Awareness and Desire as Strategy for Change. The Integration of Research and Education at Amsterdam University of Applied Sciences

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Creating Tomorrow

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ABSTRACT: Dutch universities of applied sciences (UASs) had been teaching-only institutes since their legal origin in 1960. The development of higher education (HE) in Europe in the past twenty years requires UASs to embody and become hybrid organisations where education and research are integrated. Ever-changing, complex society needs professionals with overarching skills, such as critical, analytical and reflective ones. The Dutch government has framed this as a generic need for research abilities in all higher education students, in addition to framing research as a pedagogy for the development of skills. The new millennium brought Dutch UASs national funding for research and the appointment of *lectoren* (research professors).

In 2015, the Amsterdam University of Applied Sciences (AUAS) board substantiated this national incentive in a renewed university-wide strategy to integrate research in all educational programmes. The AUAS strategic programme 'Research into Education' (Dutch: *Onderzoek in Onderwijs*; OiO) was designed to assist in the implementation of this aim. Educational managers and lecturers were positioned as the central actors in manifesting the intended changes. Five projects were framed, spanning from hands-on, tailor-made assistance of teaching staff to the creation of national and international networks. The aims and mechanisms for change of these projects as well as their results are presented in this chapter.

Although AUAS was successful in realizing a broad desire to integrate education and research, monitoring and evaluation of the process shows how little we collectively know about functional connections between research and education, especially in applied higher education. A future strategic programme needs to bring about professional enhancement at all levels to maintain the already-realised awareness and desire and take the process further to effect ability, knowledge, and reinforcement (Hiatt, 2018). It is a work in progress, yet hands-on university development can become empirically founded practice by smart and precise choices and design.

1. Changing expectations and mechanisms

This chapter presents and discusses the approach for changing a Dutch teaching-only higher education institute into an institute for research and teaching. Traditionally, higher education in Europe has focused on educating high-class citizens, including in the professional fields of medicine, law, and theology (Grace, 2014; Ruegg, 1992). Nowadays, governments incorporate the high-quality education of professionals into their responsibilities. Higher education institutes have a societal responsibility to provide for knowledgeable professionals, their degrees and their systematised knowledge (Griffioen, 2019b). They educate professionals to work in societies that are constantly changing. The 1999 European Bologna Declaration states that students are expected to be able to function in the current knowledge society (Elen & Verburgh, 2008), which demands that higher education institutes instil in students overarching skills, such as critical, analytical, and reflective ones (Barnett, 2000).

This chapter presents the Dutch setting and the plan for, as well as execution and effects of, implementing research into all educational tracks of Amsterdam University of Applied Sciences (AUAS, Dutch: Hogeschool van Amsterdam) between 2015 and 2019. Through this strategy, AUAS is on its way to becoming a full hybrid institution of research and education.

First, paragraph two explains the Dutch setting and describes the run-up to the AUAS strategic programme 'Research into Education 2015-2020. Paragraph three presents the aims of the strategic programme and

the ADKAR model for change (Hiatt, 2018) that was applied to underpin the change strategy. Paragraph four describes the five projects that were carried out to reach the programme aims and the mechanisms through which they triggered and perpetuated organisation wide change. Paragraph five presents an overview of the results of the monitoring project. The chapter ends with the current state of the integration of research and education at the time of writing in paragraph six, again linked to ADKAR. A work in progress and a vision of the future.

2. Setting the scene of Dutch Higher Education

This paragraph presents the Dutch setting of this chapter in the context of European developments toward hybrid higher education organisations.

2.1. Research in Dutch Universities of Applied Sciences

In 1960, the Dutch government created institutes for higher professional education as part of a large transformation of the secondary education system (Griffioen, 2013; Ministry of Education, 1960). These *hogescholen* became part of the higher education system in 1992, creating a binary structure of traditional universities and UASs (Ministry of Education Culture and Science, 1992). Nowadays, the Dutch higher education system consists of 14 traditional and technical universities and just over 40 UASs (De Boer et al., 2007).

The Dutch governmental direction has been more 'at a distance' since the mid-1980s, when neoliberal steering principles, such as quality and accountability, were introduced (Deetman, 1985). Every five years, the Dutch government provides a strategic agenda, upon towards which the higher education institutes direct their strategic ambitions (Griffioen, 2013).

The 1999 Bologna Declaration resulted in a firmer belief in the importance of research as part of the higher education track and for professionally oriented higher education, as happened in many countries in Europe.

While the formal task of doing research to enhance professional practice had been part of the higher education law since 1986 (Kickert, 1986), there were hardly any actual research practices, due partly to a lack of governmental funding (Witte et al., 2008). Therefore, research skills or experience usually constituted no grounds for selection in the application procedures for lecturers (Kyvik & Skodvin, 2003), and teaching skills and professional skills were considered of the highest importance for educating professionals (Boerma et al., 2013; Griffioen & De Jong, 2017). Large groups of lecturers had professional bachelor's degrees as their highest formal qualification (Dutch Ministry of Education Culture and Science, 2011).

Many connect the skills to learning to do research, as does the Dutch government. Increasingly over time, this government has framed research at the core of generic professional skills for higher education students, doing so through two ways: students' need for research abilities, and research as a pedagogy for the attainment of skills. In the 2007 Higher Education Strategic Agenda (p.11), the following was stated:

> A solid interaction between educational programmes, research and employers improves educational quality as well as the quality of professional action. Improving this interaction requests of teaching-intensive universities that they involve their students in design and development and other types of applied research.

This line of reasoning showed to be dominant and still exists in the 2019 Amsterdam Higher Education Strategic Agenda (p. 22):

> A strength of higher education in the Netherlands is the cohesion between education and research (KNAW, 2019). As a result, students in the Netherlands develop an inquisitive attitude, they learn to think creatively and are stimulated to explore new avenues. Research also improves the content of education because recent insights and innovations are given a place in education.

In 2001, a treaty between the Dutch Minister of Education and UASs provided structural funding for research. More precisely, national fund-

ing was provided to appoint *lectoren* (research professors) in UASs who would explicitly focus on applied research to enhance professional fields (De Weert & Leijnse, 2010). Their expected responsibilities were threefold:

1. To raise the quality of educational programmes through also raising the quality of the teaching staff, which resulted in debates about lecturers' formal qualifications.
2. To add to the theoretical body of knowledge of different professions.
3. To help professional fields innovate.

After eight years of research funding, academic staff in UASs were spending about 8% of their time on average on research activities, where before hardly any research was done. However, in the Dutch UAS setting there is no obligation to combine teaching with research. Despite the increase in research activities, many of these institutions struggle with a lack of an established research culture, and many working there presumed research would fade into the background again after the hype (Huisman, 2008; Van der Linden et al., 2012).

In 2001, Dutch UASs started to implement research activities as an extension of the participation in the Lisbon Treaty and the Dutch national research funding provided (Advisory Council for Science and Technology Policy, 2005; Griffioen & De Jong, 2012). They started to define strategies to implement research in their teaching-only organisations in general and in multiple educational tracks for professional higher education in particular. This activity was part of a Europe-wide parallel development, which can also be found in e.g., the *Fachhochschulen* in Germany, the former Polytechnics in the United Kingdom, and the *Hogescholen* in the Netherlands (Teichler, 2008; Vogel, 2009).

2.2. To become a hybrid organisation of two logics

The new proposed balance was more complex, and yields changes in how students are educated (Griffioen, 2019c), which lecturers are hired (Griffioen, 2018) and how higher education is seen (Barnett, 2012; Grif-

fioen, 2019b). While UASs across Europe showed their own pathways, following from their own interpretations of the Lisbon Treaty (Duivenboden et al., 2009), all needed to transform from teaching-only institutes to hybrids of two primary processes: teaching and research. Hence, a second 'logic' (Thornton & Ocasio, 2008) had to be implemented where previously the institutions were based on a single logic of teaching.

International research has shown that the success of hybrid organisations depends on sufficient balance between the different logics present (D'Aunno et al., 1991; Mouwen, 2000; Thornton & Ocasio, 2008), in this case those of research and education. This balance is not easy to achieve. Adding a second organisational logic provides opportunities for employees to choose between the old and the new logic instead of embracing the intended change (Quirke, 2013). Actions of individuals generally depend on stimuli and sanctions of the organisation as a whole (Toubiana & Zietsma, 2017) and often prove very difficult to change due to the implicit transfer of current ways of working to new personnel (Bystydzienski et al., 2016). Therefore, for an institution to become a successful hybrid, changes are needed in both the organisational structure and the culture for actions of individual employees (Bystydzienski et al., 2016). Although some research on hybrid organisations can be found, there is almost no systematic research about the complex change process to become a hybrid organisation (Vermeulen et al., 2016), leaving change managers in the dark about successful approaches.

3. A strategy for change at Amsterdam UAS

This paragraph presents the strategic programme 'Research into Education' 2015-2020 (Dutch: *Onderzoek in Onderwijs*; OiO) and the ADKAR model for organisational change (Hiatt, 2018) that underpins the programme's approach in aiming for an integration of research and education.

3.1. Substantiation of European and Dutch policy

Almost 20 years after the Lisbon Treaty and the national incentive for research, AUAS currently employs 70 *lectoren*, which is a lot when one considers the first was only appointed in 2001. That number, however, is very small when one considers AUAS's 45,000 students and 5000 employees, of whom 3500 are on an academic contract, divided across seven faculties.

In 2015, the AUAS board confirmed a new strategic agenda (Hogeschool van Amsterdam, 2015a) with novel strategic research policy (Hogeschool van Amsterdam, 2015b), which provided a renewed university-wide strategic aim to integrate research in all educational programmes.

The combined 2015 strategic policy documents stated,

> AUAS educates professionals at bachelor's level and master's level, who are aware of the constantly changing world around them, who are able to keep their professional knowledge at level and to adapt their actions to new knowledge and changed insights. This implies that they make professional decisions for action based on current (international) scientific knowledge and insights.
>
> This requires AUAS educational programs that they infuse their students as future professionals with knowledge, insight, skills and attitudes related to their professional fields, which lead to the appropriate professional behaviour. Knowledge, insight and skills related to research with a professional focus are herewith essential, as well as a functional organizational culture and structure focused on the integration of research and education.

These aims provided a connection between the professional learning of students, the design of educational (bachelor) programmes and the wider organisational structure, which is in line with the notion that connections between research and teaching can only be effective if they are consistently embedded across higher education institutes (Jenkins & Healey, 2005; Jenkins, et al., 2007).

The strategic purpose of these aims was to be specific enough to make educational managers and their teams to think about (further) integration

of research and teaching in their own programmes. At the same time, the aims needed to be generic enough to include all disciplinary sectors, each with its own language and characteristics. The intention was to be as inclusive of disciplines as possible on the rationale for change.

3.2. Aiming to create shared ambition

The strategic programme 'Research into Education' 2015-2020 (Dutch: *Onderzoek in Onderwijs*; OiO) was designed to assist in the implementation of the aforementioned aims. A programme owner (a faculty dean) and programme leader (senior central policy officer) were assigned. This university-wide role of the dean was innovative for the Dutch setting which does not have roles comparable to pro-vice-chancellor in the UK and contains the responsibility for university for change beyond his own Faculty. Together, programme owner and programme leader formulated more operationalised programme aims (see Box 1), derived from notions of curriculum development and principles of organisational change. The university board approved the full strategic programme.

Box 1. Aims of the strategic programme Research into Education
1   For each educational programme to have a grounded rationale (vision) for research in its related profession and therefore in the programme (ideally before 2017).
2   To (re)consider the position of research across curricula (ideally before 2020).
3   An increase in the numbers of lecturers and of educational teams active in the strategic programme activities.
4   An increase in activity (between lecturers and educational teams) on the topic of research integration.
5   That AUAS might have an established vision for research in professions and education, taking disciplinary diversity into account.
6   That AUAS might define the characteristics of exciting undergraduate programmes that include research.

The first two aims were formalised to only provide generic direction and to allow space for manoeuvre – and therefore learning and adapting – for educational teams. While it was well known that the broader

organisation around the educational programmes would need to adapt to the requested research integration into educational programmes, the starting point to drive this change was purposefully chosen at the lowest, most practical level of the organisation: in the 70 educational programmes themselves.

3.3. Educational teams as core stakeholders

Educational managers and lecturers were positioned as the central advocates and enablers of change. After the turn of the century and also in AUAS, the newly employed *lectoren* were expected to bring research into the educational programmes (Ministerie van OC&W & HBO-raad, 2001). However, the first ten years of an active policy focus centralized around these individuals showed that they were too few, too fragmented across topics and departments, too often employed part-time and lacked managerial responsibility to have a sufficient impact on education. After 2005, *lectoren* were grouped into knowledge centers, which created more research mass and content focus (Leijnse, 2005). This positively impacted the visibility of research and increased the quality of output as well as opportunities to bid for external research funding. Where the research success increased, it did not, however, change the results of integrating research into educational programmes.

As in most Dutch UASs, in AUAS research activities were mostly organised to be independent of educational activities. The *lectoren* were research specialists but generally did not have line-management responsibility for educational programmes. Their efforts to bring research into these programmes only sometimes resulted in curriculum change and were often stranded due to differences in research or professional experience and to perceptions of how research could benefit professionals, as was also shown in a study across six Dutch UASs (Griffioen & De Jong, 2009). When such differences of opinion (often just lack of mutual understanding) occurred, *lectoren* were not able to push their ideas through because of lacking managerial responsibilities. There is no saying whether their pro-

posals would have been the right ones, but often nothing at all changed, and many well-intended conversations ended in disconnects and mutual disappointment among *lectoren* and lecturers alike.

Based on this experience, the new strategy starting from 2015 followed those with the line-management responsibilities and not those with the highest level of research expertise. Educational managers and their teams were made responsible for implementing research into their educational programmes. Formally, the educational managers had retained this responsibility from the start, but the *lectoren* were made morally responsible as effect of the government policy that underpinned their initial appointment in 2001, leaning on them having the most expertise. Therefore, few educational managers had actively taken on this responsibility. Higher-level management did not always easily embrace the new strategy, considering the lack of research expertise in educational teams and their motivation for the topic as problems (Griffioen & De Jong, 2015, 2017). Still, the AUAS university board approved this strategy.

3.4. Aims to create movement in educational teams

With the educational managers and their teams as core stakeholders, the most important question was how to get them moving towards change. Their core specialism and motivation were not research-related; they were to educate high-level professionals; their expertise was to provide education. Previous research (Griffioen & De Jong, 2015) that followed Azjen and Fishbein's (2010) Theory of Planned Behavior had shown that lecturers' active involvement in research would increase their self-efficacy as well as their support for research-related ambitions in multiple Dutch UASs. Based on this notion, projects were framed to let lecturers across different faculties share their experiences on research integration. The programme-owning dean would be visibly present at each large-scale activity to affirm the managerial importance of these actions.

The ADKAR model, consisting of awareness, desire, knowledge, ability and reinforcement phases (see also Box 2) for organisational change

(Hiatt, 2018), fit well with these changes and the first two phases were adopted as an underpinning of the overall strategy.

Box 2. ADKAR phases of organisational change (Hiatt, 2018)	
Awareness	Enhancing awareness of organisational strategic ambitions
Desire	Enhancing the desire to contribute to organisational strategic ambitions
Knowledge	Increasing the knowledge required for constructive contributions to the aforementioned ambitions
Ability	Increasing knowledge-based skills and ability to realize contributions
Reinforcement	Embedding the realised changes in organisational prerequisites and quality assurance

Through this lens, the purpose was to get lecturers moving on this topic in any direction related to the broad perspective provided, for which the mediating programme aims 3 and 4 (Box 1) were stated: to increase the numbers of lecturers and of educational teams active in the strategic programme activities and to increase the activity (between lecturers and educational teams) on the topic of research integration.

Finally, the increase of debates on research integration was expected to make the organisation ready for a collectively established vision at the university level, as well as for collective characteristics of research integration in applied undergraduate programmes at AUAS within the 5-year term of the strategic programme. Thus, aims 5 and 6 (Box 1) were formulated on establishing a vision for research in professions and education, taking disciplinary diversity into account and on defining characteristics of exciting undergraduate programmes that include research.

4. Aligned activities across the university

This paragraph describes the five projects, and their mechanisms, that were designed to reach the six programme aims in terms of awareness and desire (Box 1 and 2).

4.1. Five projects shape the change programme

While the formulated aims provided direction, the strategic programme additionally needed a hands-on strategy for development and interaction. Initially, the project team formulated four projects that would enforce each other's effects in the university (see also figure 1). The set-up of the projects needed to consider the large size of our university as well as the dynamics of colleagues in different stages of activity and development. After the programme ran for two years, a fifth project was added. Hereafter, the projects will be briefly described.

Project 1

An **online tool** was developed to showcase the diverse perspectives of research integration related to the Dutch setting. Additionally, this tool provided full documents for further reading about the different perspectives on research integration and the possibility for Q&A across the university between lecturers of similar and different educational teams.

Project 2

Educational teams were given **hands-on support** from the project team with their own local research integration at module and curriculum levels. This support could range from a talk over coffee to workshops to development support of full teams or curricula.

Project 3

To create **knowledge exchange networks** within and beyond AUAS, this project consisted of local Amsterdam symposia and the creation of both a national and an international network. Five university-wide symposia were organised every year, three called 'Knowledge Sharers', which provided the opportunity to share and celebrate local research integration activities and results, and two called 'Taste Makers', which were aimed at bringing outside expertise into the university. A national network of university policy officers with a focus on research integration was initi-

ated, and an international network between AUAS's partner universities was finally brought to life.

Project 4

We created and applied a **monitoring and evaluation scheme** based on scientifically founded indicators with several strings of longitudinal research. The underpinning of this project was that because we ask research-informed actions of our students and educational teams, we should do the same in our programme strategies.

Project 5

A **university-wide research group** was developed with a focus on the interaction and integration of education, research, and professional action. This development had already been adopted by the university board, and it made sense for the programme owner to add this project to the strategic programme activities.

4.2. The mechanism of change across the projects

The core of the mechanism to create movement was the interaction between the hands-on assistance for educational teams (project 2) and systematically reoccurring, university-wide symposia (project 3), thus creating awareness of institutional strategic goals on the integration of research and education and the desire to realize these goals (Box 1 and 2). Several teams interacted with the online tool (project 1) as their starting point. At all times, programme managers, lecturers and educational teams were in the lead and owned their change processes, whereas the strategic programme merely provided overarching guidance. Project 5 was an overarching project to secure the future of the evidence-based change mechanism and is left out of Figure 1.
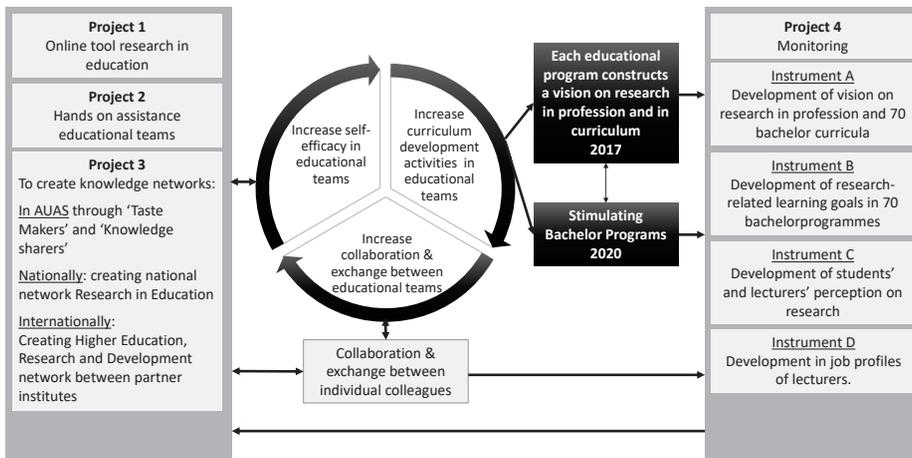
FIGURE 1
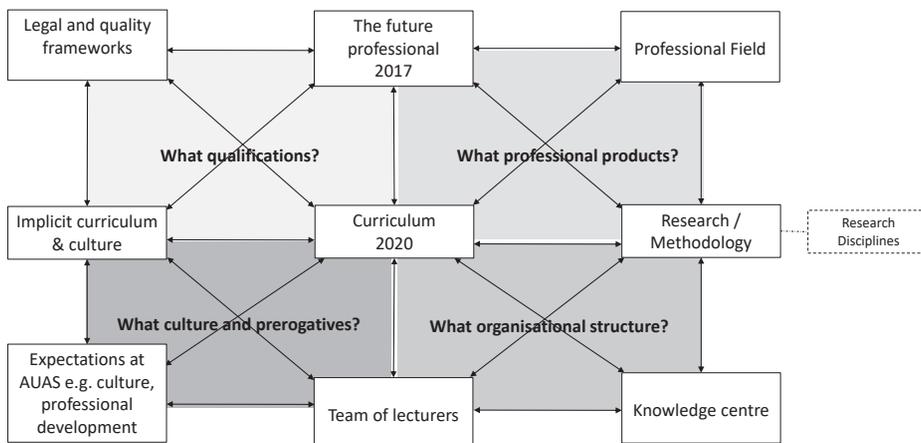
FIGURE 2

The online tool (project 1) provided an overview of the different starting points educational teams used to enter their trajectory of bringing research more into their curricula (see Figure 2).

Each of the boxes at the outer lines of the framework could be a starting point. For instance, a programme could have had an assignment to improve as an effect of a quality assurance round (upper left corner box), the lecturer in the educational team wishing to bring in more research

(middle lower box) or the professional field changing in response to a new approach (upper right box). Wherever the starting point, experience showed that educational teams needed to address all the boxes to improve their curricula. In the online tool, arrows between the boxes provided reflection questions to address during curriculum design. Answers to the questions could be archived and shared online with other educational teams. Use of the tool could be preceded or followed by tailor-made assistance – talking over coffee, workshops, team support or curriculum development – and was showcased in knowledge-sharing sessions.

The Taste Maker symposia were intended to draw in colleagues who were not yet the most active on research integration, but were curious about particular topics, such as critical thinking, systematic curriculum development, students as partners and quality enhancement. At the Knowledge Sharers, AUAS's own examples of research integration activities in particular educational programmes were showcased. This increased lecturers' self-efficacy on the topic and encouraged them to talk more actively about their plans to the strategic team members and among each other. In every symposium, the connection to the strategic programme was explicated, and hands-on assistance was always offered. An overview of topics and numbers of participants of the Taste Maker and Knowledge Sharer symposia is presented in Table 1.

As soon as new colleagues would express enthusiasm on any relevant topic, the option for hands-on assistance would be explained, which often resulted in meeting over coffee. The mechanism also worked the other way around, with hands-on requests in particular teams resulting in presentations by lecturers at one or more symposia. All known participants would be added to our newsletter, which frequently showcased all activities, developments in educational teams and tools.

The exchange and creation of knowledge within and beyond AUAS was strengthened by the formation of a national network of both a national and an international network of policymakers discussing their own practices. Also, the strategic programme took the initiative to organise AUAS's first Research Day, purposefully addressed to researchers, lecturers, and support staff.

TABLE 1. Topics and participation of Knowledge Sharer (KS)
and Taste Maker (TM) symposia

Yr		Topic	Partic.
'16	KS	Instrument and head lecturers	28
'16	TM	Students as partners in research and education	20
'16	TM	How to educate knowledgeable professionals?	15
'16		The Higher Education Conference 2016	360
'16	KS	The role of head lecturers	19
'16	TM	Critical thinking	30
'17	KS	Rationale for the curriculum	21
'17	TM	Constructive alignment	32
'17	TM	XXL Four perspectives on research integration	67
'18	KS	The illusion of quality limitations	62
'18	TM	Lecturer/researcher collaborations	20
'18	TM	Living labs	63
'19		First Amsterdam UAS 'Research Day'	290
'19	KS	Share your curriculum development issues	22
'19	KS	Talent connections	20
'19	TM	Innovative spaces for research and education	35
'19		The Higher Education Conference 2019	175
'19	TM	Confusion and silence as pedagogy	20

International colleagues shared their knowledge in Taste Makers and at the Higher Education Conferences in 2016 and 2019, which showed Amsterdam colleagues multiple international possibilities. The UREKA Higher Education Research & Development network, initiated by AUAS, provided additional opportunities for collaboration (http://www.ureka. eu/joint-activities/herd).

The monitoring instruments provided insight into the starting point and the changes during the process (for all details, see paragraph 5 of this chapter).

The creation of the university-wide research group Higher Education, Research and Integration (HERI) provided a start for steps to take after this five-year strategic programme, particularly in line with ADKAR's

phases of increasing ability and knowledge in AUAS (see also Future Perspectives). HERI's research has spanned the micro, meso and macro levels of AUAS considering the integration of research, education, and professional practice in higher education institutes (see also amsterdamuas.nl/heri). It again showcases that AUAS is willing to empirically underpin the innovation of its own practices, as the inclusion of the monitoring instruments also demonstrates.

5. Effects of the programme as monitored

This paragraph presents the instruments and the first findings of the longitudinal monitoring of the programme (project 4).

5.1. Purposes of monitoring

This served two purposes: a *reactive* one through its evaluating/monitoring function on the changing practices in educational programmes, and a *proactive* one as the accumulation of existing practices. The reactive and proactive purposes contribute to the development of knowledge (ADKAR, Box 2) required for constructive contributions to the organisational strategic ambitions.

This accumulation fed into the activities of the other projects and thus into changes of educational practice. It influenced new policy development in AUAS and was published nationally and internationally.

5.2. Instruments and effects

Matching the aims of the programme, the monitoring and evaluation scheme consisted of four instruments related to the integration of research and education throughout the organisation and nationally; see Table 2 for an overview.

TABLE 2. Longitudinal monitoring and evaluation instruments 2015-2020

	Subject	Method
A	Vision for research in profession and undergraduate curricula	Qualitative analysis of the written self-reported evaluations of programmes in 2011-2015 and 2016-2018
B	Research-related learning goals in undergraduate curricula	Qualitative analysis of the research-related learning goals in all undergraduate study guide texts in 2015/2016 and 2018/2019
C	Perceptions on research in professional action	Quantitative survey study administered to students and lecturers in 2017 and 2019
D	Research–education connection in job profiles	*Nation-wide* qualitative analysis of research and education, tasks and competencies in job vacancy texts in 2016, 2017, 2018 and 2019

Instrument A: Vision

This instrument mapped the development of reasons for educational teams to include research in study programmes. These were captured as written down in tri-annual self-evaluations and qualitatively coded and analysed, applying grounded analysis (Charmaz, 2006). In the first measurements, many educational programmes lacked a vision, or stated research was needed because the university board or the national professional framework requested it. Other reasons for research included preparing students for high-quality professional practice and contributing to professional development. Educational or pedagogical reasons were also collected, such as enhancing the quality of education by using research as a learning resource. The instrumental reasons were less reported in the second measurement, indicating changing perspectives.

Instrument B: Learning Goals

This extensive monitoring instrument captured changes in learning goals in all the modules of all 70 AUAS undergraduate programmes. The intended curricula were considered as written down in the study guidelines, following the qualitative measurement and analysis procedure of Verburgh and Elen (2013). The intermediate results of three programmes across

three faculties showed a slight increase in the occurrence of research-related learning goals. Instrumental research skills either increased over time or were most prominent at both measurement points, compared to knowledge of research results or methods, critical thinking, curiosity, and integrated research competencies. Attention to knowledge of research results differed across study programmes. Learning goals on knowledge of research methodology and critical thinking were scarcely mentioned and became even scarcer over time in these three programmes. Learning goals pertaining to integrated research competencies (learning to do full research) were less clearly described than the other learning goals, and their occurrence differed across the study programmes analysed thus far.

Instrument C: Perceptions

The Research Attitude in Vocational Education Questionnaire (RAVE-Q; Griffioen, 2019a, 2019c; Griffioen, 2020) measured students' and lecturers' perceptions of research in the profession, specifically their affective attitude towards research, cognitive attitude towards research, research self-efficacy, expectations of professional research use, experience participating in research and perspectives on the importance of it and research culture. Lecturers were on average more positive on all scales except for research self-efficacy and affective attitude, on which students scored significantly higher. Students' perceptions were mostly consistent between 2017 and 2019. Lecturers on average showed a slight but mostly insignificant growth in scores on all scales, as indicated by a means analysis. The relatively research-intensive faculties within AUAS showed higher scores for both students and teachers. These findings are congruent with those on the vision profiles and the learning goals.

Instrument D: Job profiles

To provide insight on whether the hiring of lecturers shows change in teaching and research responsibilities over time, job vacancy texts were annually studied at a national level for UASs as well as for research-intensive universities (Griffioen, 2018), following the procedure of Pitt and Mewburn (2016). The job vacancy texts, of UASs more so than of other

universities, show that the expectations and competencies for new lecturers to perform in both teaching and research were roughly unchanged between 2016 and 2019. Development towards more explicit and tighter connections between research and education tasks and competencies in recruitment practices would have matched the desire as realised in the primary processes of education and research.

In addition to the planned instruments, at the request of the national working group which was assigned to implement more professional master programmes in the Dutch, we undertook an international systematic literature review to provide insight on how research is positioned in higher education curricula, as described within higher education empirical literature (Griffioen et al., 2019). This analysis of over 6000 entries showed that curricula have hardly been studied with respect to research integration and that more research is thus needed.

6. Future perspectives

This paragraph looks ahead from the current position. Where are we in the organisational change process described as phase of awareness, desire, knowledge, ability, and reinforcement (Hiatt, 2018)?

6.1. From desire to knowledge: informed choices and design

The strategic programme 'Research into Education' was implemented in 2015 to create awareness and desire in educational teams related to the topic of integrating research in education. The current situation towards the ending of the five-year programme shows that the wider organisation of AUAS indeed went through the ADKARs phases of Awareness and Desire. Many educational programmes have gone through one, two or even three cycles of research implementation in their curricula. As was hoped, the programmes' activities have also kick-started the awareness and desire to contribute of support staff and management in both

faculty and central positions at AUAS. AUAS now formally declares itself a 'knowledge institute' that disregards the differences between research and education. 'Learning communities' and 'centres of expertise' are the new magic words at AUAS bringing the two concepts together, but the trajectory at AUAS so far has shown that such words will not ensure long-term connections between research and education. Only smart and precise choices and design at the detailed level can do so.

These choices illustrate that our increase in curriculum development activities also brought to the surface how little we collectively know about functional connections between research and education, particularly for higher education applications. We must be aware that our next ADKAR phases – Knowledge and Ability – will demand in-depth investment again. Creating desire is a small thing compared to developing knowledge and creating large-scale ability, especially for the long run. The new research department HERI is expected to help bring knowledge and reflection, starting from the methodology for professional knowledge (Griffioen, 2019b). A new strategic programme 2021-2026 needs to bring about professional enhancement at all levels, which will engender ability across the university and the same balanced desire to contribute that many educational programmes now demonstrably have. The support staff will need to provide balanced reinforcement, in line with the strategy. New AUAS partners which need to be included, such as policy advisors, research teams, non-education management, will make the implementation tasks ahead more complex.

6.2. Toward embodied practice

Through this type of hands-on university development, the notions of a research–teaching nexus that have so far been mostly normative (Trowler & Wareham, 2008) can grow into empirically founded practices. The written strategy of a university can become practice through the implementation of a strategic programme, as described here. Then, such a policy document can indeed become the 'embodiment of practice, which makes that

practice knowable by others, repeatable over time' (Freeman & Maybin, 2011, p.165). Hopefully, this chapter can facilitate the embodiment of related implementation strategies to integrate research in education, in UASs and beyond.

7. References

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