlands: research by the Galan Group (2021) and others shows that the conditions that must be met for the implementation of evidence-informed educational innovation form an obstacle in every education sector.

1.4 Method

This study builds on a previous inventory conducted in seven higher education institutions: Rotterdam University of Applied Sciences, Radboud University, Radboudumc, Hanze University of Applied Sciences, HU University of Applied Sciences Utrecht, Open Universiteit and VU Amsterdam.[3] For this second study, additional stakeholders in five other institutions were interviewed. Again, the research question was answered based on qualitative data obtained from semi-structured interviews. A total of nine respondents from five higher education institutions took part in this second round of interviews: HAN University of Applied Sciences, University of Applied Sciences Leiden, Amsterdam University of Applied Sciences, University of Groningen and Maastricht University. The data was analysed using the constant comparison method, which is a form of qualitative content analysis (e.g. Mills et al., 2006).

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[2] In this study, we define the term educational innovation in the broadest sense: it means to improve, reform or update educational practice (Walder, 2017).

[3] For the previous study, see de Jong et al. (2021).

The Acceleration Plan for Educational Innovation with ICT is a four-year programme of SURF, the Dutch Association of Universities of Applied Sciences and the Association of Universities in the Netherlands (VSNU). It aims to bring together initiatives, knowledge and experiences to accelerate the development of opportunities for higher education. The work of the Acceleration Plan is divided into eight zones. The Evidence-Informed zone encourages education professionals, such as lecturers, field researchers, educational IT coaches and education coaches, to work in an evidence-informed manner. To make this happen, the zone is developing a knowledge infrastructure to make it easier to share existing and new knowledge and experiences.

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