drift for transition

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Baseline measurement for transition monitoring

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Introduction

Tertiary education in the Netherlands has been undergoing change for some time. The demand for flexibility is increasing, career paths are becoming less linear, and tertiary education is expected not only to provide initial training but also to offer opportunities for lifelong development. At the same time, digitalisation is challenging education: the opportunities are vast, but so are the concerns – about how learning takes place, dependence on big tech, and our capacity for critical thinking.

Work on this initiative is taking place at all levels: in the classroom, in boardrooms, and, more recently, through cross-institutional and cross-sector partnerships such as Npuls and the LLO Catalyst. Now, all these developments together seem to be entering a crucial phase. Not because the individual movements are new, but because their combined effect is increasingly raising the question of whether tertiary education can still make do with marginal adjustments, or whether something more fundamental needs to shift in how it organises, legitimises and perceives itself. In short, whether we are witnessing a fundamental systemic change – a transition.

The central question seems to remain the same: will it remain a layer of flexibility, technology and social engagement superimposed on an unchanged underlying logic, or will the sum of all these movements lead to a genuine reorganisation of how tertiary education organises, legitimises and perceives itself? The answer to that question depends on the choices being made now: regarding the structures and institutions that currently shape tertiary education, the position of the learner, the management of technology, the embedding of social relationships, and the recognition of the professionals who sustain education.

Amidst this turbulent dynamic, Npuls focuses on accelerating and steering the desired transition process. The programme is firmly rooted in practice and operates from the daily reality of thousands of teaching staff, learners and educational innovators. DRIFT and Risbo have been asked by Npuls to monitor the (progress of the) transition in tertiary education. This goes to the heart of what transition monitoring is all about: tracking and understanding fundamental changes taking shape in everyday practice. Together with Npuls, DRIFT has therefore developed a monitoring tool that:

- Makes the changes in education visible and open to discussion
- Maps out the progress of the transition
- Provides tools for adjusting the multi-year Npuls programme

In doing so, it also lays the foundation for being able to provide concrete answers to the central questions regarding the direction and depth of the outlined developments — concerning flexibility, the learner's position, technology, societal embedding and teacher roles — over six years of monitoring.

This report is structured as follows. Chapter 1 begins with an explanation of traditional Dutch tertiary education and the transition movement becoming visible within it. Here, we outline the starting point: what are the core principles upon which the current system is built, which societal and technological developments are putting those principles under pressure, and along which themes is the transition unfolding.

We then provide a theoretical and methodological justification for the transition monitoring. Here, we explain the transition perspective from which we view tertiary education, how the monitoring tool is structured, and what methods and procedures are used.

Chapter 3 forms the core of the report, covering the main findings of the monitoring exercise. It begins with an overview in which the key patterns and tensions across the themes, as well as within each theme, are interpreted. Based on this, we formulate a number of recommendations, aimed at Npuls and the wider circle of parties working

on this transition. These recommendations are not intended as a blueprint, but as starting points for discussion with those who wish to take the transition further.

The bulk of the report consists of the results, which are set out in Chapter 4. Here, for each sub-theme, we describe and interpret the four transition dynamics — build-up, institutionalisation, lock-in and phase-out — and substantiate the scores using empirical findings and illustrative examples.

Finally, a number of appendices have been included to provide further insight into the scoring methodology, as well as the empirical material drawn from the literature, interviews and working sessions.

1. A transition perspective on tertiary education

1.1 Traditional Dutch tertiary education

The traditional Dutch tertiary education system, as it took shape after the Second World War, was structured around a clearly defined stage of life. It focused primarily on young students aged between 16 and 25, who, after completing secondary education, progressed along a continuous learning pathway to vocational education (MBO), university of applied sciences or university. Learning took place prior to entering the labour market and was largely separate from later stages of life and career.

Education was organised into distinct programmes of a similar level, with fixed curricula, a nominal duration of study and predefined final qualifications. Within a programme, students largely followed the same curriculum, at the same pace and with limited scope for individual variation. This ensured standardisation, comparability and scalability within the system.

The dominant form of education was classroom-based knowledge transfer. The teaching staff were central as subject matter experts and primary sources of knowledge, whilst learning took place mainly within institutional settings such as lecture theatres and classrooms. The educational process was predictable, linear and supply-driven.

To ensure quality and legitimacy, the education system was designed to be highly assessable. Progress and performance were measured through standardised tests and exams, focused on set learning objectives and reproducible knowledge. Assessment served as a mechanism for selection, progress monitoring and certification.

The qualification was the central organising principle. It served as formal proof of knowledge and skills and provided access to further education and the labour market. In this system, education and the labour market were closely linked through recognised qualifications, with employers using the qualification as the primary indicator of employability and level.

1.2. Tertiary education in transition

Traditional tertiary education, as described above, has been undergoing change in many places for some time. In principle, tertiary education is also accessible at other stages of life, and the teaching staff are constantly evolving. Practice-oriented, project-based and interdisciplinary study has been around for years, and innovation in teaching methods and learning materials is nothing new. In that sense, the image of a static system suddenly confronted with change is too simplistic.

At the same time, many of the core principles have remained intact. This applies both to the societal perception we have of tertiary education and to all the incentives, funding mechanisms and legislation surrounding it. For a long time, change mainly took the form of top-down adjustments or the introduction of diversity at the periphery: new courses, new target groups, new teaching methods. But the underlying logic remained largely intact. To put it better: there is a core of fundamental principles around which much variation and diversity has grown over the years, but that core itself has scarcely been called into question. What is changing now is that this core is coming under increasing pressure. Not just at the fringes, but at the very heart of what tertiary education is and does. This pressure stems from two interrelated developments that reinforce one another.

Firstly, there is a growing societal and labour market-driven demand for flexibility. The student body has become increasingly diverse, with differences in age, learning pathways (full-time and part-time) and background. Careers have become less linear, professions are changing more rapidly and knowledge becomes outdated at a faster rate than in previous decades. The expectation that a course of study will equip someone for life is simply no longer realistic for an increasing number of people and sectors. This broadens the discussion about the role of public tertiary education: no longer just training young people for their first step on the labour market, but also facilitating upskilling, reskilling and continuous professional development throughout different stages of life. This broader understanding of the role comes up against a system that is still only partially equipped for it, both institutionally and financially.

Secondly, new technological possibilities—particularly digital ones—are opening up fundamentally different ways of learning, organising and recognising learning. Digitalisation makes it possible to design education in a modular, flexible way that is partly independent of time and place, and to better link learning with work, practical experience and informal learning environments. Digital learning materials and EdTech are creating forms of education that were unthinkable ten years ago. Moreover, new digital technologies, and in particular generative AI, are also changing the way we acquire, process and apply knowledge. This has direct consequences for what we teach in education, how we do so and how we assess it. At the same time, the increasing digitalisation of society is giving tertiary education a broader remit: it is no longer just about learners being digitally skilled, but also about them being digitally literate – capable of critically understanding, questioning and steering technology.

The challenge facing tertiary education is therefore not an incremental change, and goes even further than a systemic reform. A fundamental transition is needed in how we understand, value and deliver education, one that touches on the very essence of what – and for whom – constitutes good tertiary education.

But what exactly does that transition look like, and along what lines is it unfolding? In our research, five themes repeatedly emerged as the areas where this fundamental quest is most palpable. Areas where old certainties are shifting and new practices are slowly emerging, without the outcome yet being fixed. Below, we describe the essence of each sub-theme and conclude each with a critical reflection. For with every theme, the fundamental question is not whether change is needed, but whether the movement that has been set in motion goes deep enough to truly transform the system. For each theme, we therefore pose a critical question at the end that gets to the heart of what the transition is really about.

Digitalisation supports valuable learning experiences

In this analysis, we focus on a selection of three interrelated but distinct themes within digitalisation: digital learning materials, EdTech (digital learning materials and broader digital applications and infrastructures for education) and AI. This selection is not exhaustive, but aligns with Npuls' current focus and highlights the diversity within the broader digitalisation movement. New digital learning materials, EdTech and AI are fundamentally changing learning and teaching, with AI not only introducing new applications but also restructuring existing educational and knowledge structures. AI developments affect not only educational practices, but also the organisation of knowledge, labour and access to learning in society as a whole. Consequently, public values such as accessibility of education and democratic knowledge-sharing also become relevant at the systemic level. Technological development creates diverse learning experiences alongside traditional classroom-based and textual knowledge transfer, but also entails many risks and downsides. Both the opportunities and challenges of new digital possibilities will play a central role in tertiary education, ensuring that both basic digital skills and broader digital literacy are secured for current and future generations. In this context, the public values of justice, humanity and

autonomy are central to both the use of technology and the broader design of education and the digital learning environment.

In concrete terms, this involves the development and deployment of open or FAIR digital learning materials that are flexible, reusable and accessible; the thoughtful use of EdTech applications to support learning, assessment and guidance; and the responsible application of digital technology and AI in educational processes. In addition, this requires structural attention to both digital skills and broader digital literacy, including the critical use of technology and online environments. Media literacy plays an important role in this, enabling learners and educational professionals to reflect on the reliability and social significance of digital media.

The underlying fundamental question of transition here is therefore: will tertiary education succeed in deploying technology on its own terms, guided by public values and a pedagogical vision, or will the system be primarily swept along by the logic of major technology firms and the pace of technological development?

Flexible learning pathways

Education is moving away from linear, degree-oriented programmes towards more flexible learning pathways, with greater variation in pace, time, place, content and level, and is less tied to a single fixed institution, level of education or stage of life. In this new system, the focus is shifting from tests and degrees to broader forms of recognition and appreciation.

In practical terms, this means there will be greater scope for personalised learning, allowing learners to deviate from a standard pathway whenever they wish or whenever necessary. This is facilitated by a diverse range of joint degrees and modular programmes offered through a clear, cross-institutional catalogue, in which the rigid boundaries between vocational education (MBO), higher professional education (HBO) and university education (WO) are also becoming blurred. Enabling technologies such as micro-credentials, eduID, eduwallet and edubadges form the building blocks of this shared educational environment.

The underlying fundamental question regarding this transition, however, is: to what extent does increased flexibility lead to a genuinely different system, or does it primarily result in an increasingly complex patchwork of exceptions and bespoke arrangements on top of an unchanged underlying logic?

From students to learners

The emphasis is shifting from students to learners. Tertiary education no longer focuses primarily on a homogeneous group of young people and young adults. In line with all LLO ambitions, learning is becoming more accessible to a diverse population of learners of different ages and at different stages of life. The core task of tertiary education is to provide a place for anyone with the desire to continue developing in a world that is constantly changing.

To a large extent, this concerns the question of the extent to which the flexible learning pathways described above are also accessible to and utilised by target groups outside the standard student population. This may seem like a subtle distinction, but we have nevertheless made it explicit in a separate indicator, as it touches on the very core of the identity of institutions in tertiary education and is certainly not uncontroversial today. In concrete terms, this concerns the question of whether and how the needs of

a broader population of learners have been taken into account in the design and development of the flexible learning pathways and the associated enabling technology.

The underlying fundamental transition question here is therefore: is tertiary education prepared to embrace the learner as the full-fledged core of its identity, or does the learner remain a welcome addition to a system that, at its core, remains designed for the traditional student?

Learning with and from society

Alongside formal educational settings, learning with and from society is also central. Workplaces, societal challenges, social interactions and nature become explicit learning environments. This shifts the relationship with the labour market and society towards greater reciprocity and collaboration. Tertiary education not only responds better to existing needs, but also develops new knowledge, skills and practices in collaboration with employers, sectors and societal partners.

In concrete terms, this involves learning in and through practice, including informal learning in the workplace and in social contexts. Or consider the design of inquiry-based learning, in which learners explore issues and develop knowledge together with social and professional partners. Examples of this include living labs, pilot projects and field labs as learning environments in which experimentation and reflection take centre stage. ‘ ’ education, which starts from concrete challenges, also plays an important role here, with current societal challenges guiding the learning process. Furthermore, it involves strengthening cross-disciplinary knowledge networks or learning communities, in which education, research and practice are structurally interconnected.

The underlying fundamental transition question here is therefore: will the relationship with society become a structural part of how tertiary education organises and legitimises itself, or will it remain a supplementary, often undervalued, activity that depends on individual enthusiasm and temporary programme funding?

New competences and roles for educational professionals

Finally, the role of the teaching staff is also shifting. Instead of standing in front of the class exclusively, the teaching staff member can and should develop in a variety of ways: as a designer and co-developer of learning materials, a guide (coach, mentor) for personal learning processes, and a link to the real world. This increase in the diversity of roles goes hand in hand with a move towards greater mutual collaboration and exchange within multidisciplinary teams.

In concrete terms, this involves creating space to develop and jointly shape new educational practices. This takes shape, among other things, through Centres for Teaching and Learning (CTLs) and learning innovation teams, where expertise is shared and educational innovation is developed collaboratively. Furthermore, this requires targeted professional development for teaching staff, covering both subject-specific and didactic and pedagogical aspects. Other and complementary roles are also emerging for educational professionals within teams, such as coaching roles focused on learning processes, mental wellbeing and the personal development of learners. Finally, it is about recognising and valuing this diversity of roles, for example by creating more scope in the collective labour agreement for professional development and the various development pathways and careers that align with a range of skills and competences.

The underlying fundamental question regarding this transition, however, is: is the shift towards multiple teaching roles truly embedded in remuneration, career paths and the division of tasks, or are we simply piling more demands onto the teaching staff's plate without letting go of any of the old expectations?

2. Transition monitoring: approach and methodological justification

Transitions are fundamental changes to the structure, culture and working methods within a social system, such as the food, transport, healthcare or education system. The core social function of the system remains intact, but the way in which we fulfil this function changes irreversibly.

2.1 Theoretical framework

To describe the dynamics of a transition, we use the X-curve developed by DRIFT (see Figure 1)[1] . A transition is a process of build-up and breakdown. The X-curve provides insight into the emergence of new phenomena, which eventually become institutionalised. It also describes how an existing system is initially still primarily optimised and thus does not change substantially, remaining locked into the 'old' suboptimal logic. Over time, this system comes under scrutiny, is dismantled and disappears. The processes in the X-curve are largely autonomous, but can also be partially steered through deliberate interventions, such as the Npuls programme.

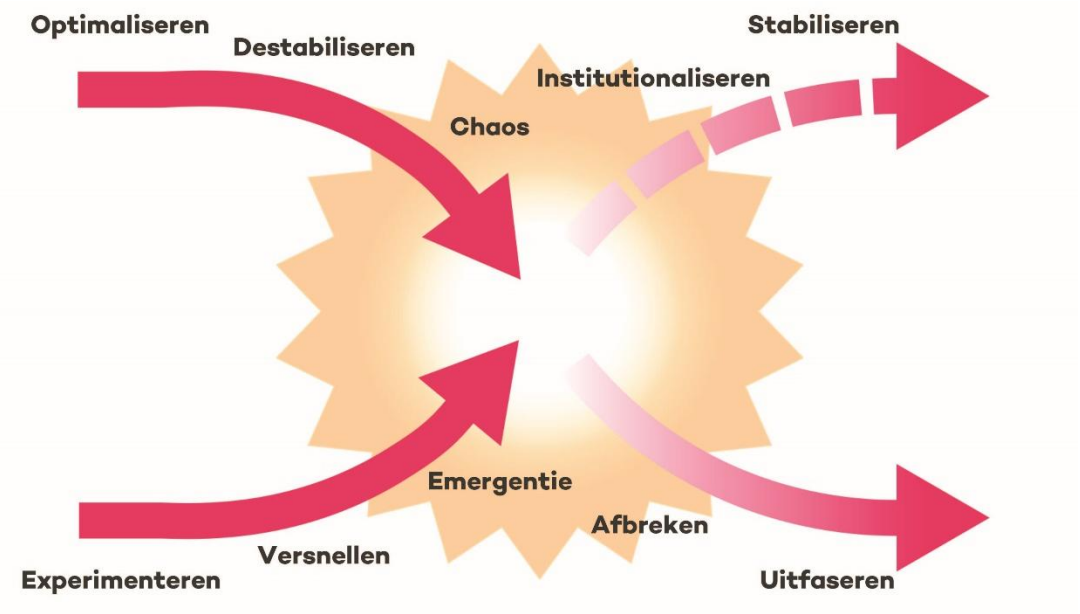


Figure 1: The X-curve[2]

If you zoom out, clear, sequential phases in these changes become visible, but when monitoring in the here and now, all patterns are present simultaneously. Only over a longer period does a coherent transition narrative emerge from the current dynamics. Think, for example, of the rise and fall of communism or the mobile phone: in hindsight, clear phases can be recognised, but from the perspective of someone in the midst of such a transition, you experience all those patterns of destabilisation, experimentation, institutionalisation and chaos simultaneously.

To make monitoring more manageable, we will not monitor all ten transition dynamics of the X-curve, but will opt for a simplified version that distinguishes between four patterns: (1) the development and (2) institutionalisation of new developments desired by Npuls. At the same time, it is crucial to detach and reduce parts of the undesirable existing culture, structures, and working methods. This means that we no longer perpetuate undesirable aspects of the education system and work towards (3) ending lock-in mechanisms and the (4) gradual phasing out of outdated

[1] See also: DRIFT (2017), *State of Transition: Construction and Decline in Five Domains*, DRIFT, Rotterdam, and DRIFT (2020), *State of Transition: Dynamics in Mobility, Climate Adaptation and the Circular Economy*, DRIFT, EUR, Rotterdam.
[2] Diercks, G., et al., (2020), *Steering Transitions: a framework for strategy formulation*, DRIFT, NSOB, Rotterdam.

or undesirable practices. Using these four patterns of the X-curve, Npuls can monitor both the desired changes and the existing resistance to those changes. Both must be addressed for a successful transition.

- **Lock-in**: Which existing elements are still being maintained? Where do we see inertia in the system that stands in the way of fundamental change?
- **Phase-out**: Where do we see a decline in old ways of thinking, organising and acting? Which elements are being phased out?
- **Build-up**: What new initiatives are emerging? Where are alternatives being developed, and do they coalesce into a credible alternative?
- **Institutionalisation**: Which new principles are becoming guiding principles? Which standards, frameworks and values are being established?

Figure 2: Quadrants of the X-curve

2.2 Scoring logic

For each of the five transition movements we have identified, we use the X-curve to illustrate the prevailing transition dynamics; however, measuring these dynamics is neither a simple nor an exact science. The results of this baseline measurement and subsequent measurement points will rarely lead to very precise conclusions, such as exact percentages or figures. The strength of the X-curve lies precisely in providing a framework for gaining insight into various transition dynamics and engaging in dialogue about them.

In other words: the outcomes of transition monitoring depend in part on how we collectively interpret events and activities – a process of collective meaning-making, also known as 'sensemaking'.

To support this process, we have developed a scoring form[3] . This enables Npuls to assess the indicators on a scale of 1 (little transition momentum) to 5 (significant transition momentum). The form helps to make this scale concrete. The scores are inter-subjective, based as far as possible on factual developments, and offer valuable shared insights. Forming a joint judgement on the degree of dynamism reinforces the meaning attributed to

[3] See appendix

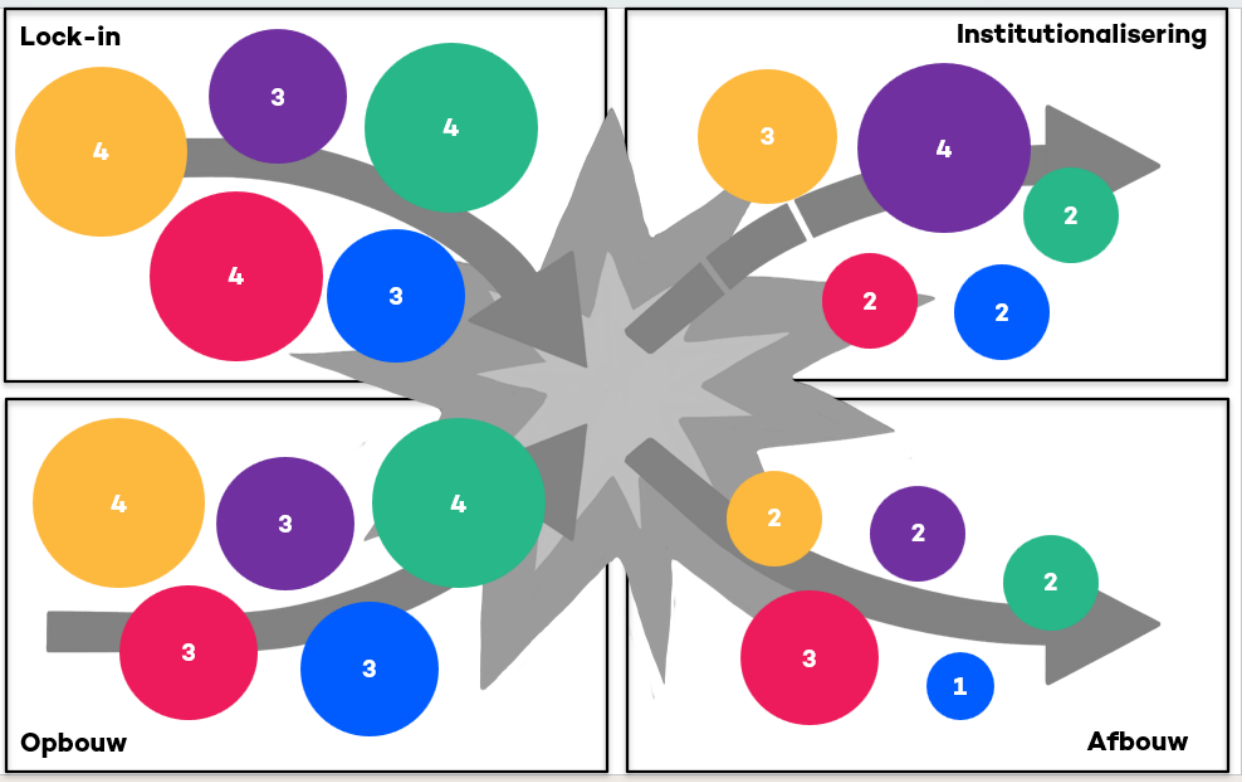
complex societal developments. In transition, or reflexive, monitoring, we also refer to this as the process of 'negotiation of meaning'.

2.3 Data collection and interpretation

The themes central to this report were not determined in advance, but emerged as the research progressed. The starting point was a monitoring tool developed by DRIFT in 2024, which was based on Npuls' five programme objectives at that time. These were the themes of digital learning materials, digital skills, personal agency, learning culture, and the labour market and society. However, in the course of the research, it became apparent that these original themes did not sufficiently align with what the data revealed. Following a number of working sessions, we therefore switched to the five themes described in this report, as they more accurately reflect the developments in the field.

The research itself combined multiple methods. Based on a literature review, an initial picture was constructed of the state of the transition for each theme. In this, we collected several illustrative examples in each of the four X-curve quadrants for each theme. Subsequently, in October and November 2025, five working sessions were organised in which this picture was refined, supplemented and discussed with stakeholders from the field. The resulting analysis and interpretation were deepened and validated on the basis of follow-up research and a number of expert interviews. Interim results were shared with the Npuls steering group in a joint scoring session, where an initial indicative scoring was discussed and tested. The final scoring and elaboration were ultimately carried out by transition and monitoring experts from Risbo and DRIFT.

3. State of transition



Caption: Digitalisation supports valuable learning experiences, Flexible learning pathways, From students to learners, Learning with and from society, Diversity of roles in teaching teams

Anyone looking at this image will not see a transition that is just beginning. **In many sub-themes**, **there is already a mature development in progress**: tertiary education has no shortage of inspiring experiments and innovative practices concerning, for example, flexibility, new teaching skills or other forms of learning. And these are supported by structurally funded, cross-institutional networks such as the LLO Catalyst and Npuls, which provide this dynamic with a long-term professional impetus. However, a broadly shared language and vision is still frequently lacking here, which is an important characteristic for achieving a score of 5. On a number of themes, particularly regarding new teaching skills and digitalisation that supports valuable learning experiences, we are already seeing a certain emergence: everywhere, people are, to a greater or lesser extent, working on this within their own context. In this regard, the challenge for Npuls is therefore to organise itself in such a way that, upon completion, the programme becomes redundant and the movement continues under its own steam.

Whilst the momentum for development is relatively strong across many themes, **the transition to institutionalisation at the system level is proving difficult.** This is a well-known and well-documented characteristic of tertiary education: the transformative practices that have the potential to scale up often have to conform to existing systemic logics such as accreditation frameworks, curriculum structures, assessment practices, admission requirements and external expectations from employers and society. The result is that promising innovations do not lead the way in the re al redesign of the system, but are instead awkwardly fitted into existing structures. The innovations arising from the dynamics of development are, as it were, absorbed by the existing system – meaning that institutionalisation takes place within the logic of the old, rather than new, alternative structures emerging to replace the old. In the short term, this may appear to be promising change within

institutions, but in the long term it leads to a system that is even more difficult to adjust, whilst the world around it continues to change. There are also tentative positive exceptions. Institutionalisation is already more firmly established around teaching roles, and in the field of digitalisation too, geopolitical unrest and the rapid rise of LLMs are creating administrative pressure to consider public values and shared standards specifically at the institutional level. This highlights the importance of programmes such as Npuls, not only to work on building capacity, but also to consistently keep the difficult, slow-moving yet necessary institutional work in focus. This goes beyond simply translating ambitions into visions and institutional policy – something we are seeing more and more often – but concerns, in particular, the implementation of this policy into what is sometimes a stubborn reality.

The fact that institutionalisation is proving so difficult can largely be explained by the enormous lock-in effect that characterises tertiary education. This stems from the dominant societal view of tertiary education as a logical next step after secondary education, aimed at a clearly defined population and a clear objective: a qualification that grants access to the labour market. But it is the structures of recent decades — funding, accreditation, inspection — that prove the most stubborn. At present, these are mainly being circumvented, which effectively perpetuates them. The result is the emergence of two parallel worlds: new opportunities are developing, but they are mainly accessible to those who can or are willing to go the extra mile to seek or create space within an inert system. This is not only inefficient, it is also fundamentally unfair to learners and educational professionals who lack the space or the right knowledge to do so. This exacerbates social inequality (and inequality of opportunity). It can also lead to increasing tension between groups of people who are very actively engaged in innovation, whilst others cling to the 'old' and feel left behind. Addressing this lock-in is a key priority for everyone working on this transition.

Phase-out is not very concrete or explicit. We see that, on most themes, phase-out efforts are limited or not very explicit – which may partly explain the strong lock-in. In our research, too, the discussion about phasing out proved complex: although everyone recognised its importance, it was sometimes difficult to specify exactly what needed to be phased out and how to do so. This is a missed opportunity, as phasing out can also be a powerful catalyst for transition. We saw a good example of this in our research on flexible learning pathways. We note that there is a strong and significant phase-out dynamic here: in many places, the nominal and linear study path is no longer followed, for a variety of reasons, and the traditional degree is no longer the only route to gaining relevance on the labour market. We then see that tertiary education is attempting to adapt to this societal phase-out movement based on practical experience. It may therefore be worthwhile for Npuls to take this trend as a starting point more often in its activities. It takes practice to recognise and operationalise this trend, but if this is achieved , it will lead to different discussions, arrangements, interventions or funding, which can give the transition the right impetus.

By sub-theme: the most striking patterns

'Digitalisation supports valuable learning experiences' seemed for a long time to follow a similar pattern (much build-up, little institutionalisation), but has been significantly shaken up in the last few years by geopolitical unrest and the breakthrough of LLMs. The fundamental discussion on shaping value-driven digitalisation, and on thinking critically about learning and developing learning capacity, is now being conducted widely and effectively. This is creating enormous momentum for transition, which has also given institutionalisation a strong boost. Currently, this sub-theme has a score of 3, but we are already seeing a shift towards a higher level, whereby we expect that in the coming years new ways of doing, thinking and organising will increasingly be translated into (organisational) policy and adapted procedures. At the same time, the lock-in remains strong and the gap between discussion and practice wide. The coming years will therefore be very interesting: will we succeed in truly breaking through the

stubborn lock-in, and in turning the nascent discussion about phasing out into actually saying goodbye to undesirable forms of digitalisation and dependence on major tech players?

'Flexible learning pathways' presents a unique picture, as we may be witnessing a phase-out-driven transition here. As described earlier, it is primarily the practice (learners and employers) that is ceasing to follow and value nominal and linear pathways, and the system that is attempting to adapt to this. What is striking is that this societal phase-out movement goes hand in hand with a very strong lock-in on the part of the system itself. Without targeted phasing out from within the system, this transition path could go either way: either flexible routes will continue to exist as bespoke solutions within a traditional system, or more and more additional schemes and programmes will emerge, creating an increasingly confusing patchwork that, in the long run, no one will be able to make sense of. In any case, both options seem extremely inefficient and, above all, accessible only to those who genuinely want to and are able to.

'From student to learner', on the other hand, has hardly any phasing-out dynamics. There is broad consensus that the learner must be given a place in the tertiary education of the future. But that this also has consequences for the position and provision surrounding 'the student' seems less obvious. As a result, LLO often manifests itself as a parallel activity alongside mainstream education, being more supplementary than structural. This organisational separation perpetuates the distinction between initial and post-initial education and hinders the development of integrated learning pathways. The task of phasing out this silo mentality, so that flexibility becomes structural rather than merely supplementary, could therefore serve as a concrete starting point for Npuls. At the same time, there is still simply a great deal of debate on this theme, which translates into a low institutionalisation score: the role of publicly funded tertiary education in facilitating LLO remains ambiguous, partly because a significant proportion of the flexible learning and development provision is taken up by private providers. Consequently, it remains unclear what role public institutions will play on a structural basis and under what conditions they will do so.

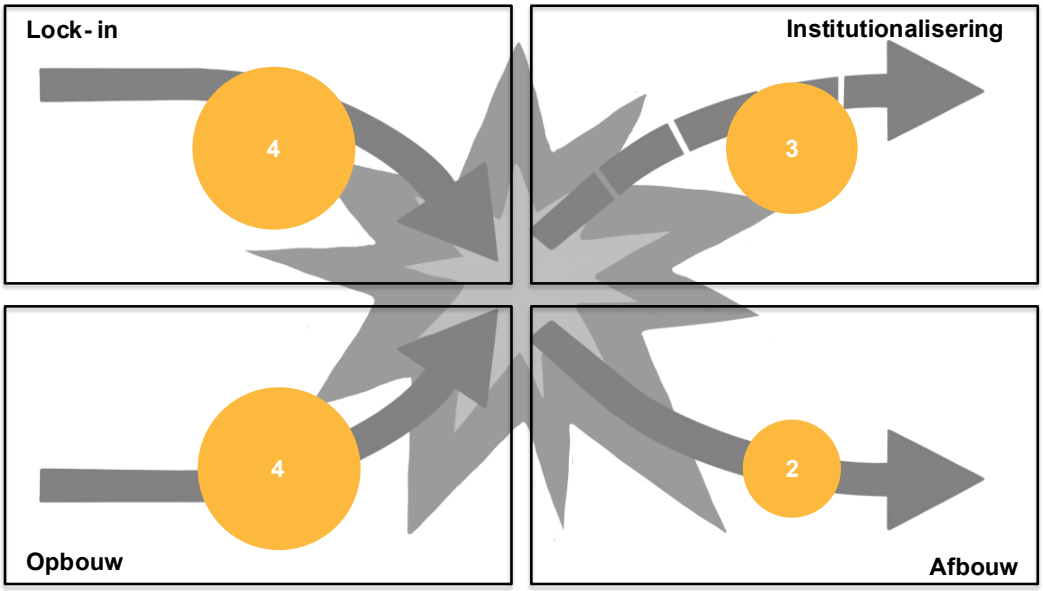
'Learning with and from society' is perhaps the most emblematic of the overall picture that emerges from this analysis. In the area of development, we see numerous excellent initiatives to enable learning to take place outside the classroom, and the development dynamic therefore scores highly. However, achieving institutionalisation – for example, regarding recognition and valuation within quality assurance, curricula and assessment – is a different order of difficulty. The lock-in on these themes is therefore also significant. It is recognised, for instance, that the current education funding system (focused on accredited education and full-time students) hinders innovation and the embedding of new forms of learning and collaboration. Furthermore, phasing out the old system is difficult to implement in concrete terms or to bring to the fore structurally, and the 'old' way of working therefore continues to run parallel to, for example, work-based learning. In the current context, progress is therefore heavily dependent on the energy and efforts of individual institutions, programmes and teaching staff. Fortunately, there is more than enough of this, but it is insufficient as a foundation for a sustainable systemic transition.

'New roles and competencies of educational professionals' is the most advanced of all the sub-themes. Over the past twenty years, there has been a broad emancipation of the teaching staff, with growing recognition and appreciation for the multiple competencies and roles required, and the fact that these are perhaps better fulfilled within a team. Development activities appear to have passed their peak here, which is why we score only a three: attention is already visibly shifting towards institutionalisation, with various efforts to embed the new image of the educational professional in collective agreements, job profiles and supporting infrastructures such as training courses and Centres for Teaching and Learning. Nevertheless, there are important points for attention here. For

although diversity in roles is recognised and valued, the image of the teaching staff member as a subject-matter expert remains dominant and is often still placed above the other roles in the hierarchy. As long as that hierarchy remains intact, there will be no real transition. We also see this reflected in the weak phasing-out dynamics. A transition without phasing out risks becoming an accumulation of ambitions, whereby *more* and more is expected of teaching staff, with all the consequences that entails.

4. State of transition by sub-theme

4.1 Digitalisation supports valuable learning experiences



Development dynamics

Score: 4

The movement is characterised by a gradual broadening of learning experiences. Digital learning materials are being used to make learning more flexible, interactive and differentiated. This movement has long been supported by sector-wide programmes such as 'Doorpakken op digitalisering' (vocational education), the Education Innovation Acceleration Plan with ICT and now also Npuls, which provide long-term professional impetus for this dynamic and offer scope for experimentation.

A substantial market for digital learning materials and broader EdTech has also emerged, in which there has been increasing attention in recent years to public values such as accessibility, privacy and autonomy. Collaboration between educational institutions and suppliers is becoming more professional, with more explicit agreements on privacy, user data and ownership. Consequently, the dynamic is shifting from the ad-hoc use of tools to a more conscious and strategic approach. The core of this development is also shifting from a focus on technology itself to a different approach to knowledge: sharing, reusing, jointly developing and dealing more consciously with public values such as accessibility, autonomy and ownership, both in the use of technology and in the broader design of educational practices and systems.

More recently, we have seen a rapid rise in more generic digital technologies, particularly AI and specifically LLMs, which not only influence educational practices (from dissertations to assessment) but, as system technologies, fundamentally reconfigure the organisation of knowledge, learning and assessment. The quest for broader digital literacy and public values in relation to AI and other generic digital technologies is still characterised by a more nascent development dynamic, with many pioneers and experiments in isolated pockets that are as yet only loosely connected.

In general, however, there is a mature development movement that scores a 4 across all points. For instance, there is **clustering around a number of dominant themes** (learning materials, ed-tech, AI), and **there are network**

organisations with regular meetings and external communication that explicitly work towards shared learning and development goals. In a number of areas, the movement is even going further. And, based on the Npuls criteria, we can already speak of **sustainable and stably funded network forms in which collective learning takes place**.

At the same time, the movement is still growing and remains somewhat fragmented, and **there is as yet no sign of an emerging cross-institutional ecosystem**. We also see that, both within Npuls and beyond, **there is still a great deal of searching for the right visions of the future and a shared language**. Although clear progress is being made here, we cannot yet give a score of 5 across all these aspects, and our final rating is a 4.

Variation in the movement

A relatively strong dynamic has emerged around digital learning materials, with, for example, collaboration on open and FAIR materials, the reuse of materials and joint development. Within EdTech, we see a more mixed picture in terms of the degree of autonomy, dependence and embedding of public values. Although collaboration with suppliers is becoming more professional and public values are being taken into account more explicitly in decision-making, dependence on large (international) EdTech players remains high. Development here is less autonomous and more closely intertwined with existing market structures. With new digital technologies, such as LLMs, there is an emerging dynamic of development. There is a great deal of experimentation with new technologies, which also immediately raises fundamental questions about assessment and digital literacy. However, structural embedding and internal coherence are still largely lacking here.

Illustrative examples

- An ecosystem around open learning materials has been developing for some time, and has been further strengthened in recent years through national platforms such as eduscources and through incentive schemes such as Boost je Collectie, OpenUp and the Impuls Open Leermateriaal. This development is supported by cross-institutional organisations such as SURF, Kennisnet and NWO, which facilitate networking, knowledge sharing and funding.
- In vocational education (MBO), there are examples of teams of teaching staff who jointly develop digital learning materials based on shared qualification files, using open authoring tools such as Xerte. These types of teams are also known as ‘Team Content Creation’. These materials are developed without the involvement of a publisher and shared across institutions, meaning that intellectual property rights remain with the teaching staff and institutions themselves. For example, several VET institutions are jointly developing NT2 (Dutch as a second language) courses, with one institution having designed an open template that is filled in and expanded by other institutions into thematic modules.
- The use of Xerte as an open-source authoring tool by vocational, higher vocational and university institutions makes it possible to design learning experiences[4] , independent of commercial Learning Management Systems (LMS), and to share them across institutions. In vocational education, for example, experiments have been conducted with combining Moodle and Xerte, whereby a 360-degree feedback tool from Moodle was integrated into Xerte. Whereas a commercial LMS supplier would offer comparable functionality at high cost and with a transfer of ownership, this could be achieved considerably more cheaply via open tooling, whilst retaining ownership with the institution(s).
- Experiments with LLMs and AI in educational practices (e.g. support for material development), which challenge existing teaching methods but are still largely pioneering in nature.

[4] An LMS (Learning Management System) is a digital platform used to organise, deliver and monitor education.

Institutionalisation dynamics

Score: 3

This movement shows clear but fragmented institutionalisation. Many guidelines, quick scans, vision documents and institutional policies have now been developed that legitimise and encourage the use of digital resources and blended learning (a combination of physical and digital learning). New ways of working are thus increasingly being translated into policy and adapted procedures. At the same time, the actual use of open, digital learning materials remains largely small-scale and embedded at a local level.

Other digital learning materials and EdTech are often sourced through commercial providers, where conditions that align with public values such as privacy, transparency and autonomy are not yet a given, and structural embedding in policy, contracts and infrastructure (long-term safeguarding) is still under development.There are increasing efforts to organise collaboration, streamline provision and reach agreements on ownership, privacy and *governance*. Generative AI and LLMs, as system technologies, are still in a very exploratory phase: they raise many questions and are still a long way from institutionalisation. This is linked to the fact that AI is not merely a new application, but a system technology that fundamentally redefines existing roles, processes and responsibilities in education. Something similar applies to digital literacy, which is slowly evolving from a narrow, skills- and competence-oriented approach towards a broader educational challenge, but is still only limitedly embedded in the system.

In general, this movement is best characterised by a middle position in the institutionalisation dynamic (score 3). New ideas are finding their way into policy and are being partially formalised, for example in institutional policy on open learning materials and in sectoral agreements on privacy and ownership. Initiatives such as the Content Advisory Council and the inclusion of public values in tenders demonstrate that organisations are actively weighing up what and how they wish to embed. At the same time, we see that the impact on the primary process remains limited. The use of open learning materials remains dependent on individual teaching staff or teams, and even with themes such as generative AI and digital literacy, clear frameworks and broad implementation are sometimes still lacking. While there is explicit attention being paid to embedding and the first steps are being taken towards formalisation, responsibilities, implementation and consistency are lagging behind, meaning that a fully institutionalised picture is not yet in place.

Variation in progress

Institutionalisation appears to be developing relatively quickly at the policy and system level, whilst progress is lagging somewhat in educational practices and organisational culture. For instance, at sectoral level, we see increasing coherence emerging through agreements, governance structures and shared facilities. However, implementation remains fragmented because responsibilities are divided between ICT, education policy and procurement. In practice, too, institutionalisation remains limited in its visibility. The use of open learning materials and new technologies often depends on individual teaching staff or teams, rather than on structural choices made by institutions. We do, however, see a growing awareness at the cultural level of public values and the importance of leadership, but this has not yet consistently translated into concrete action, for example in terms of clear procurement frameworks.

Illustrative examples

- Development of the public-private agreement framework (SURF, Kennisnet, OCW, PIANOo) in which privacy, interoperability and reusability of digital learning materials, including model contracts and ICT

terms and conditions, are laid down. This constitutes a first step towards more structural safeguards in policy and procurement practices.

- Institutions are developing guidelines and handbooks for the use of generative AI (e.g. regarding assessment, use of sources and academic integrity), thereby taking the first steps towards formalising the use of AI in educational processes.
- Sectoral agreements and frameworks concerning privacy, data use and interoperability (e.g. via SURF and the agreement system) are increasingly being translated into concrete requirements in tenders and institutions' ICT policies.
- In a university's LMS tender, an award criterion relating to public values was explicitly included (accounting for approximately 15 per cent of the assessment), requiring suppliers to demonstrate how they handle data, privacy and ownership.
- Universities and universities of applied sciences (including UU, HU and HAN) have developed policies that promote open learning materials and link them to educational strategy and library support.

Lock-in dynamics

Score: 4

Although the fundamental discussion on value-driven digitisation, particularly with the recent rapid breakthrough of LLMs in particular, is being conducted extensively and effectively, the lock-in dynamic remains very strong and the gap between discussion and practice is wide. Digitisation is still often used primarily as a tool for optimisation within existing educational practices. Online lectures, digital learning environments and the use of AI thus reinforce the existing ‘ ’ system of one-way knowledge transfer rather than leading to different learning experiences. Furthermore, digital learning materials and EdTech are regularly selected on the basis of market availability rather than pedagogy or public values.

Furthermore, there appears to be a structural dependence on large suppliers and closed platforms, with vendor lock-in being very strong. This dependence limits the scope for developing alternatives that better meet the pedagogical needs of learners.

Large EdTech platforms combine content, infrastructure and data services, making institutions dependent on their ecosystem. Furthermore, large technology companies are increasingly venturing into the field of training and certification, thereby increasingly competing with or complementing formal educational institutions.

The emergence of AI as a system technology may further reinforce this lock-in, as dependencies develop not only on tools but also on data, models and infrastructures. Public values such as autonomy and fairness are also coming under increasing pressure as a result of this dependence on big tech.

Generally speaking, this trend is characterised by relatively strong lock-in dynamics. The status quo is being challenged in a number of areas, for example in discussions about digital autonomy, public values and dependence on major EdTech suppliers. At the same time, we see that deviating from the status quo is often viewed in practice as difficult and risky: tenders remain largely focused on existing market players, institutions remain dependent on existing platform ecosystems, and experiments with alternatives (such as open-source solutions like Xerte) often remain local and small-scale. In educational practices, too, it is evident that new digital possibilities are often fitted into existing educational principles. For example, lectures are offered one-to-one online and existing assessment methods are digitised, without the underlying learning and assessment principles changing. This shows that, in practice, technological innovation often falls back on existing structures, rather than leading to fundamentally different learning experiences.

Variation in motion

Lock-in manifests itself at both the structural and cultural levels. At the cultural level (dominant ways of thinking), awareness of this dependency is growing. At the structural level (dominant ways of organising and operating), however, there remains a strong dependency on suppliers, contracts and tendering practices.

Illustrative examples

- Major EdTech suppliers combine content, infrastructure and data services, making switching complex and costly (Ratheneau Institute, 2022; Oberon, 2023).
- Institutions often formulate their tenders based on what the market offers, rather than on an educational vision. This perpetuates existing dependencies.
- Contracts where data remains with suppliers limit institutions' autonomy and make reuse and transparency difficult (Dialogic, 2023).
- Discussions reveal that educational professionals feel they cannot 'break free' from large EdTech suppliers, partly due to costs, time pressures and a lack of alternatives.
- The educational professionals interviewed sometimes feel that technology is implemented because it is available or promises efficiency, not because it fits with a pedagogical vision.

phase-out dynamics

Score: 2

In this context, we define phasing out as the active reduction, replacement or phasing out of existing digital systems, working methods and dependencies that are not in line with public values or desired educational practices. In two areas, we see that the phase-out dynamic is still struggling to take hold. Firstly, we see that many new learning resources are primarily used to facilitate existing classroom-based and assessable education, for example by offering online lectures or summative assessments, but in digital form. There is a lack of active policy to counter and phase out these practices. This could, for example, mean that institutions stop using certain platforms, redesign existing teaching methods, or explicitly choose to no longer use technologies that do not meet public values.

Secondly, we see that rapid digitalisation has brought a deluge of digital tools into education that are not always in line with the public values that education prioritises. Although the need to be less one-sidedly and long-term dependent on commercial parties is growing, in practice it remains very difficult to move away from this, and dependence persists on commercial providers who do not operate entirely in accordance with the so-called FAIR principles. Here too, we see a movement towards developing more learning resources in line with the FAIR principle, but actively discouraging, countering and phasing out resources that do not meet these standards still seems a bridge too far.

We see this movement as an early phase of phasing out. Whereas lock-in describes existing dependencies, phasing out involves actively breaking and reducing these dependencies. The importance of distancing oneself from certain technologies and dependencies is increasingly being explicitly highlighted, for example in discussions about digital autonomy and in initiatives surrounding open source and joint procurement of EdTech. At the same time, we see that actual phasing out remains limited. Existing systems and working methods remain in use, and new solutions are often introduced alongside the old systems rather than replacing them. Examples such as the use of open tools like Xerte or experiments with alternative infrastructures show that exploration is taking place, but that phasing out of dominant platforms and working methods is not yet happening. There are therefore clear signs of doubt

regarding the current way of working, which is reflected in an initial exploration of phasing out these working methods, but there is still a lack of targeted strategies and systematic implementation to actually reduce these existing practices.

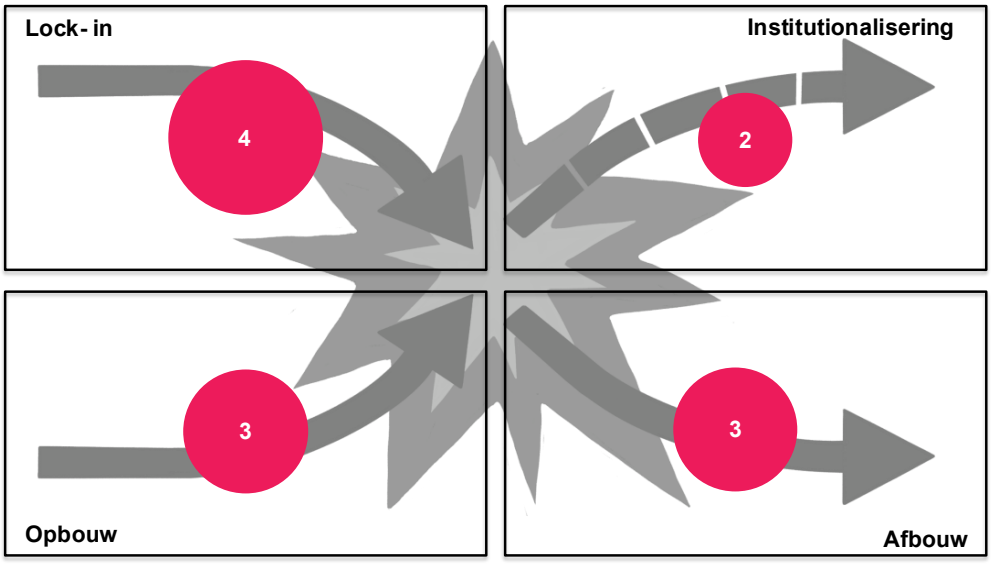
Variation in motion

The phasing out of existing practices is particularly visible at the level of ambition, for example in strategic discussions on procurement and governance. In practice, commercial tools often remain dominant, even when different values are articulated in policy. At the cultural level, therefore, there is a growing awareness of dependence on existing systems and a desire for greater autonomy, but this does not always translate into concrete choices. Phasing out is visible as an intention and an exploration, but is not yet widely supported.

Illustrative examples

- Institutions are explicitly expressing a desire to be less dependent on Big Tech and to take greater control of digital infrastructure.
- Institutions are switching to open-source solutions such as Xerte and PeerTube, and are also exploring initiatives aimed at developing autonomous AI infrastructures to increase ownership and autonomy and reduce dependence on commercial parties.
- Development of strategies to make more informed choices regarding suppliers and to reduce dependencies, for example through collective procurement and pre-agreed exit options.
- Mergers in vocational education where outdated or specialist systems are actively being replaced by more uniform and future-proof solutions.

4.2 Flexible learning pathways



Development dynamics

Score: 3

In practice, we see that learners are already making their learning pathways more flexible in all sorts of ways. The reasons for this vary: sometimes, for example, it stems from the need to combine learning with other life responsibilities such as informal care, work or participating in elite sport. Other learners wish to acquire skills or

knowledge not covered in their nominal programme and therefore look to the course offerings of other programmes or even seek out other institutions.

In recent years, more attention and time has been devoted to facilitating these needs for flexibility. Institutions are collaborating on this, in the form of networks or large-scale pilot projects, and drawing joint lessons. This is reflected, for example, in the emergence of all kinds of concrete initiatives such as *joint degrees,* part-time programmes and, more recently, (experiments with) microcredentials.

Despite this clear upward trend, the visibility of these initiatives for learners remains limited and fragmented. Within many institutions, they are still treated and approached as a supplement or exception to the standard provision. The focus, in terms of both culture and infrastructure, remains primarily on offering, incentivising and facilitating standard degree programmes. There is therefore as yet no fundamental reorganisation of education from a supply-oriented (based on programmes and qualifications) logic to a demand-driven logic (based on learners' development and career needs).

We rate the development dynamics surrounding flexible learning pathways as a 3. Across institutions, there is a growing number of pioneers and experiments that together form a visible movement towards the flexibilisation of educational pathways. Initiatives relating to modular education, microcredentials and alternative learning pathways are increasingly being developed and implemented, thereby gaining a recognisable place within the broader educational landscape.
Networks and partnerships are also emerging, such as within Npuls, in which institutions are joining forces to explore and develop opportunities for greater flexibility. Within these networks, a shared language is also beginning to take shape around concepts such as flexibility, modularisation and lifelong development.

Nevertheless, the movement remains limited in terms of coherence and structural embedding. In particular, the harmonisation of cross-institutional provision is still at an early stage. The movement has thus clearly moved beyond the stage of isolated experiments, but has not yet developed into a cross-institutional ecosystem.

Variation in motion
The shift towards flexibility in vocational education (MBO) is much more advanced than in higher professional education (HBO) and certainly in university education (WO). We also see clear differences in emphasis regarding the aim of this shift towards flexibility. In VET, flexibility is closely linked to labour market issues and the needs of regional employers. Within higher professional education (HBO), flexibility is primarily aimed at meeting the needs of an increasingly diverse student population, which in recent years has led to a growing range of part-time courses and further training opportunities for professionals within the sector. In higher education (universities), flexibility is primarily seen as an opportunity for learners to acquire additional knowledge on top of regular programmes. Here, we have seen significant growth over the past 20 years in the range of programmes that can be freely structured within the educational framework (e.g. University Colleges and master's programmes with numerous possible specialisations).

Illustrative examples

- Various experiments with micro-credentials are currently underway. In recent years, pilot schemes have been rolled out in vocational education (MBO), higher professional education (HBO) and higher education (WO) to widely implement this form of modular education and to draw lessons for its improved implementation.

- ROC Mondriaan explicitly asks learners during the intake process whether they prefer a fixed pathway or a bespoke programme. Flexibility needs are therefore explored at the start of the learning process.
- Numerous institutions, such as the University of Amsterdam (UvA), HU University of Applied Sciences and Fontys University of Applied Sciences, are actively promoting modular and flexible forms of education to the outside world.
- Research by the University of Groningen into student wellbeing shows that students are increasingly interested in part-time and more flexible pathways to combine work and study.
- Regional collaborations in areas such as Brainport Eindhoven are emerging around thematic or labour market issues. And in regions experiencing population decline, collaborations are also growing out of the need to maintain educational provision.

Institutionalisation dynamics

Score: 2

Flexibility has become a policy theme: the need for a more flexible educational provision has been incorporated into numerous national vision documents and strategic agendas. Combined with a growing demand from learners for more flexible learning opportunities and the emerging dynamics of initiatives seeking to meet this demand, there is also a growing need to build a coherent educational architecture that accommodates more demand-driven education. Here and there, experiments are already taking place on the fringes of this. For instance, initiatives such as eduID, eduwallets and edubadges are creating a cross-institutional recognition infrastructure for educational achievements. Sector-wide pilots involving microcredentials also demonstrate that the focus is shifting towards the broader provision and recognition of knowledge and skills. Within the educational infrastructure, there is therefore a cautious move towards institutionalisation.

Nevertheless, it is worth noting that flexibility is not yet part of the core of tertiary education: it is still often seen as incidental and is organised outside the dominant structures of the education system. Support for flexible learning formats, for example, is regularly organised through separate specialist units. Consider microcredentials, which, for the purposes of assessment and quality assurance, have been integrated with regular programmes within only a few institutions. Despite the significant momentum for development, we therefore see that the first steps towards breaking down the dividing line between regular and flexible education are still being taken only occasionally and very cautiously.

Although there is already considerable momentum in practice regarding both the demand for and supply of flexible working arrangements, there is still only limited evidence of genuine institutionalisation: structural embedding is lagging behind the widespread recognition of the need for flexibility. Under the influence of widely rolled-out pilot schemes and more ad hoc experiments, institutions across all sectors of education are achieving results. Learning networks help to identify, to some extent, the successes and shared lessons arising from these initiatives. Nevertheless, these lessons are still scarcely being translated into concrete structural changes in legislation and regulations, organisational structures or funding mechanisms that are necessary to take the next step in the transition towards a more fundamental flexibilisation of education.

Variation in progress

There is a significant discrepancy between the perceived and actual embedding of this theme. Whilst learners and businesses on the demand side are already fully committed to and making use of flexibility, institutions are lagging far behind, resulting in a supply that is currently fragmented and difficult to find.

But there is also considerable variation between institutions: some are working more purposefully towards embedding flexible learning pathways. Elsewhere, efforts remain limited to isolated initiatives that depend on the commitment of individuals, bespoke solutions, or temporary funding.

Illustrative examples

- Integration of microcredentials into standard assessment and quality assurance processes within a few institutions
- Sector-wide facilities such as EduID or EduWallet support access, enrolment and validation
- Digital validation tools such as Edubadges make learning outcomes visible and transferable
- Npuls collects and disseminates experiences from pilot projects involving microcredentials and modular education
- Institutions coordinate with one another on standards, quality assurance and implementation issues

Lock-in dynamics

Score: 4

Genuine modularisation or scalable flexibility is therefore still some way off: in many cases, flexibility remains primarily a bespoke solution, without any large-scale impact on the core of the education system. Legislation and regulations, funding, quality assurance and accreditation are deeply embedded in the mindset of degree programmes and the so-called 'diploma logic'. Flexible learning pathways, modular programmes and microcredentials often exist alongside mainstream education as a supplement rather than a replacement. For many learners and employers, diplomas remain the dominant form of recognition, which discourages them from embarking on alternative learning paths ; for institutions themselves, it is currently more financially attractive to invest time and energy in optimising their diploma-oriented programmes.

This lock-in dynamic is reinforced by the fact that flexibility is often designed based on the aforementioned supply-side logic rather than on the needs of learners. Learners are given freedom of choice, but the flexible provision is fragmented and largely embedded or hidden within existing curricula. The effect of this is that opportunities for flexibility are certainly not always easy to find or accessible for students.
Flexible learning pathways already exist, and are therefore possible, in many shapes and sizes. The current system thus offers some scope, and stakeholders recognise the importance of greater flexibility. However, we do observe a lack of institutional willingness to change: support for flexibility is being developed within a parallel system that is, in many respects, separate from the organisational structures governing standard degree programmes. As a result, opportunities for flexibility often clash with existing regulations, information systems, timetabling, examination boards, sectoral interests and funding streams in practice. In short: the current education system discourages flexibility through financial penalties, societal undervaluation and institutional rigidity. However, societal perceptions of, and (financial) validation of, what is regarded as a 'fully-fledged qualification' also lead to reluctance among both learners and institutions to join this movement and deviate from the norm. As a result, flexibility remains primarily an instrumental and incidental feature within a demand-driven education system.

Variation in the movement

A clear difference can be observed between education sectors in the specific purpose for which the educational provision is being made more flexible. In higher education, for example, the purpose of microcredentials lies primarily in deepening knowledge or academic specialisation. Furthermore, they also help universities to open up parts of their educational provision to a more international audience. Within higher professional education (HBO), microcredentials are more often used as a training option for part-time students to meet the needs of working

people with an interest in learning. Although this also applies in part to HBO institutions, microcredentials certainly function in the vocational education (MBO) sector as a labour market tool to address shortages in specific sectors or regions.

Overall, it is worth noting that the available options, the consequences of certain choices, or the value of alternative routes are often still unclear. As a result, it is primarily students with high social and cultural capital who are able to find their way when they need to make their careers more flexible.

Illustrative examples

- Microcredentials and other forms of LLO are still often seen as supplementary forms of course or further training rather than as fully-fledged alternatives to 'the diploma'
- Learners have little insight into opportunities for greater flexibility
- Teaching staff largely continue to adhere to their role as subject matter experts and, partly due to work pressure and a lack of training, they acquire few skills to coach and guide students with

Phasing-out dynamics

Score: 3

The 'standard' degree-oriented pathway is breaking down: only a minority of learners follow this narrow path within the prescribed timeframe. The reasons for this vary: from the desire to acquire alternative knowledge and skills to the need to work or care for others alongside their studies. And the qualification, based on strictly defined learning outcomes and fixed assessment points, is gradually losing its self-evident status as the ultimate end product of education.

On the one hand, this trend is fuelled by the labour market: under the influence of staff shortages, degree requirements are being relaxed here and there in the search for suitable workers. At the same time, the 'shelf life' of traditional knowledge is also becoming increasingly short for learners due to the disruptive developments that are rapidly changing our society and what is valued within it. Scepticism about the added value of years of study in a rapidly changing economy is growing. This is reflected, among other things, in the popularity of online movements that capitalise on the idea that one can become economically independent quickly and easily not only through work but also through investment and speculation. In short: more and more learners are rejecting the idea that a degree is the be-all and end-all for opportunities in one's future life.

Societal perceptions of the importance of that degree and the need to follow a standard academic path are gradually shifting, but little active work is being done to dismantle the infrastructure that largely perpetuates the old way of thinking. As a result, alternatives often emerge alongside the existing system rather than replacing it. As a result, the degree remains dominant, even though practice already shows that it is no longer a guarantee of success. Both the final certificate and the assessments along the way remain strongly linked to linear educational logic.

Variation in motion

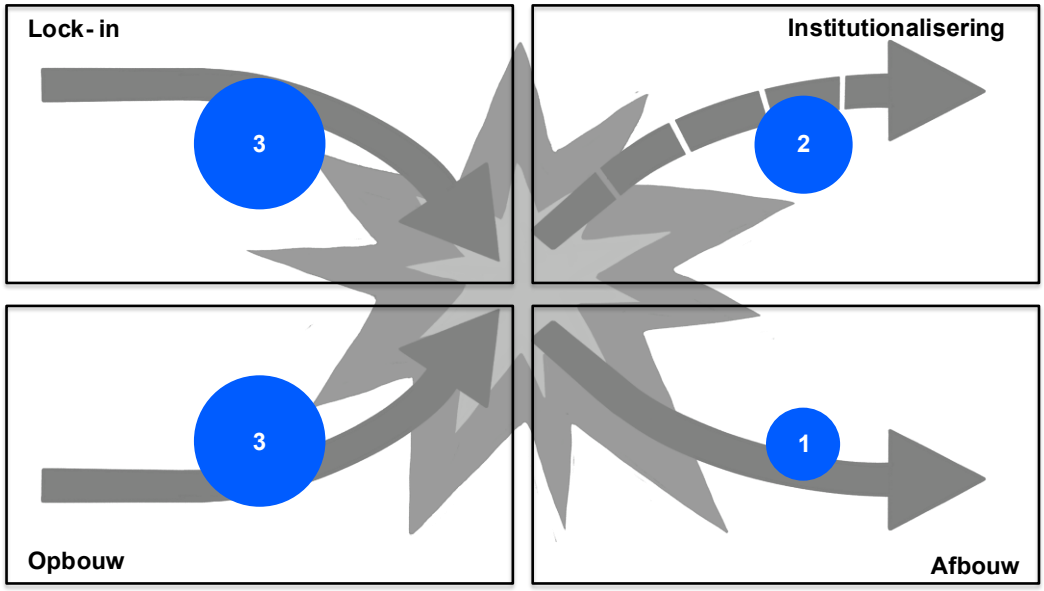
Particularly in sectors gripped by acute labour shortages, shifts are taking place in recruitment criteria: employers are increasingly relaxing strict qualification requirements in their search for suitable staff. This trend manifests itself in the extreme within vocational education institutions under the phenomenon of 'early recruitment'. Companies in sectors such as greenhouse horticulture are enticing learners with attractive terms to join them even before they have formally obtained their qualifications. In the short term, this brings young people a significant financial benefit

and also alleviates the staff shortages faced by companies. In the long term, however, it undermines these young people's chances of sustainable employability and lasting recognition on the labour market.

Illustrative examples

- The Learning Outcomes Act is phasing out the practice of assessing progress based on contact hours and teaching time rather than learning outcomes. This creates scope to facilitate and determine what a student is capable of in a different way.
- Job classifications are being phased out within employers' organisations. This creates scope for roles that do not require entry-level qualifications

4.3 From students to learners



Development dynamics

Score: 3

The shift from 'student' to 'learner' is taking shape primarily through the rise of Lifelong Learning (LLL). Whereas learning was traditionally closely linked to a defined stage of life and a clearly defined group – the student – this is increasingly shifting towards a continuous process that spans the entire lifespan. LLO explicitly focuses on lowering barriers to learning for groups that fall outside the traditional image of a student.

Although LLO was primarily a policy ideal for a long time, we are seeing this movement begin to take shape in increasingly concrete terms. Influenced by societal developments such as an ageing population, labour market shortages and digitalisation, it is becoming increasingly normal to undertake retraining and further training later in one's career. Particularly in sectors with structural staff shortages, such as healthcare, education and engineering, there is an active focus on attracting and developing new and existing staff through flexible learning pathways.

This development is reflected in an emerging infrastructure in which the flexibilisation and modularisation of educational provision are taking centre stage. Tools such as microcredentials make it possible to offer smaller, stackable learning experiences that better align with the needs of working people. At the same time, the dynamics

of this development remain somewhat limited and instrumental . For groups for whom further training is necessary to remain employable, access to education has certainly improved, but for broader groups of 'learning-minded workers', financial and organisational barriers remain significant. Furthermore, the division of roles between educational institutions and employers is still being worked out, meaning that the potential of LLO is not yet being fully utilised.

Overall, there is an emerging to moderately developed development movement, linked to score 3. There is clearly a focus on the issue, **with several pioneers and experiments** and initial forms of supporting infrastructure, but **there is not yet a broadly supported, stable and coherent ecosystem**. Initiatives are often still fragmented, temporarily funded and heavily dependent on the sectoral context.

Variation in the movement

The extent to which the shift from student to learner is taking shape varies considerably between education sectors. In vocational education (MBO), where the intertwining of learning and work has traditionally been strong, this transition is most advanced. Through close collaboration with the professional sector and a strong focus on sectors with continuous training needs, there is relatively ample scope here for flexible and practice-oriented learning arrangements – although the target group generally remains relatively young.

Within higher professional education (HBO), we are also seeing a move towards greater flexibility and modularisation, and an increasing number of hybrid forms are emerging in which learning and work are combined; however, these are still far from being structurally embedded in the educational provision. In higher education (WO), the traditional image of the student remains relatively dominant, with programmes strongly geared towards full-time students following a linear pathway.

Illustrative examples

- DNA Next is a regional partnership in which three educational institutions (DCTerra, Noorderpoort and Alfa College) are working together with public authorities and employers to create a regional learning environment aimed at strengthening the basic skills and employability of workers and jobseekers
- Pilots involving micro-credentials, in which educational institutions develop short-cycle, modular learning pathways for workers, with flexible entry and stackable certification.
- In sectors such as healthcare, IT and education, continuous upskilling and reskilling is increasingly becoming an implicit prerequisite for sustainable employability, leading to a growing demand for flexible learning pathways throughout the entire life course.

Institutionalisation dynamics

Score: 2

The shift from 'student' to 'learner' is being clearly reflected in language use and policy-making. In policy documents and strategic agendas, learning is increasingly portrayed as a continuous activity, not tied to age or stage of life. In collective labour agreements (CAOs) and ' ' (learning agreements) – for example, those concerning learning budgets – the traditional image of a linear school career is also being expanded.

In addition, Lifelong Development (LLO) is widely endorsed and cautiously supported through legislation and regulations, such as the Learning Outcomes Act, which provides scope for more flexible recognition and validation of learning outcomes. Tools such as microcredentials and digital certification systems (e.g. EduBadges) also have the potential to institutionally embed this broader movement, as they make smaller learning steps formally visible and recognised.

At the same time, institutionalisation remains limited for the time being. Many of these tools are still in a pilot phase and face uncertainty regarding structural safeguarding and broad recognition. There is as yet no stable, cross-institutional infrastructure in which learning outcomes are widely recognised and interchangeable.

The role of publicly funded tertiary education remains ambiguous in this regard. Although LLO features in institutional plans and strategic visions, its translation into structural embedding within educational provision, funding and organisation remains limited. In many cases, LLO manifests itself as a parallel activity alongside mainstream education, rather than an integral part of it. At the same time, a significant proportion of the flexible learning and development provision is being taken up by private providers. As a result, it remains unclear what role public institutions will come to play structurally and under what conditions.

Overall, we rate this dynamic as a 2 on the institutionalisation scale. There is clear agenda-setting and incipient embedding in policy and language, and initial steps towards formal recognition of new learning arrangements. At the same time, there is still a lack of structural embedding in systems, stable funding and widely shared standards and working methods.

Variation in progress

The degree of institutionalisation varies greatly across different dimensions. In language and policy, we see a relatively advanced shift: learning is increasingly positioned as a lifelong and context-independent activity. This discursive change is ahead of practice. However, in the formal organisation of education and the associated systems, the movement is lagging behind. This creates a tension between a progressive discourse and a system that is still largely organised in a traditional manner.

Illustrative examples

- **The** LLO catalyst as a national programme focused on the modularisation of education and strengthening the enabling conditions for lifelong development.
- Pilots with microcredentials and EduBadges in which partial qualifications are formally certified, with the potential for broader recognition of learning outcomes beyond full qualifications, but with limited institutional safeguards as yet.

Lock-in dynamics

Score: 3

The transition towards lifelong learning and the associated flexibilisation and modularisation of learning pathways is encountering persistent, systemically entrenched perceptions of what a ‘student’ is. Although the term ‘learners’ is increasingly used in everyday language, the structure of tertiary education remains heavily based on the archetype of the young, full-time student who is physically present on campus. This image is deeply embedded in funding systems, timetabling, teaching methods, supervision and quality assurance, and thus also forms the dominant self-image of educational institutions.

This lock-in is further reinforced by financial incentives. Indicators such as graduation rates and nominal enrolment figures steer institutions towards offering full, multi-year programmes. Shorter, modular and flexible learning pathways do not fit well with this logic and are therefore less attractive, both financially and organisationally, to offer on a structural basis.

At the same time, the needs of an increasingly diverse group of learners rarely form the explicit starting point for educational design. Variation in age, life stage, learning objectives and pace is only limitedly accommodated within

existing structures. This makes it difficult for non-traditional learners to find their way through the range of educational provision, particularly across institutions and programmes. Guidance and support are also largely geared towards standard pathways, whereas more flexible learning paths actually require more intensive and tailored support.

Overall, we rate this dynamic as a 3 on the lock-in scale. There are deeply entrenched structures, incentives and norms that reproduce the existing system and structurally hinder alternative forms of learning. Although there is scope for experimentation and greater flexibility in certain areas, these remain largely supplementary to and dependent on the dominant system. There is as yet no sign of a breakthrough from this lock-in.

Variation in motion

The degree of lock-in varies across different sectors of education. It is most pronounced in higher education. The image of the student as a full-time, young campus participant is deeply rooted here, not only institutionally but also culturally. A broad ecosystem of student accommodation, societies and social structures reinforces this archetype, meaning that accessibility for working adults and lateral entrants remains limited not only in practical terms but also socially.

In higher professional education (HBO) and senior secondary vocational education (MBO), we see more scope for flexibility, partly due to the stronger link with professional practice. At the same time, this flexibility is often still primarily used to offer regular students more choice within existing programmes, rather than to serve fundamentally different target groups. As a result, the lock-in persists here too, albeit in a less pronounced form than in higher education.

Illustrative examples

- **Funding incentives focused on qualifications**: Funding and performance indicators (such as qualification completion rates and nominal enrolments) reward full, linear programmes. This makes it structurally less attractive for institutions to offer short, modular learning pathways for working adults, despite growing demand.
- **Incompatible systems and administrative infrastructure**: Digital certificates and student information systems are often poorly aligned, meaning that the verification, exchange and integration of learning outcomes remain complex and costly. This forces institutions to stick to existing (often linear) systems and processes
- **Dominant student archetype in educational practices and culture**: Education is still heavily geared towards the young, full-time student who is physically present on campus. This manifests itself in daytime timetables, full-time programmes and social structures such as societies and campus facilities. These formats are poorly suited to working students or those entering higher education later in life, making it harder for them to fit in and causing existing practices to perpetuate themselves.

<u>Declining dynamics</u>

Score: 1

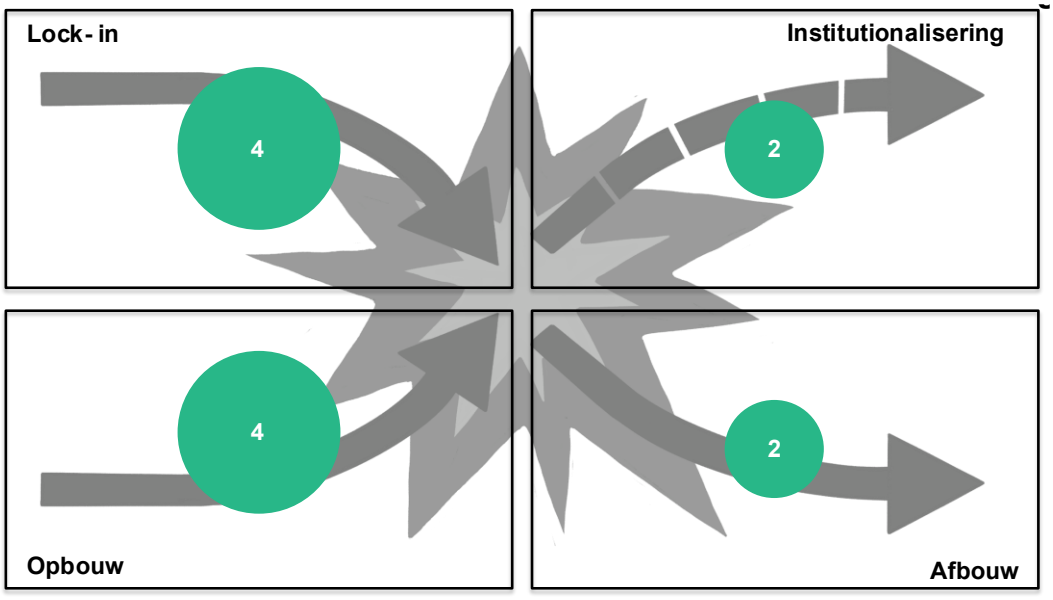
The phasing out of the dominant image of the ‘student’ as a young, full-time, campus-based participant has begun cautiously, particularly in language use and policy documents, which increasingly refer to the ‘learner’. However, this discursive shift has so far had limited impact on the underlying structures. Support services, timetabling and the social and cultural organisation of education remain largely geared towards the traditional student profile, meaning that alternative forms of participation remain implicitly deviant.

In addition, we see that Lifelong Learning (LLL) is still organised in many institutions as a separate business unit, with its own systems, teams and provision, separate from mainstream education. This organisational separation perpetuates the distinction between initial and post-initial education and hinders the development of integrated learning pathways. The task here is to break down this 'silo mentality', so that flexibility becomes structural rather than merely supplementary.

The greatest challenge, however, lies in dismantling the dominant funding and accountability logic. As long as funding and governance remain primarily focused on graduation rates, nominal duration of study and full-time enrolment, linear and long-term programmes will be structurally favoured over short-cycle and modular learning pathways. This reproduces the existing system and limits the scope for alternative forms of learning. Genuine phasing out requires a review of the underlying incentives, so that other learning pathways can also be developed and embedded in a sustainable manner.

We rate the dismantling dynamics as a 1 on the dismantling scale. Although there are increasing signs of doubt regarding the dominant image of the student and the associated organisation of education, this doubt remains largely implicit and discursive- e in nature. Old and new practices coexist, without this leading to a targeted dismantling of existing structures. Activities explicitly aimed at dismantling undesirable cultures and working methods – such as revising funding logic, breaking down organisational silos or adapting support structures – are scarce. Instead, new forms, such as LLO provision, are often added to the existing system, leaving the underlying logic largely intact. As a result, there is some initial initiative, but hardly any targeted dismantling.

4.4 Learning with and from society



Development dynamics

Score: 4

Education, the labour market and society regularly collaborate and focus on the shift from formal educational settings (classrooms and lecture theatres) to learning in, with and from society. This leads to initiatives and experiments that link tertiary education more closely to societal issues and enable the organisation of more flexible

education. We see development dynamics across the entire tertiary education sector. In vocational education (MBO), we see hybrid learning environments: guest lecturers work part-time in the field and teach part-time in the classroom. In higher professional education (HBO) and university education (WO), we see many activities centred on inquiry-based learning, challenge-driven education and working on societal issues. In higher education, for example, there are an increasing number of inter-academic collaborations. In addition, higher professional education is experimenting with a Professional Doctorate (PD), a programme similar to a PhD, but in which knowledge is directly applied in practice.

Informal learning is also receiving attention in many areas. Examples include learning by observing others, giving and receiving feedback, and through making mistakes, as well as efforts to better integrate informal learning into current education. Consider, too, more institutionalised forms of informal learning in, for example, living labs, pilot projects and field labs.

Such initiatives and activities are supported by the development of knowledge networks, platforms, learning communities and knowledge circles where education, research and practice converge – think of the LLO Collective, the Broad Skills Guide and MBOin2030 – and the scaling up of public-private partnerships.

We therefore argue that a mature network-building movement is emerging, with regular meetings and external communication, often supported by shared learning and development goals. These developments make education more future-oriented and 'valuable' learning experiences less dependent on traditional qualifications. In some cases, there is already sustainable and stably funded networking in which learning takes place collectively. At the same time, efforts remain relatively compartmentalised between employers and educational institutions, or between institutions themselves. There is therefore as yet no sign of a rich ecosystem of initiatives that, based on a shared language and a common vision of the future, foster cross-organisational collaboration.

Variation in motion

The link between vocational education and the labour market is inherent and forms part of the thinking, practice and organisation within vocational education. Vocational education is, logically, at the forefront, given its traditionally strong practical focus.

Illustrative examples

- Scratch MBO Utrecht is an example of an innovative form of education in which education and practice collaborate across sectors to address societal issues. The VET programme operates without a timetable, classrooms or exams.
- New Jobs (in Healthcare) brings together two issues: a shortage of healthcare professionals and people who want to work in healthcare but lack the right prior training. Learners follow a 4-6 week induction programme and then get to work in practice.
- HAN's AI Hub is an example of a learning community where learners work on societal issues (this can also be done through *challenges*). Insights from such learning communities can in turn inform the design of educational programmes.
- The Microcredentials Pilot was launched in 2021. These microcredentials enable learners to continuously brush up on their skills and demonstrate their value to employers, whilst also ensuring that learning experiences gained in the labour market are better valued and recognised within the education system.
- Volandis is conducting research into the integration of informal learning into current education.

Institutionalisation dynamics

Score: 2

In the shift from formal educational settings towards learning with and from society, there is limited evidence of institutional change. However, the development of education is increasingly demand-driven and carried out in collaboration with other parties: education is organised with the intention of placing learners and/or the public interest at the centre. Consider, for example, working with learning outcomes rather than learning objectives. This type of education then aligns with major societal challenges, such as the energy transition. There is some focus on embedding lessons learnt and effective elements from pilots, experiments and initiatives for learning with and from society, but this remains limited to frontrunners who receive limited recognition at the system level. For instance, work is underway to develop alternative guidelines, quality standards and assessment frameworks for practice-oriented learning, work placements, workplace learning and hybrid learning environments – and there is recognition and appreciation of practical learning, which is being given a more formal place within curricula and quality assurance – but this movement is not yet taking place consistently, and new educational practices are still only becoming a limited part of policy documents, vision statements and exploratory reports, and are being hindered by existing legislation and regulations (see also lock-in dynamics).

However, there are support networks and centres of expertise that disseminate knowledge and experiences from initiatives, enabling education in the future to better align with practice and society. Examples include the LOB Expertise Centre, KLIMmbo (formerly the MBO Lifelong Development Knowledge Centre), the Sectoral and Regional LLO Network, and Katapult, a network for public-private partnerships. Support is also coming from central government. The LLO Catalyst, for example, emerged from the LLO 2022 Coalition Agreement, and regional Leerwerkloketten Plus have been set up to raise awareness of the learning culture within organisations.

Variation in motion

Cooperation and exchange between education, the labour market and the workplace are a natural part of vocational education. Regional (cooperative) partnerships are well-established, and work placements, for example, are a standard part of vocational courses. VET institutions generally feel a sense of responsibility when it comes to Lifelong Learning in relation to labour market challenges, and are already focusing more on ‘other’ target groups, such as people who already have (more than) ten years’ work experience. At the same time, LLO is still in its infancy and the amount of modular education that learners can undertake at MBO level remains limited. This also requires a cultural shift within schools. In contrast, every university of applied sciences has drawn up an LLO policy, and this policy is increasingly becoming part of the institutional plan, with the result that LLO is being organised institutionally. In higher professional education (HBO), teacher training programmes demonstrate what is possible in terms of institutionalising learning with and within society: programmes are better aligned with societal challenges (such as the teacher shortage) and needs (for example, lateral entry, shortened pathways or learning through practice).

Illustrative examples

- In vocational education (MBO), learning in practice is an integral part of the curriculum, such as BPV (vocational practice training), BBL (work-based learning), practical pathways and project-based learning.
- New programmes arise from a societal need. Such as the ‘Stikstof’ business coach programme (offered by HAS and Aeres University of Applied Sciences, among others), which stems from the agricultural sector’s need for advice and support in implementing nitrogen-reducing measures.
- Cartesius, a neighbourhood in Utrecht, is a place where education and practice come together to tackle social issues and apply lessons learnt within the neighbourhood.

Lock-in dynamics

Score: 4

Existing structures (such as the organisation of funding streams, buildings and curricula) hinder innovation in collaboration between education, the labour market and society. The status quo is certainly under discussion, but new initiatives quickly revert to the existing model. For example, there is talk of an obstructive education funding system focused on full-time students and accredited education, yet alternative forms of learning and collaboration struggle to gain traction. Ensuring the sustainability of innovations is also challenging: alternatives depend on temporary grants and responsibilities are fragmented across institutions. As a result, LLO is largely dependent on the individual motivation (willingness to learn) and effectiveness (ability to learn) of learners.

Moreover, collaboration with the labour market and societal partners is often instrumental and demand-driven, rather than reciprocal with a focus on co-creation. Such collaborations do not yet lead everywhere to a re-evaluation of underlying assumptions about where, when and how learning takes place. Lines of reasoning therefore still resist innovation. This is reflected, for example, in the fact that accreditation frameworks and inspection standards mean that practice-oriented learning environments are not yet always recognised, and are therefore limited in their scalability and remain heavily dependent on motivated driving forces within individual institutions.

Variation in motion

Vocational education trains people on the basis of qualification profiles, where developments in education cannot be viewed in isolation from societal developments. For the group of adult learners and those undertaking further training that VET serves, this may create greater tension than in higher professional education (HBO) and university education (WO). This group primarily needs specific components of a qualification (such as certain subjects or work placements), whilst VET funding is based on the attainment of qualifications. VET is attempting to move away from a strict focus on diplomas, for example by introducing sector-specific certifications. We also see differences between stakeholders: some institutions, teaching staff and employers cling to traditional ways of working and interests. This mindset (clinging to the old and familiar), reinforced by staff shortages and sometimes even ‘change fatigue’, hinders the move towards flexible and sustainable forms of learning with and from society.

Illustrative examples

- When enrolling, a distinction is made between DUO students and LLO learners, which limits ‘learning’ to something that happens at school rather than a process that can also take place in and with society.
- Former radio producer Eric Corton attracted a great deal of attention when he wanted to enrol on a vocational course in healthcare but was first required to pass modules in citizenship, Dutch and numeracy (despite his prior education and experience). This case highlighted the barriers to tailored learning and exemptions in education.
- The use of microcredentials is hampered by the fact that they are not recognised by, for example, the Higher Education and Scientific Research Act (WHW) and the Education and Vocational Education Act (WEB), and because administrative systems are not compatible.
- In the case of a *skills mismatch,* the knowledge and skills on offer do not keep pace with developments in the knowledge and skills demanded by the labour market and society.

Score: 2

Isolated signs of doubt regarding the dominant ways of thinking, acting and organising are becoming visible in initial dismantling initiatives. For example, divisions between study programmes and institutions are gradually disappearing: working as 'islands' and the isolated view of education are being dismantled; institutions no longer wish to operate in isolation (partly due to fewer students in the region, which reduces competitive thinking); study programmes are leading the way in this and are developing (regional) programmes together. For a long time, practical learning, workplace learning and hybrid learning environments were primarily designed as a supplement to formal education: parallel tracks that offered enrichment but left the existing curriculum untouched. Increasingly, however, these practices function not only as a complement but also as a fully-fledged alternative to parts of more traditional learning pathways. It is precisely at this point that friction arises. The shift raises fundamental questions about assessment, quality assurance and legitimacy, and regularly leads to heated discussions with examination boards and inspectorates. When does practical learning actually replace a formal part of the curriculum, and when is it merely considered an extra? Discussions about phasing out are therefore taking place, but there is as yet no explicit experimentation with the (temporary) suspension or phasing out of existing practices and structures. For many programmes, this is still a matter of explicit exploration: the boundaries between substitution and complementarity are blurred and have not yet been sufficiently defined at an institutional level.

Furthermore, the traditional model of education is increasingly being abandoned: timetables are becoming more flexible, education is targeting diverse groups (rather than the 'traditional student' who studies full-time for 3–4 years), and the focus is on skills rather than merely acquiring knowledge (cramming for exams and obtaining a qualification). We see this in companies too, which consider it less important whether someone has completed a degree if they possess valuable skills and/or expertise.

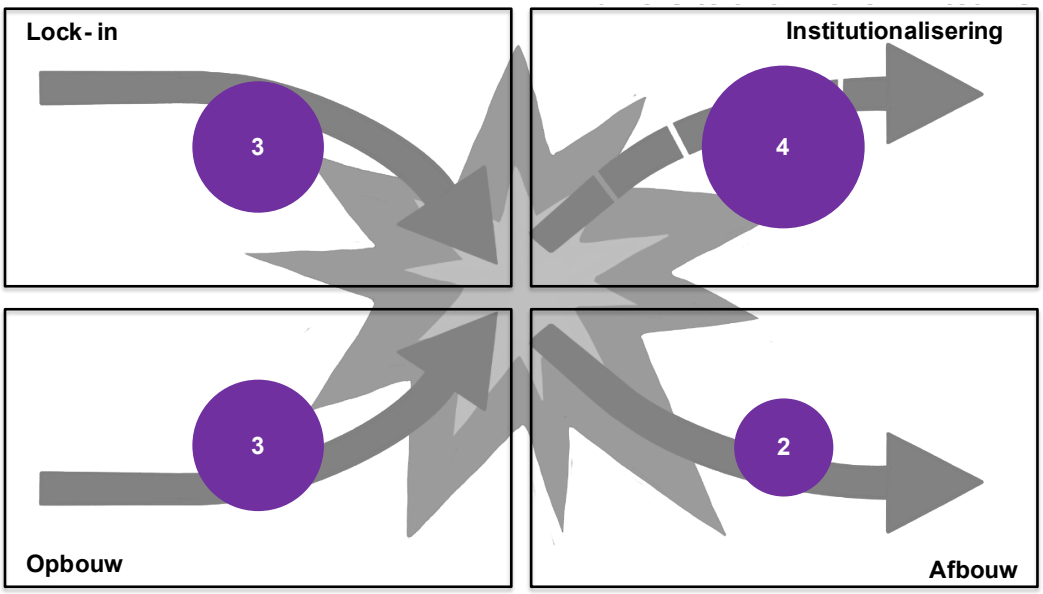
Variation within the movement

Vocational education (MBO) has made further progress in moving away from classroom-based teaching, one-way knowledge transfer (the teaching staff at the front of the class), education centred on cramming information, and traditional examination methods. Dutch and maths, for example, are no longer taught solely in the classroom, but in practical settings (as part of an internship, for instance). In addition, MBO is experimenting with innovative methods of assessment and evaluation.

Illustrative examples

- **By** experimenting with 'Leerwerkloketten Plus' – where regions aim to operate a single employment service centre for that region – this helps to reduce the fragmented provision of countless employment service centres for employers and employees.
- By working with 'Lerend Kwalificeren', vocational education is moving away from fixed assessment points over time and static testing. Instead, the learner's development is tracked in terms of behaviour, attitude and a portfolio demonstrating mastery of that knowledge, tasks and processes.

4.5 New competences and roles for educational professionals



Structural dynamics

Score: 3

Within tertiary education, there is increasing scope for diverse professional roles. There is more frequent scope for the formation of multidisciplinary teams in which professionals with different backgrounds, tasks and competences take joint responsibility for, and shape, a subject or course. Giving learners more autonomy over their learning process also means that teaching staff are increasingly taking on a new, more coaching-oriented role alongside their subject-specific and didactic tasks. Particularly within institutions where learners can shape their learning pathways in a more dynamic and flexible manner, the focus is shifting from purely subject-specific guidance to ‘ ’ – a form of guidance that explicitly pays greater attention to mental wellbeing and personal development. Within some institutions, teaching staff already frequently support learners in making choices, link combinations of learning outcomes to the needs of the workplace, and facilitate experimentation with learning pathways.

At the same time, there is a stronger focus on teacher professionalisation. Institution-based Centres for Teaching and Learning (CTLs) and learning innovation teams play a crucial role in nurturing and facilitating the learning ecosystem. With their support, teaching staff are increasingly given the space to experiment with new educational practices. An increasing number of institutions are taking initial steps towards developing a learning culture among educational professionals through various experiments and pilot schemes. Initiatives focus primarily on inquiry-based learning, professionalisation of teaching staff and creating space to practise new educational practices. They often still depend on individual enthusiasm or temporary and fragmented project funding. Nevertheless, they are important precursors on the path to structural innovation.

Variation within the movement

Teaching staff start from different positions in the various sectors. Due to the clear integration of education into professional practice in vocational education (particularly for work-based learning programmes), teaching staff there are accustomed to exchanging ideas with the professional field, and teaching staff also more frequently take on a ‘mentoring role’ as in secondary education. Teaching staff in higher professional education also have close ties to professional practice. University teaching staff, on the other hand, are more firmly rooted in research. Developing roles and competencies therefore requires a slightly different approach in each sector.

Illustrative examples

- SOTL grants give teaching staff the opportunity to examine their own teaching practice (e.g. the CLI Fellowship at EUR), thereby integrating teaching methodology and innovation with the role of researcher, and prioritising this as a key focus for teaching staff.
- Various initiatives at educational institutions aimed at promoting teacher professional development and innovation in educational practices: these include the Research-Based Learning research group at Utrecht University of Applied Sciences, the project " " (Fontys, Amsterdam University of Applied Sciences, Utrecht University of Applied Sciences), and the "Teacher Professional Development" practoraat at Landstede Group.
- Comenius Network, established in 2018 to connect teaching staff who are actively committed to educational innovation in tertiary education.
- The LLO catalyst offers solutions specifically aimed at the professional development of teaching staff and other staff. There is also a growing private sector offering of "teacher as coach" courses (primarily for vocational teachers).
- Pilots 'A Smarter Academic Year', in which educational professionals from various universities and a university of applied sciences learn together about organising educational activities more effectively, redesigning assessment, and the balance between teaching and research.

Institutionalisation dynamics

Score: 4

In the transition towards greater diversification of roles, a cautious but significant institutionalisation is taking place: Centres for Teaching & Learning and key teams are increasingly becoming a structural part of the educational organisation. They offer teaching staff a place to develop skills, exchange experiences and support innovation. At the same time, differences remain apparent: some CTLs are fully embedded and operate without funding, whilst others are awaiting decisions or lack the scope to take further action. Furthermore, the activities of CTLs are often identified and utilised by a smaller group of educational professionals within an institution. In addition, there is growing attention for the professionalisation chain: definitions, impact analyses and support profiles are being refined, but are not always easy to find.

Collective labour agreements are also following this trend: job titles are being updated and there is increasing formal scope for roles focused on coaching, guidance, educational development and well-being. At the same time, much remains unclear regarding the demarcation of tasks, career paths and the associated recognition and appreciation. The precise details of these new professional roles still need to be further defined in practice.

Across institutions, there is increasing structural networking among educational innovators in tertiary education. Opportunities are emerging to exchange experiences and knowledge.

Variation within the movement

In vocational education (MBO), teacher professionalisation is more often organised collectively for entire teams or institutions, whereas in higher professional education (HBO) and university education (WO), these are more individual (and optional) development pathways. Legal obligations in some MBO programmes (such as compulsory work placements) result in different learning and consultation structures than in programmes where there is more scope for variation. Universities and universities of applied sciences operate according to different logics, for example through LLO partnerships or research-driven exchange.

Illustrative examples

- The collective labour agreements for each sector provide for professional development and skills enhancement. Vocational education (MBO): a training budget, 59 hours of training time and scope for pilot projects for teaching teams. Higher professional education (HBO): professional development plans, 6% budget allocation and scope for team development. University education: BKO and follow-up courses, 3 development days, employability funds, more permanent contracts for junior lecturers.
- At a number of leading institutions, there are CTLs (cohort 4) that are already operating structurally without subsidies and are embedded in regular operations. This shows that governing bodies recognise the importance of professionalisation and educational innovation and wish to allocate structural attention and funding to these areas.
- Networking via Npuls, Top Sectors, NWO, SIA and NRO around learning communities and educational innovation fosters connection, exchange and the scaling up of innovative developments.

Lock-in dynamics

Score: 3

Despite trends towards greater teacher professionalisation, good teaching is still seen by many as something that often takes second place. The original professional identity of a teaching staff member as a practitioner or researcher is persistent. Alongside these primary roles, there is also a clinging to the image of the teaching staff member as a subject matter expert and a lone figure responsible for their own subjects. Flexible, socially oriented education requires teaching staff who also take on coaching, connecting and coordinating roles. Ingrained routines, work pressure, but also a lack of alternative training, hinder the shift towards educational support that is more learner-centred. Although there is greater attention being paid to the guiding and designing roles of (teaching) teams, these remain regularly undervalued in terms of task allocation, career paths, recognition and appreciation. These factors contribute to the entrenchment of the aforementioned role definitions.

Educational innovation and the exchange of learning experiences often remain confined to a small, motivated group of teaching staff, whilst most professionals feel they have little time or scope to learn from and with one another on a structural basis. Furthermore, support staff who assist with the implementation of educational innovation through learning innovation teams are often not part of the teams they support, meaning that innovation does not always become embedded within teams but is viewed as something separate.

Siloed structures (legislation, funding streams, accreditation and inspection criteria) make it difficult for educational professionals to collaborate across subjects, programmes or institutions. In addition to these organisational barriers, underlying assumptions and risk aversion reinforce the tendency to turn inwards. Teams wish to remain within safe boundaries for fear of sanctions from the inspectorate, whilst institutions prioritise financial security over innovation: support structures are being cut back, and professional development or collaboration is viewed as an extra rather than an integral part of teaching staff's remit.

The rapid commercial rise of AI technology for consumers (particularly LLMs) is a major destabilising factor for educational professionals. It is forcing institutions to critically re-evaluate the role of teaching staff in curriculum development, testing and assessment, teaching methodology and interaction with learners. At present, learning in this area is still in its infancy in many places, and it is unclear what impact this disruption will have on tertiary education.

However, there is certainly increasing scope for the broader development of teaching staff (see development and institutionalisation). There is therefore certainly no question of a complete lock-in.

Variation within the movement

Within higher education, didactic and pedagogical professionalisation is often seen as something extra alongside conducting research. In vocational education and higher professional education, however, these competencies are subordinate to building and maintaining applied expertise and networks in practice (and, for lecturers and practors, also applied research).

Illustrative examples

- Higher education: compulsory teaching duties for researchers and temporary teaching contracts that are not automatically renewed (resulting in high turnover), although the sector has now expressed its intention to offer junior lecturers longer contracts.
- VET and higher professional education: teaching staff are appointed for their professional network and practical knowledge (not teaching skills or educational vision)

Downsizing dynamics

Score: 2

The traditional image of the teaching staff as the autonomous custodian of a subject or programme is gradually losing its self-evident status: here we see a clear trend towards de-emphasising the individual. Increasingly, it is not the individual but the team as a whole that is held responsible for the design, delivery and quality of education.

This shift is accompanied by a reduction in individual autonomy and exclusive subject responsibility. Dropout rates, declining academic performance and the growing diversity of learners (background, age, pace, life experience) highlight the importance of effective learner support. Whereas teaching staff were previously primarily regarded as subject matter experts, the focus is shifting towards the joint design of learning experiences and development pathways.

At the same time, practice shows that this shift does not happen automatically. The shift requires the development of new supporting infrastructures, such as team-oriented professional development, adapted HR tools and other forms of quality assurance. As long as these preconditions remain insufficiently developed, old and new conceptions of roles often coexist, sometimes making it seem as though a single teaching staff member should be able to do *everything*. A dynamic that we see most strongly in higher education.

Variation within the movement

Particularly within universities of applied sciences, and increasingly also within parts of vocational education, self-organising or more collectively managed teams are emerging.

Illustrative examples

- Self-organising teaching teams in vocational education and higher professional education, e.g. at Avans University of Applied Sciences, are helping to dismantle the notion of the ‘subject teacher’ as the sole person responsible with a one-sided role

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Appendices

Scoring table

	1	2	3	4	5
Development	Only a few pioneers and experiments, often temporary and highly dependent on individuals Hardly any exchange between experiments No shared language or vision	Several pioneers and experiments. Occasional mutual contact and meetings Limited or informal exchange of knowledge	Pioneers and experiments form a visible movement Temporary networks or learning circles emerge A shared language gradually takes shape	Clustering around a number of dominant themes Network organisation with regular meetings and external communication Joint learning and development goals	A rich ecosystem of initiatives that actively collaborate across organisations Sustainable and stably funded network structures in which learning takes place collectively A shared language and a clear vision for the future
Institutionalisation	Innovation takes place outside the policy context Innovation often remains temporary and context-specific There is a lack of intention or effort to embed lessons from frontrunners into standards, (organisational) policy, and legislation and regulations	Pioneers receive only limited recognition at the system level New ideas find their way only sporadically into memos, vision statements and exploratory reports Lessons from frontrunners are formalised only occasionally	Explicit focus on embedding, for example by systematically learning from pilot projects Organisations weigh up what needs to be recorded and how The ability to push through changes and implement them remains limited	New ways of doing, thinking and organising are actively translated into (organisational) policy and adapted procedures Responsibilities are assigned through clear agreements and timelines The transition is not yet entirely consistent across the board and there are still a few laggards	The new normal has been almost entirely codified in standards, policies and frameworks Legislation and regulations have been harmonised and are being applied systematically New forms of lock-in are slowly becoming apparent
Lock-in	There is (very) low resistance to change and plenty of scope for experimentation across the entire field Dominant and undesirable cultures, structures and working methods are being questioned	The need for change is no longer in question Some old routines and cultural elements continue to exist implicitly A few persistent incentives perpetuate the status quo	Deviations from the status quo occur regularly Deviating from the status quo can lead to ( ) (organised) resistance	The status quo is under discussion, but deviating from it is seen as risky New movements quickly revert to the existing order Arguments are defensive and reject innovation	The dominant narrative positions the status quo as the best and most legitimate option Activities and incentives reinforce the existing system

	Alternatives are seen as legitimate and are not watered down in terms of ambition		Various parties endorse innovation but do not act accordingly		Innovation is marginalised and delegitimised
Phasing out	Discontinuation is avoided or actively opposed Few activities focus on explicitly dismantling undesirable cultures, structures and working methods Old and new practices continue to coexist	There are isolated signs of doubt regarding dominant ways of doing, thinking and organising Discussions about phasing out take place without any decisions being made Initial phasing-out initiatives are still implicit and often driven by individuals	The need for phasing out is explicitly recognised and promoted by various parties Scenarios are being explored and preparations made for systematic phasing out Experiments with temporary suspension or scaling back are taking place	Phasing out is visibly taking place in several areas Resources are being reallocated and old routines, roles and working methods are being broken down The old system is losing its dominance	There are targeted phase-out strategies across the entire field Systematic discontinuation of ways of doing, thinking and organising Widespread acceptance of the loss of old, no longer adequate working methods and ideas

1. Report on monitoring session: Digital literacy (6 October 2025)

From digital skills to digital literacy

In the run-up to, and during, the monitoring session, the need arose to reframe the originally formulated indicator 'digital skills' as 'digital literacy'. This shift stemmed from the broader development of Npuls' vision on this theme and from the input of participants during the monitoring session. With this reframing from skills to literacy, the focus is more on understanding, applying and critically reflecting on the digitalisation of the education sector, and this aligns with the broader movement within Npuls and the education umbrella organisations to encourage not only technical proficiency, but also a critical, ethical and creative approach to technology.

Structure

The disruptive rise of digital learning resources has increased the need for professionals to engage in collective reflection and standard-setting. There is a high level of engagement: initiatives are springing up everywhere to interpret and guide the digital transition, but there is still limited coherence and consistency in this regard. Innovation is taking place at an operational level, whilst underlying practices and values are only slowly adapting.

Emergence of individual initiatives by educational institutions
Institutions are undertaking initiatives to provide guidance on dealing with AI and digitalisation. Examples include codes of conduct for responsible use, parents' evenings on AI in education, or opportunities for pilot projects on the use of generative tools. Individual teaching staff are drawing up rules and guidelines on their own initiative.
Practical examples: St. Lucas with an AI code of conduct and AI disclaimers, the 'digital learning research centre' experimental space; MBO Innovatiecollege (a fictional school offering contemporary and future-proof education)

Educational institutions are taking increasing ownership
By developing codes of conduct, providing scope for experimentation for professionals and holding discussions on how to deal with AI, educational institutions are positioning themselves not only as implementers of policy, but also as active and reflective leaders in charting a more digital course.
Practical examples: Parent evenings on AI at St. Lucas, Fontys with specialisations in Digital Literacy and Computer Science

More or less organised learning networks among professionals
Growth of (in)formal learning networks in which professionals exchange knowledge on topics such as the use of AI in assessment, media literacy and digital resilience among young people. Networks vary in scale and form: from regional collaborations such as Npuls to small-scale groups of teachers sharing experiences on internal platforms or at professional development days. It is therefore worth noting that digitalisation in education is increasingly being rolled out through networks rather than via central policy.

Practical examples:
Media literacy and digital resilience for young people network, regional networks such as Npuls, and networks between institutions such as ROC Twente and Saxxion

There is a different approach to monitoring what students should be able to do
Governments and educational institutions formulate proficiency targets, learning outcomes and final qualifications that explicitly incorporate digitalisation. Targets are also regularly monitored on a cyclical basis and linked to national instruments and policy agendas.
Practical examples:
MOVEL HAN final qualification

Policy follows practice
Whilst practical work on this theme is already underway in the field, the government is attempting to promote digital skills in education reactively: the Ministry of Education, Culture and Science (OCW) will soon be providing grants for the inclusion of digital competences in curricula, and digital literacy is being given a permanent place in primary education. Frameworks on this theme are also being developed within the EU, although these are of a more timely and voluntary nature.
Practical examples:
Ministry of Education, Culture and Science grant for incorporating digitalisation into courses from 2026

Learning by doing is becoming increasingly common
Educational institutions are creating scope to experiment with the use of AI outside existing rules. In this way, the boundaries of the responsible use of digitalisation can be explored in a controlled manner. However, overarching formal rules regarding the use of AI remain limited.
Practical examples:
UvA AI in curriculum pilots, TU Delft digital skills courses, Maastricht University AI honours programme KE@WORK

The importance of digital skills as a public issue
Governments and the media are actively campaigning on the digital impact on young people, for example regarding cyberbullying or data breaches. Public attention influences not only policy but also society's perception of digitalisation in education.
Practical examples: Government adverts on the digital impact on young people (including BNR campaigns on cyberbullying and data breaches), podcasts such as *'AI-tussenuurtje'*

Institutionalisation

Institutional recognition of the importance of digital literacy appears, for the time being, to be only superficial. Although new guidelines and tools are being introduced here and there, their main aim is to facilitate the smooth roll-out of technological innovation. However, there is a lack of in-depth reflection on their impact on critical thinking, ethics and pedagogical relationships within education. Institutional attention indicates a certain degree of embedding, but the focus often remains on projects and innovation programmes, whilst structural embedding in curricula and quality assurance remains limited.

New frameworks and guidelines provide language and direction for policy-making
In recent years, various frameworks have emerged to guide the integration of AI and digitalisation in education. This creates a language and structure for policy, although the actual implementation remains largely non-binding and dependent on priorities and capacity.
Practical examples: the AI-GO framework, Npuls as a national programme supporting digital transformation in education

Digital skills are increasingly being integrated into institutional structures
Formal structures such as blended learning centres, Centres for Teaching and Learning (CTLs), multi-year strategies, practorates or research groups are embedding digital literacy structurally. There is also growing recognition of digital competences as a core component of professional teaching, but the extent to which this leads to structural behavioural change varies greatly between institutions.
Practical examples: Blended coaching and 'Canvas' developments within institutions, new practorates and lectorates; structural incorporation into policy and multi-year strategies

Professional development in digital skills is gaining ground
Professional development pathways are being supplemented or revised to include digital pedagogy and AI literacy. Teaching staff are being given more opportunities to develop skills in the use of digital learning environments, generative AI and blended learning design.
Practical examples: PDG and BKO with modules on digital pedagogy; core curriculum for digital skills in primary and secondary education, agreements with providers of digital teaching tools

Practice is gradually adapting
In practice, there is a subtle shift in norms. Whereas AI tools were initially viewed with suspicion and sometimes even banned (such as ChatGPT), there is now more scope for controlled and targeted use within clear frameworks. At the same time, teaching staff are increasingly turning to forms of assessment that are less affected by AI use, such as oral presentations or formative assessments.

Responsible use of technological tools is becoming a moral issue
The rise of technology brings with it ethical and social issues: in response, themes such as data ethics, critical thinking, meaningful work and transparency are moving higher up the policy agenda.
Practical examples: National AI course for primary education, policy focus on data ethics and digital responsibility via the Minister

Lock-in

Efforts to promote digital literacy appear to clash in many places with existing habits, structures and assumptions. Technology is often used instrumentally. However, reflection on the pedagogical, ethical and organisational implications is lagging behind. Structural support is also limited. Digitalisation is embraced, but only at an operational level, without being sustainably embedded in vision, curriculum and professional development.

Instrumental and one-sided use of technology
Both students and teaching staff use digital tools such as ChatGPT without clear frameworks or ethical reflection. The focus on artificial intelligence overshadows other dimensions of digital literacy, such as media literacy, information skills and digital ethics. This creates a narrow technological perspective in which educational and pedagogical elements are given less attention.

Limitations in teaching staff's digital competence and motivation
Many teaching staff overestimate their digital skills or view digital developments as an additional burden or a passing fad. In many courses, there are still gaps in basic skills such as file management, collaboration in the cloud or the secure handling of data. Where training is available, there is often a lack of intrinsic motivation or connection to everyday educational practices.

Fragmentation and lack of structural integration
Digitalisation is often seen as something that is 'added on', rather than a fundamental part of teaching staff's professional expertise. Students and teaching staff often receive only fragmented digital training, depending on the teacher, programme or project. Without a coherent curriculum, digital skills develop in a fragmented manner and differences between institutions remain significant.

Lack of proven teaching methods and pedagogical approaches
There is still little educational research into effective methods for teaching digital competences. As a result, institutions continue to experiment with one-off workshops or pilot schemes, without a lasting learning effect or a continuous learning pathway.

Uncertainty regarding ownership and leadership
Within and between educational institutions, there is a lack of a shared understanding of exactly what 'digital literacy' entails. Digital literacy falls between two stools: neither the education inspectorate, nor always the degree programmes, and often not the board either, feels ultimately responsible. Policy frameworks often shift responsibility onto individual teaching staff or teams, whilst structural support and strategic leadership are lacking.

Tension between autonomy and joint vision development
Developing a shared vision requires a certain degree of central guidance, something that is often a sensitive issue within education. This tension makes it difficult to achieve coherence between initiatives, training programmes and disciplines.

Underestimation of a structural approach
The complexity of digital literacy is often underestimated: it requires more than occasional training. Without structural professionalisation, vision and governance, the sector remains dependent on random initiatives or enthusiastic pioneers.

Phasing out

Old structures and approaches to digitalisation in education are coming under increasing pressure. Digitalisation was once seen as a specialism, whereas there is now a more coherent vision regarding the value of digital skills and literacy for students across all disciplines.

From digital skills to digital literacy
Npuls and various educational umbrella organisations are consciously shifting the focus from technical proficiency to a critical, ethical and creative engagement with digital technology. This phasing out of instrumental approaches and the development of reflective frameworks marks a significant turning point in vision and policy.

Shift from ICT specialism to broad digital competence
Digital skills are no longer exclusively linked to ICT courses, but are also being integrated into other fields such as law, healthcare or social studies. Examples such as 'Law in a digital world' demonstrate that digital literacy is becoming a generic professional skill. The shift from 'digital skills' to 'digital literacy' marks the transition from technical proficiency to a critical, ethical and creative approach to technology.

Revision of educational frameworks due to the rise of AI
The use of generative AI renders traditional teaching methods such as essays or homework assignments less meaningful. Recommendations from the Education Council and Npuls therefore advocate a fundamental review of learning objectives, assessment methods and educational practices in which digital competences are structurally integrated.

From linear knowledge transfer to practical integration
Digital skills are increasingly being integrated into professional practice rather than offered as a separate subject. This shift leads to more authentic learning: students practise digital competences within real-world work situations and projects.

Standardisation and redesign of programmes
The standardisation and streamlining of ICT programmes promotes quality and recognition and makes it easier to implement generic digital competences across all programmes. Digital skills are often still optional, but in some places are already being positioned as a compulsory core component of curricula.

Leadership and shared responsibility
Not only teaching staff, but also managers are involved in shaping digital strategy. Institutions are increasingly working together within collectives such as Npuls or SURF. This collaboration reduces fragmentation and promotes shared standards, learning pathways and learning materials. Digitalisation thus shifts from an individual teaching staff issue to a collective institutional task.

Moving away from a project-based approach and focusing on sustainable professional development
There is a growing realisation that digital transformation cannot be achieved through one-off workshops or quick fixes. Institutions are increasingly investing in sustainable learning pathways, professional development and joint reflection. The 'workshop implementation' mentality is giving way to a structural, long-term approach to digitisation.

2. Report on monitoring session: Digital learning materials (15 October 2025)

Build-up

The development phase shows a growing movement of institutions and teaching staff collaborating on digital learning materials that are FAIR (Findable, Accessible, Interoperable and Reusable) and align with public values. Through initiatives by organisations such as Npuls, including edusources, Boost je Collectie and OpenUp, communities and experiments are emerging in which the first steps towards collaboration, openness and value-conscious use of technology are being taken, explicitly from a different mindset where openness, sharing and collaboration are central. At the same time, we are hearing from the education sector that the development of this is still in its infancy. Other experts point out that many initiatives are 'new forms of the old': digitisation without any substantial innovation in education. Awareness of public values is growing, but remains unevenly distributed. The development phase currently appears to be a period of experimentation, but also of fragmentation, where innovation often still depends on pioneers rather than a broadly supported strategy.

Examples of development

- **Networking and community development**
  Around initiatives such as Npuls (with initiatives such as OpenUp and Boost je Collectie) and edusources, an active network of institutions and teaching staff is growing, working together to develop and share digital learning materials. These initiatives lay the foundation for open and FAIR learning materials and promote awareness of public values. The collaboration focuses primarily on public sector organisations; collaboration with suppliers currently takes place mainly in specific pilots and experiments, for example within EdTech projects exploring new models of collaboration between institutions and market players

- **Experiments and pilots**
  Various experiments are emerging in which institutions are working together on learning materials and educational technologies. Examples include the National Growth Fund project 'Groeivermogen MBO-HBO-WO', in which joint modular programmes are being developed using open learning materials, and Npuls' EdTech Marketplace, in which public values are directly incorporated into tenders. In addition, pilots are being carried out with FAIR metadata, EduSources and OpenEDx (such as the Swiss Learnity model), in which institutions learn together about governance, openness and scalability. SURF is exploring alternatives to dominant platforms such as Microsoft in collaboration with institutions, with institutions acting as 'guinea pigs' in pilots involving public or European solutions. These experiments are aimed at increasing digital autonomy and testing the feasibility of alternative infrastructures in practice (Erasmus Magazine, 2025).

- **Support and tools**
  Institutions are gaining increasing access to tools that help inform decisions regarding digital learning materials. Examples include the WaardenWijzer, the Digital Learning Materials Impact Scan, 'Choose your digital learning materials wisely' and SURF's Definitional Framework for Digital (Open) Learning Materials. Grants such as the Open Learning Materials Impulse encourage teaching staff to try new working methods and develop open materials.

- **Professionalisation and awareness**
  Although awareness of public values and FAIR principles is growing, this is only just beginning and remains both limited and unevenly distributed across institutions. Teaching staff and teams who experiment often receive limited structural recognition, but there are signs that this is changing, for example at HAN, Avans and Fontys, where contributions to open resources are explicitly valued.

- **Pedagogical and technological integration**
  The focus is shifting from mere digitisation to pedagogical integration. Institutions such as Eindhoven University of Technology and Radboud University are experimenting with the flexible use of EdTech and AI in the core teaching process, explicitly incorporating public values.

Institutionalisation

The institutionalisation of digital learning materials is slowly gaining momentum through policy, agreements and governance structures in which public values are embedded. Under the leadership of organisations including Npuls, SURF, Kennisnet and PIANOo, agreements are being developed on interoperability, privacy and open procurement. An increasing number of institutions are formulating policies for open digital learning materials and integrating these into their educational strategies. Within Npuls, work is also underway in collaboration with SURF to establish collective framework conditions, such as a system of agreements, as well as digital facilities, such as edusources.

Nevertheless, implementation appears to be lagging behind. Institutionalisation seems to be at a stage where structures are being built, but where the cultural shift has yet to materialise: "There are visions, it looks good on paper, but nothing comes of it." Education administrators endorse the goals, but the sense of urgency is not always shared within the organisations. Although teaching staff and support staff are willing, they do not always yet feel part of this transition. Moreover, there is often a lack of awareness that digitalisation is also an administrative and educational challenge, according to one of the experts interviewed: "Technology is still seen too much as a facility, not as part of the primary process."

Although policies and systems of agreements are developing, progress is often hampered by fragmented responsibilities and decision-making. Various bodies, such as IT departments, project teams and administrative working groups, operate according to their own priorities and paces. As a

result, there is a lack of coherent leadership on digitalisation and public values. This administrative fragmentation makes it difficult to move from vision to implementation and constitutes a significant barrier to the institutionalisation of digital learning materials. Furthermore, interviews reveal that, particularly in procurement and legal processes, there is still a reluctance to translate public values into concrete choices.

Examples of institutionalisation:

- **Policy and governance**
  Work is underway on a public-private framework of agreements concerning digital learning materials and data exchange. Within Npuls, this framework is being further developed, with a focus on establishing joint agreements on interoperability, privacy, reusability and governance. The establishment of the Content Advisory Council within Npuls contributes to sectoral coordination and prioritisation. Similar public-private partnerships also exist in other education sectors, such as Edu-V in primary, secondary and vocational education, where work is underway on standardising data exchange.

- **Sector-wide agreements and standards**
  SURF and Kennisnet are working on structural safeguards through model contracts, ICT terms and conditions, and interoperability agreements (such as Sharekit and Edurep). These standards enable institutions to develop and exchange digital learning materials in a sustainable, secure and FAIR manner.

- **Institutional embedding**
  An increasing number of institutions are incorporating open digital learning materials policies into their education and library strategies. Utrecht, Leiden, HU and HAN have developed policies that encourage and facilitate the sharing of open learning materials. Institutions such as Eindhoven University of Technology recognise the importance of a broader IT strategy centred on autonomy, IP ownership and public values, but the strategy is not yet under development.

- **Collaboration and public-private partnerships**
  Structural partnerships are emerging between educational institutions and private parties (PPPs) in which shared ownership and IP rights are established (e.g. the LUNAI arrangement, where the researcher, institution and supplier each own one-third of the IP).

Lock-in

The lock-in phase is characterised by structural dependence on market players and a widely recognised sense of limited room for manoeuvre within institutions. Major suppliers largely determine the digital infrastructure, and tenders are often structured around what the market currently offers (market

availability) rather than public values. In both the transition workshops and interviews, this is described as a form of "illusion of powerlessness": the conviction that things could be different exists, but practice remains focused on maintaining existing systems. Institutions often follow tendering rules procedurally ("the contract is expiring, so we'll put it out to tender again"), without fundamentally reconsidering what digital support education actually needs. At the same time, the use of EdTech solutions does not always align seamlessly with pedagogical goals. Although there are many examples of teaching staff initiating EdTech innovations themselves, both the literature (e.g. Rathenau, 2022; Oberon, 2023) and interview material show that, in practice, digitalisation is often designed to be technology- or efficiency-driven. The lock-in is thus reinforced not only by technology, but also by organisational and cultural patterns.

Examples of lock-in

- **Vertical integration and platform dependency**
  Major EdTech platforms combine content, infrastructure and data services, making institutions dependent on their ecosystem. This limits the scope for public alternatives and makes switching costly and complex (Rathenau, 2022; Oberon, 2023).

- **Data ownership by suppliers**
  Suppliers often retain control over data, even after contracts have expired. This limits institutions' data sovereignty and creates risks for transparency, fairness and public control.

- **Contract terms that favour suppliers**
  Many contracts contain provisions that allow suppliers to retain data or require additional access for a fee. Some institutions, such as Veerda MBO, demonstrate that early negotiations between suppliers can break this cycle.

- **Belief in inevitable dependence on big tech**
  There is a prevailing belief within institutions that they "cannot break free" from major suppliers, partly due to budget cuts and limited time to develop alternatives. This fatalism hinders experimentation with open or collaborative solutions.

- **Pseudo-alternatives to Big Tech**
  Initiatives such as De Boomhut position themselves as alternatives to large technology companies, but are not yet scalable or functionally equivalent. At the same time, these initiatives do offer scope for customisation or flexibility, allowing institutions to exert greater influence over design, use and value considerations. Nevertheless, the limited scale means that, in practice, many institutions remain reliant on Big Tech ecosystems for their digital learning environments for the time being.

- **Perception of limited development capacity and outsourcing**
  Interviews reveal that institutions regularly outsource digital development to commercial parties, partly based on the idea that internal development capacity is limited or difficult to scale. At the same time, collaborations within SURF and open-source initiatives demonstrate that joint development is indeed possible. This suggests that outsourcing is not only a technical choice, but also an organisational and cultural one, which can reinforce dependency.

- **Fragmented procurement without coordination**
  Institutions procure independently without a joint strategy, which weakens their negotiating position and perpetuates vendor lock-in. This results in overlapping contracts and a lack of economies of scale or knowledge sharing.

- **Procurement focused on market availability rather than need**
  Tenders are often drafted based on what is already available in the market, out of fear of being unable to procure anything. This means that innovative or public alternatives are overlooked.

- **Speed over public values**
  With pressure from the organisation to act quickly, it is difficult to consistently prioritise public values. In the long term, this can lead to governance issues or dependence on non-transparent technologies.

- **Rule-following behaviour in tenders**
  Institutions strictly follow tendering rules (“the contract is expiring, so we’ll put it out to tender again”), without strategically reconsidering what is needed. This reproduces existing market conditions rather than stimulating innovation.

- **Data silos and system fragmentation**
  Education data is often spread across multiple, unlinked systems. This hinders analysis, collaboration and the ability to use data for quality improvement or innovation.

- **Limited appetite for risk in data innovations**
  Initiatives such as GPT-NL are met with reluctance from institutions fearful of data risks. This low risk appetite means that only a few pioneers participate, resulting in a lack of collective learning experiences. Yet this caution is not always realistic: collaborations with large commercial providers also entail data risks, albeit of a different nature, for example regarding data access, ownership and transparency.

- **Fragmentation between stakeholders and decision-making levels**
  Decision-making on digitalisation is divided between various bodies (e.g. IT departments, key

teams, Npuls), which leads to tensions and delays. Different interests and approaches make it difficult to determine a common direction.

- **Top-down digitalisation without pedagogical alignment**
  Digitalisation choices are often driven by technology or administration, without alignment with educational practices. This leads to solutions that are poorly aligned with pedagogical and public values.

- **Tool-driven digitalisation without a vision**
  Many institutions implement tools simply because they are available, or because they have ambitions to make processes more efficient or optimised, rather than because they fit with their educational or social vision. As a result, technology remains the driving force and pedagogy follows.

- **Technological innovation is not always pedagogically grounded**
  Technological applications are regularly presented as innovative in education (for example, the use of VR headsets), but the underlying pedagogical and didactic considerations are not always fully developed. Moreover, the focus sometimes shifts more towards the deployment of new resources than towards the question of how these can be integrated in a meaningful and values-conscious way."

- **Limited ownership within the core educational process**
  Within educational institutions, the use of digital resources is not always automatically seen as part of the core educational process. As a result, decision-making on digitalisation often falls outside the direct remit of the educational sector. This can lead to the focus being primarily on the perceived workload associated with ICT, whilst the discussion about the potential contribution to educational quality takes a back seat.

- **Non-scalable in-house tools**
  Institutions regularly develop their own digital tools, which are not scaled up or maintained once key figures leave. As a result, innovations such as the 'Fontys blur app' or a free alternative to SPSS fizzle out .

- **Dependence on platforms and loss of ownership (Coursera)**
  Institutions that develop MOOCs on commercial platforms such as Coursera find that they have limited control over the accessibility and use of their own content. Whereas courses were originally freely accessible, in some cases they have been placed behind a paywall by the platform. This means that institutions develop content using publicly funded resources, but

ultimately do not retain full control over distribution and access.

Phase-out

In the phase-out phase, a willingness is slowly emerging to distance oneself from technology and partnerships that are not in line with public values. Universities and universities of applied sciences are openly advocating for digital autonomy and exploring open-source and cooperative models in which ownership is shared. Projects such as Xerte and PeerTube demonstrate that public control is possible, whilst within Nplus and through the associations, work is underway on joint procurement and the harmonisation of ICT architectures. At the same time, there is a note of realism: "We are primarily building up governance, not dismantling it." The actual phasing out of undesirable systems is proceeding slowly and requires structural choices. The movement is primarily visible in policy terms in exit strategies, tendering frameworks and agreements on values, but implementation is lagging behind. The sector still seems to be balancing between preservation and renewal: the desire to become more independent is there, but in practice more courage, cooperation and consistency are needed to truly realise public leadership – the very conditions that have not yet been fully embedded in the development and institutionalisation phase.

Examples of phasing out

- **Reducing dependence on non-European technology**
  The open letter from Dutch universities on digital autonomy underlines the need to distance ourselves from Big Tech platforms. This step marks a structural reduction in dependency and a drive towards European or public alternatives that guarantee neutrality and privacy.

- **Mergers lead to the phasing out of undesirable or specialist systems**
  When organisations merge, as we are currently seeing frequently in vocational education, for example, outdated or highly specialised or bespoke (so-called ‘ ’ or ‘exotic’ systems) are actively phased out. This creates space for more uniform, open and future-proof infrastructures.

- **Transition from commercial to open-source solutions**
  Institutions such as Wageningen University are switching from commercial software to open-source alternatives such as Xerte. This promotes autonomy, adaptability and shared ownership within the educational community. At the same time, this is gradually reducing dependencies on closed, inflexible software: systems that offered limited scope for customisation and adaptation are coming under pressure as a result of these alternatives. In addition, there are examples where courses or subjects (within vocational education) are switching entirely to open learning materials, completely abandoning commercial methods or licences. In such cases, it is not only the technology that is replaced (for example, the use of Xerte), but the underlying dependence on publishers is also being phased out. This demonstrates that phasing out can take shape not

only technically, but also didactically and organisationally.

- **Placing rights to tools within public or cooperative structures**
  Software projects such as PeerTube and Xerte embed ownership within foundations or models of steward ownership. This ensures that rights are publicly safeguarded and prevents commercial takeovers or alienation.

- **Establishing exit strategies in advance**
  Institutions are increasingly developing explicit exit strategies for digital services, rather than switching providers on an ad-hoc basis when contracts expire. This strengthens their control and makes future migrations less risky and costly.

- **Collaboration via umbrella organisations and Npuls**
  Umbrella organisations are collaborating within Npuls on shared digital facilities and standards. Although this formally alters the position of members, it offers an opportunity to strengthen collective governance and reduce lock-in.

- **Phasing out parallel architectures**
  Old, separate ICT architectures such as HORA, MORA, HOSA and MOSA are being phased out and integrated. This harmonisation makes systems simpler, more interoperable and easier to manage within a shared public infrastructure.

3. Report on monitoring session: Learning culture (4 November 2025)

Guide

In what follows, we describe the dynamics and developments we are seeing emerge in the four quadrants of the X-curve. These descriptions are based on the broad societal analysis conducted by DRIFT and RISBO in the run-up to the session and enriched with the reflections and insights contributed by the participants during the monitoring session. The description for each of the four quadrants begins with a narrative that provides an overarching view of the dynamics we observe. The bullet points that follow describe underlying developments and practical examples that have informed this narrative.

The aim of this analytical report is to outline a shared understanding of where the sector currently stands on the theme of learning culture and to initiate further dialogue on the role of Npuls in this area, with a view to advancing the transition towards future-proof, high-quality education.

Structure

Small-scale and often temporary experiments are nurturing the learning culture within institutions. Through these initiatives, professionals are connecting with one another in nascent networks. However,

levels of engagement vary: some institutions are experimenting with new forms of learning, professional development and collaboration, whilst others continue to operate in the traditional manner. Coherence between, and structural embedding within, institutions is still lacking. Innovation is taking place primarily at the operational level, in pilot projects, communities and exchanges. Underlying practices, roles and values are only changing slowly.

Institutions are experimenting with new forms of learning and exchange

An increasing number of institutions are taking their first steps towards developing a learning culture through various experiments and pilot schemes. Initiatives focus mainly on inquiry-based learning, the professional development of teaching staff and the creation of a space to practise new educational practices. They are often still too reliant on individual enthusiasm or temporary and fragmented project funding. Nevertheless, they are important pioneers on the path to structural innovation.

Examples:

- The new *Research-based Learning* research group at Utrecht University of Applied Sciences.
- The collaboration within *Leiden-Delft-Erasmus (LDE)* that facilitates joint learning processes

Networks are being made visible and cautiously linked together

Initiatives are emerging that make existing or fragmented initiatives and networks more visible: teaching staff, researchers and support staff can find one another more easily when seeking help or looking to collaborate.

Examples:

- *Kennisnetwerken.npuls.nl*, which makes national and regional networks more accessible.
- *CTL Magazine*, which compiles and disseminates inspiring case studies.
- Collaborations on digital literacy, such as between Drenthe College, Noorderpoort and Alfa College.

(In)formal exchanges on urgent topics implicitly contribute to the emergence of learning networks

The urgency of topics such as AI and digitalisation means that professionals are less likely to operate exclusively within the walls of their own institution. Networks, both formal and informal, are becoming increasingly important for exchange, joint language development and accelerating implementation. Once collaboration begins, the next step becomes easier; human networks thus form a lasting infrastructure for change. Digital platforms and communities reinforce this effect.

Examples:

- Digital platforms for cross-sector exchange.

- DNA collaboration on digital literacy, building on LLO initiatives.
- Knowledge circles and communities whose form and structure determine participation.
- Proof-of-concept projects (such as EduWallet) that demonstrate that collaboration accelerates implementation.

Educational support is developing but is not yet sustainably and stably embedded

CTLs and learning innovation teams are emerging at various universities and universities of applied sciences to support teaching staff in educational innovation and professional development. Although these teams are proving valuable for strengthening a learning culture, their funding and policy status are not yet secured everywhere. It is mainly universities and universities of applied sciences that highlight the presence of a CTL or learning innovation team on their websites, making it unclear from online information what the situation is at vocational colleges.[5]

Examples:

- Learning & Innovation Offices at institutions such as Utrecht University and Leiden University act as pioneers of a more structured professionalisation framework.
- Institutions across the country are setting up CTLs. Some are even doing so without funding.

National programmes encourage local and regional innovation

Incentive programmes such as Comenius and Npuls give teaching staff (and teams) the opportunity to explore innovation outside the regular frameworks. These kinds of programmes lay the foundations for a culture that facilitates, recognises and values experimentation and learning. For some institutions, however, participation is a major step due to the significant investment in capacity required.

Examples:

- The NRO *Comenius* programme, which supports innovation projects through fellowships, teaching teams and leadership grants.
- SoTLs give teaching staff the space to explore their own teaching practice (such as the CLI Fellowship at EUR).

Collaboration on digitalisation and AI accelerates the learning process

Digitalisation, and AI in particular, is drawing professionals beyond the boundaries of their own institutions. This gives rise to informal and formal collaborations, knowledge networks and communities of practice that contribute to a culture in which learning from and with one another becomes more natural. These networks reinforce the idea that learning is something you do together, and that

[5] In the in-depth interviews on this theme, we would like to focus further on the development of a learning culture within vocational colleges. Do you have an interesting contact in your network? Please let us know viabeckers@drift.eur.nl .

repetition accelerates the process.

Examples:

- Growing collaborations between institutions around teacher professional development in AI.
- Knowledge circles and communities within vocational education, universities of applied sciences and universities, where form and language are crucial to encouraging participation.
- Resources such as EduSources help to connect people within a network.

Institutionalisation

New routines, structures and roles are taking shape and, in some places, becoming a recognisable part of the core process. What began as isolated initiatives is developing into more stable organisational forms such as CTLs, network structures and strategic policies on learning, digitalisation and professional development. Cultural practices such as reflection, the creation of a shared language and the establishment of frameworks are also improving, although this remains unevenly distributed across sectors. Support is becoming more visible, collaboration more self-evident and professionalisation taken more seriously, but remains vulnerable due to budget cuts and limited capacity. The movement is clearly underway, but is not equally firmly established everywhere.

CTLs and support structures are becoming more firmly established

Centres for Teaching & Learning and key teams are increasingly becoming a structural part of the educational organisation. They offer teaching staff a place to develop skills, share experiences and support innovation. At the same time, differences remain apparent: some CTLs are fully embedded and operate without funding, whilst others are awaiting decisions or lack the scope to take further action. In addition, there is growing attention for the professionalisation chain: definitions, impact analyses and support profiles are being refined, but are not always easily accessible. Statutory obligations in some vocational education programmes (such as compulsory work placements) result in different learning and consultation structures than in programmes where there is more scope for variation. Universities and universities of applied sciences operate according to different logics, for example through LLO partnerships or research-driven exchange.

Examples:

- CTLs that already operate structurally without funding (cohort 4).
- Institutions that ‘make do with what they have’ due to a lack of funding.
- Sectors with statutory obligations (such as BIG programmes) where consultation and learning structures (with practical experience) are more self-evident.
- Definition notes and impact analyses for teacher support.

- Networking via Nputs, Top Sectors, NWO, SIA and NRO around learning communities and educational innovation.

A learning culture is becoming part of strategic policy

An increasing number of institutions are explicitly choosing to place learning, development and quality at the heart of their strategy. Governing bodies and senior management are steering efforts towards reflection and professionalisation, and creating space for well-considered choices regarding AI, digitalisation and educational innovation. This translates into strategic plans, discussions on solutionism and the development of AI-proof forms of assessment. At the same time, sector-wide agreements are emerging that help to establish a common language and ensure coordination.

Examples:

- Institutions linking a learning culture to sectoral goals
- Strategic choices regarding urgent themes such as AI
- Evidence-informed working is incorporated into strategic education plans (e.g. UU, VU, Leiden)
- Higher professional education (HBO) and senior secondary vocational education (MBO) institutions explicitly learning from practice through work placements and final-year projects

Professional development is taken more seriously, but is under pressure

It is gradually becoming the norm for professional development to be an integral part of working as a teacher. Teaching staff are no longer seen solely as subject experts: subject knowledge alone is insufficient; teaching requires broader pedagogical and didactic skills. At the same time, evidence-informed working is coming under pressure, for example due to budget cuts.

Examples:

- Universities: more scope in collective agreements for professional development and recognition & appreciation
- Universities of Applied Sciences: ample scope in collective agreements for skills development
- Vocational education (MBO): 158 hours of professional development, often incorporated through team activities

Lock-in

Although there are visible signs of a move towards innovation, a large part of the system remains firmly anchored in existing routines, beliefs and structures. This lock-in manifests itself both in how professionals understand their role and in how institutions are organised: habits, norms and funding

logics mean that working towards a learning culture often remains something 'extra' rather than a natural part of daily work. This creates friction between the capacity for innovation that is growing locally and the systemic frameworks that hold it back. Consequently, the energy of pioneers does not always reach the rest of the organisation, and the space that does exist feels smaller in practice than it actually is. In this quadrant, we recognise dynamics that reveal *where the system is stuck* — and why this proves so persistent.

Professional beliefs hinder change

Despite trends towards the professionalisation of teaching (see 'institutionalisation'). According to participants, teaching is seen as something that exists alongside subject expertise or research and often takes second place, meaning that professional development in teaching is viewed as less urgent. Educational innovation remains confined to a small, motivated group of teaching staff, whilst most professionals feel they have little time or scope for structured learning. Furthermore, support staff are often not part of the teams they support, meaning that innovation does not become embedded within teams but is seen as something separate.

Examples:

- Universities: compulsory teaching duties for researchers and temporary teaching contracts
- Vocational and higher vocational education: teaching staff appointed for their professional network and practical knowledge (rather than teaching skills or educational vision)

Rigid structures and standards hinder innovation

Legislation, funding streams, and accreditation and inspection criteria cause institutions to become 'siloed'. This does not encourage learning across subjects, programmes or institutions. Participants note that there is sometimes more scope than one might think or feel. However, risk aversion means that teams remain within safe boundaries . Financial constraints reinforce these patterns even further: support structures are being cut back, and professionalisation or collaboration is seen as an extra rather than an integral part of a job description.

'Not invented here' bias creates tension between innovation and implementation

There is a great deal of innovation within institutions based on the belief that what you do yourself is better. However, this also leads to a great deal of duplication of effort. Institution-focused grants reinforce this tendency. The tendency of institutions to advocate for evidence-based education also hinders innovation, as there is a significant delay between new developments and 'proving' their effectiveness. The distinction between evidence-based and evidence-informed education is important here.

Phasing out

In more and more places, existing working methods, taken-for-granted assumptions and beliefs are being questioned. External developments are revealing that some parts of the current education model

are no longer sustainable. This is giving rise to a slow but palpable process of phasing out: patterns that were previously dominant are losing their taken-for-granted status, and institutions are cautiously experimenting with letting go, revising or organising things differently. This movement is still fragmented, but it does mark where the transition is beginning, as old routines are actually starting to shift.

The changing world is challenging beliefs about what constitutes good education

AI, increased flexibility and new forms of collaboration make it clear that traditional beliefs about education no longer always apply. Institutions are exploring how work processes can be made smarter, for example by allocating resources differently or revising formats.

Examples:

- Working with learning outcomes shifts the focus from 'programme provision' to working towards learning outcomes and goes hand in hand with different methods of assessment; this has a direct impact on teaching staff's professional development
- The LLO catalyst offers solutions specifically aimed at the professional development of teaching staff and staff

Shift from individual to team responsibility

Teaching staff are finding that their role is changing: the individual is less the bearer of a subject or programme, but a whole team is held accountable. Self-organising teams are emerging, particularly within universities of applied sciences, but also in parts of vocational education. This movement requires the development of an infrastructure that supports these forms of collective responsibility.

Examples:

- Self-organising teaching teams, e.g. at Avans University of Applied Sciences

4. Report on monitoring session: Personal agency (27 November 2025)

Reading guide

In what follows, we describe the dynamics and developments we are seeing emerge in the four quadrants of the X-curve. These descriptions are based on the broad societal analysis conducted by DRIFT and RISBO in the run-up to the session and enriched with the reflections and insights contributed by the participants during the monitoring session. The description for each of the four quadrants begins with a narrative that provides an overarching view of the dynamics we observe. The bullet points that follow describe underlying developments and practical examples that have informed this narrative.

The aim of this analytical report is to outline a shared understanding of where the sector currently stands

on the theme of 'self-direction' and to initiate further dialogue on the role of Nplus in this area, with a view to advancing the transition towards future-proof, high-quality education.

Structure

Higher education is becoming increasingly flexible. Learners are gaining more control over their own pathways, supported by an emerging, adaptive educational infrastructure that allows for a more personalised learning journey. Teaching staff are taking on more coaching and facilitating roles, and institutions must collaborate more closely with one another and with stakeholders on the labour market.

Numerous institutions offer microcredentials and modular courses

Across the entire sector, microcredentials are being used as a tool for lifelong learning. In recent years, pilot schemes have been carried out across the country in vocational education (MBO), higher professional education (HBO) and university education (WO) to roll out microcredentials on a broad scale. As a result, learners can develop broadly and flexibly within and across educational programmes ( ) at numerous institutions. In some cases, the pilot schemes are also contributing to organisational innovation: learning environments are becoming more hybrid in design, professionals are taking on more coaching roles, and minors or modules within programmes are increasingly being opened up to learners outside the programme.

Practical examples:

- Institutions such as the University of Amsterdam (UvA), HU University of Applied Sciences and Fontys actively promote modular forms of education to the wider world
- Pilot schemes involving microcredentials within Nplus for vocational, higher vocational and university education

There is growing demand from learners for greater career flexibility

Learners are increasingly deviating from their standard curriculum. A large proportion of learners switch courses, take modules from other institutions or programmes, or switch from full-time to part-time study in order to work alongside their studies or to adapt their study pace to other responsibilities (e.g. informal care).

Practical examples:

- Growing interest in part-time and more flexible pathways to combine work and study
- During the intake process, ROC Mondriaan explicitly asks learners whether they prefer a fixed pathway or a bespoke programme

The shift towards different roles for professionals

The increasing flexibility of education requires educational professionals to fulfil different roles. Within some institutions, teaching staff already frequently support learners in making choices, link combinations

of learning outcomes to practical needs, and facilitate experimentation with learning pathways. Due to the growing demand for flexibility in education, guidance is shifting from curriculum-focused to student-focused, with greater attention to mental wellbeing and personal development.

Practical examples:

- Learners who do not receive a mentor or regular support are more likely to drop out
- Higher professional education (HBO) and university (WO) institutions now devote much more time to mental health, study skills and personal guidance

The vision and direction regarding flexibility are fragmented

Although flexibilisation is already widespread, there is often still a lack of a shared vision of to which this movement should contribute. In some cases, flexibilisation is driven by the needs of learners. At the same time, in other places, the labour market is a major driver with a strong guiding role in the content and form of flexibilisation.

Practical examples:

- In sectors with significant shortages, such as healthcare or construction, the labour market is calling for greater flexibility
- Specialisation of institutions in specific professional fields and target groups, such as Wageningen University & Research (WUR) or Eindhoven University of Technology (TU Eindhoven)

Collaboration as a key condition for sustainable implementation

Self-direction requires collaboration between institutions, regions and different levels of education. Building a coherent educational architecture is a key prerequisite for enabling flexible learning. At present, microcredentials and other opportunities for flexibility remain highly fragmented. Greater coherence can be achieved by systematically exchanging experiences, best practices and lessons learnt. Such activities certainly take place here and there, but are often still sporadic or dependent on personal relationships. Npuls is endeavouring to facilitate this.

Real-world examples:

- Lessons learnt from pilot projects are collected and shared by Npuls
- Collaborations in regions such as Brainport Eindhoven are driven by thematic overlap, but greater synergy is also emerging out of necessity in shrinking municipalities
- Hybrid learning environments where education and practice train together
- Practicum programmes at vocational colleges that link education and practice
- Teacher training programmes that are reorganising their curricula around current issues in the professional field

Institutionalisation

Opportunities for flexibility are being integrated step by step, albeit very cautiously, into the infrastructure of mainstream education. Where they originated from pilot projects or other forms of experimentation, they are now being embedded more and more structurally within mainstream systems. Digital facilities also support the validation and registration of these forms of learning across institutions. Institutions are also exchanging knowledge and lessons learnt with one another more frequently. A movement in which Npuls plays a leading role.

Microcredentials are increasingly being embedded in institutional structures
Modular forms of education such as microcredentials have, partly due to the successful pilot projects of recent years, secured a firm place within many institutions. Short courses, as well as individual modules taken separately, are increasingly being formally recognised and validated.

The boundaries between mainstream and LLO education are becoming increasingly blurred
Institutionalisation requires that flexibility and modular education fit within the formal frameworks of legislation and regulations, assessment and accreditation. Institutions are therefore actively seeking ways to no longer organise LLO provision separately, but rather to link it to the structures established for regular programmes.

Practical examples:

- Integration of microcredentials into mainstream assessment and quality assurance processes

Digital infrastructure supports the move towards more modular education
Institutions and organisations such as Npuls are working on digital facilities that help learners with enrolment, credit management and modular education, so that learners can easily and transparently take control of their own learning. The infrastructure forms the basis for a flexible, user-friendly and widely accessible learning system.

Practical examples:

- Sector-wide facilities such as EduID or EduWallet support access, enrolment and validation
- Digital validation tools such as Edubadges make learning outcomes visible and transferable

Knowledge sharing and coordination are becoming more structured
Whereas institutions previously experimented mainly on an individual basis, Npuls is fostering the emergence of a network that places greater emphasis on joint reflection and coordination. Lessons learnt from pilot projects are collected and shared, contributing to a more consistent and coordinated shift towards flexibility across the sector.

Practical examples:

- Npuls collects and disseminates experiences from pilot projects involving microcredentials and modular education

- Institutions coordinate with one another on standards, quality assurance and implementation issues

Lock-in

Innovations clash with existing structures, logics and systems in higher education. Although initiatives such as microcredentials have been widely rolled out, they are still seen as supplementary to mainstream education. As a result, the majority of learners still opt primarily for degree-oriented education.

Legislation, regulations and funding remain tied to the traditional programme-based approach
Although there is a great deal of experimentation, institutionalisation is still proceeding slowly. Outdated structures and existing funding systems are hindering innovation, and institutions still have much to learn about how to organise new forms of education effectively and provide high-quality support to learners in their learning process. The dominant logic governing legislation, funding, quality assurance and information systems is strongly programme-oriented. As a result, the formalisation of new, more cross-programme forms of learning remains challenging.

Microcredentials and other forms of LLO are still often viewed as supplementary forms of education
Microcredentials are often still viewed as isolated or marginal. Many learners see them as a form of further training rather than as a standalone form of education. Employers also often fail to fully appreciate the value of this form of education.

Teaching roles and team dynamics are lagging behind
Creating a flexible learning environment requires not only infrastructural changes but also different collaboration skills, relationships, flexibility and time. Teaching staff do recognise that a different role is needed but often continue to act as traditional subject experts. The focus is on expertise, and to a lesser extent on didactic, pedagogical and support skills. Ingrained behaviour, work pressure and a lack of training also hinder more innovation-oriented approaches.

Learners are often not seen as the starting point for change
Institutions' understanding of their learners' needs varies greatly. Consequently, new forms of education are often designed based on existing structures rather than on the needs of the learners. As a result, it is difficult for learners to gain a clear and comprehensive overview of the learning options available, independent of institutions and programmes.

There is a lack of effective support
Dropout rates and poor academic performance indicate that the curriculum must not be too rigid; guidance makes all the difference. Due to the diversity of learners (background, age, pace, life experience), the demand for coaching and support is growing. The rise of LLO is putting increasing pressure on mainstream education. There is a great need for retraining and further training from the labour market, but institutions often still focus primarily on full-time students. Retraining, learning alongside work and lifelong development require different organisation, support and funding.

Phasing out

Deep-rooted structures and logics are gradually coming under pressure. For instance, the assumption that a student is tied to a specific institution has become less self-evident, and the idea of learning as a full-time, linear, time-bound and physical activity is outdated. The support structure for mainstream education is becoming increasingly intertwined with that for LLO, and dominant concepts from the old way of thinking are making way for concepts that align with the new reality of more fluid learning processes.

Institutional identity is gradually being phased out
There is a clear movement towards a more overarching identity for learners. Sector-wide identification and validation tools help learners break free from their institution-bound identity. In this way, the first steps towards a shared education infrastructure are being taken.

LLO and mainstream systems are gradually merging
The distinction between mainstream learners and LLO learners is becoming increasingly blurred. Institutions are attempting to integrate the organisation, quality policy and assessment of micro-credentials as much as possible into systems for mainstream courses.

Moving away from the idea that learning is always full-time, linear and limited in time
As mentioned earlier, learners are increasingly deviating from standard learning pathways. Taking a gap year or speeding up or slowing down a course is becoming increasingly normal, leading us to move away from the idea that learners follow a standard path. Furthermore, even the concept of physical and time-bound learning has come under pressure due to the COVID-19 pandemic, the globalisation of education and the emergence of high-quality digital learning tools.

Practical examples:

- Discussion on the concept of the 'nominal route': learners who, in reality, hardly follow it anymore
- Working across the MBO sector on generic learning outcomes to increase mobility and efficiency (in collaboration with national bodies such as the Ministry of Education, Culture and Science and the MBO- s Council)

Rigid language and logic in education are under pressure
Rigid and deeply ingrained language and dominant logics from traditional education are increasingly under pressure from innovative practices.

Practical examples:

- The student becomes the learner
- A degree programme becomes a professional learning pathway
- Less emphasis on cohorts, classes and years

5. Report on the monitoring session: Labour market and society (27 November 2025)

Structure

Education, the labour market and society are increasingly working together. This leads to initiatives and experiments that encourage informal learning, relate more closely to social issues and enable the creation of more flexible learning spaces. In addition, modular education is growing, which increases ownership and customisation for learners. These developments make education more future-oriented and less dependent on traditional qualifications.

Increasing collaboration between education, the labour market and society, and the establishment of learning communities.

Education providers, businesses, public authorities and other stakeholders are working together, focusing, among other things, on future-oriented education for people with limited education and/or basic skills. Collaborations take place within educational institutions (for example, inter-academic in higher education), across sectors (between vocational, higher professional and university education), between the public and private sectors (public-private partnerships), as well as with industries (and their roles), and at regional and European levels. The establishment of learning communities is a result of such collaborations. Learning communities are spaces where those involved are free to experiment and learn, for example through informal learning. Another example is a single educational space and/or overview of learning outcomes, but with different teaching and assessment arrangements (for example, depending on the target group, full-time/part-time, etc.). Apps are being developed to support learners in their development, provide them with instructions and/or assessments, and/or enable them to communicate with colleagues – thereby allowing learning to take place more effectively in practice.

Practical examples:

- In learning communities, for example, learners work on societal issues (challenges), which in turn informs the design of educational programmes.
- Living labs, pilot projects and field labs provide scope for informal learning.
- LLO Collectief, MBOin2030 and the Broad Skills Guide introduce and support new initiatives and future-oriented curricula.
- The Groen App uses regenerative AI to develop employees in the landscaping sector and increase their autonomy.

Education is offered in separate modules for which certificates are awarded, contributing to the design of flexible learning pathways

Modular learning involves working with micro-credentials and partial certificates, and this is found, for example, in LLO initiatives and public-private partnerships. Modular learning contributes to flexible learning pathways for learners (pace, duration, structure), a different funding dynamic for those

responsible for the provision (see points on transition dynamics: lock-in), and it appears that students are more successful when they are allowed to create their own combinations of courses. This also touches on the theme of 'self-direction' (see State of Transition: Self-direction). There is a need for greater insight into what modular learning can mean for themes such as equal opportunities and inclusive education. Microcredentials could, for example, contribute to the development of people who are distanced from the labour market, newcomers, and people with, for instance, neurodiversity (such as ADHD). However, insufficient attention is currently being paid to the implications of collecting digital data – for example, via an EduWallet – for the balance of power between employers and employees.

Practical examples:

- An EduWallet recognises modular education, which encourages ownership among providers and learners. SURF's eduBadges are another example of this.
- The Microcredentials pilot is experimenting with offering modular learning.
- There are initiatives for newcomers whereby the qualifications they hold are awarded (and recognised in the Netherlands) via microcredentials.

Institutionalisation

The development of education is increasingly demand-driven, carried out in collaboration with other parties, and aligned with major societal challenges such as the energy transition. New systems and hybrid forms enable flexible, ' ' education. In addition, networks and centres of expertise support the dissemination of knowledge and initiatives, enabling education to better align with practice and society.

Education is organised with a clear purpose, placing learners and/or the public interest at the centre

Education has shifted from a supply-driven to a demand-driven approach to working and designing programmes. The diverse needs of both the labour market and learners are identified, forming the basis for educational development. One example of this is that people would like to enrol more flexibly when they wish to undertake further training. This is already possible in vocational education (MBO), where learners do not always have to enrol at a fixed time. Social importance is also taken into account in this regard. For instance, it is not just about what 'the market' wants professionals to be able to do, but also about the broader societal trends to which people wish to contribute (such as the energy transition or technological developments).

Practical examples:

- An example of the focus on social importance is the training programme for Nitrogen Business Coaches, which only became popular once the government began steering towards a sustainable and future-proof agricultural sector.
- In the Cartesius neighbourhood of Utrecht, various parties are working together so that learners can work on and learn about local social issues in practice.

- In hybrid learning environments in vocational education, learners and teaching staff – who have one foot in the classroom and one foot in society – come together, for example, to tackle a difficult 'real-world' social issue.

New policies or improved systems enable education to align with, or collaborate with, the labour market and society

For example, every higher education institution has LLO policy, and this policy is increasingly becoming part of the institutional plan. This is evident through the implementation of LLO within organisations. Furthermore, a number of systems have made it easier for educational institutions to offer flexible education, for instance by allowing flexible timetabling in the timetable programme or by granting learners exemptions. Hybrid learning/working and the virtual classroom can now be effectively facilitated thanks to the Covid-19 pandemic – which in turn can contribute to collaboration between education and various actors/parties from the professional world. Within vocational education (MBO), hybrid learning environments already exist, in which guest lecturers work part-time at and part-time in the classroom. Moreover, in vocational education, work placements have long been an integral part of the curriculum, as seen in mixed learning pathways, SBB, BBL and BOL.

Practical examples:

- Working with learning outcomes rather than learning objectives.
- It is legally possible to create a continuous learning pathway, in which VMBO and MBO jointly develop a single programme (this is not yet possible in higher professional education and university education).
- The Professional Doctorate (PD) is being enshrined in law, which could contribute to innovation and knowledge development in collaboration with the professional field.
- A bill (VABA) has been tabled to enable the provision of shortened, tailored and flexible pathways.

Supporting organisations and disseminating knowledge, experience and insights that contribute to the further development of initiatives and alternative forms of education

Examples include the LOB Expertise Centre, the MBO Lifelong Development Knowledge Centre, the Initiatives Collective, , the Sectoral and Regional LLO Network (by SER) and Katapult (a network for public-private partnerships).

Lock-in

Existing structures, funding and mindsets hinder innovation regarding collaboration between education, the labour market and society. The education funding system is geared towards full-time students and accredited education, making it difficult for alternative forms of learning and collaborations to get off the ground. Ensuring sustainability is also challenging: alternatives depend on temporary grants, responsibilities are fragmented and collaboration is precarious. Furthermore, institutions, teaching staff and employers cling to traditional working methods and interests, reinforced by staff shortages and

resistance to change, which means that progress towards flexible and sustainable solutions is not being made.

Current structures hinder innovation in lifelong development and the alignment of education with the labour market and society

Dynamics at national level – such as budget cuts, decentralisation and market-oriented reforms – have fragmented career development across various services. Furthermore, lifelong learning initiatives are heavily dependent on temporary grants and project funding (a sustainable and coherent funding model is lacking), responsibilities are fragmented (there is no overarching coordination) and collaborations depend on individual actors (which makes their organisation vulnerable) . Furthermore, the education funding system is primarily geared towards attracting and retaining as many students and qualifications as possible, resulting in insufficient investment in other forms of education or education for other target groups (for example, training for certificates rather than degrees). Education must also be accredited (NVO), which makes it challenging to recognise the quality of informal learning. This hinders change and sustainable collaboration (between institutions, but also between education and the labour market).

Practical examples:

- Abolition of the STAP grant.
- The Higher Education and Research Act (WHW) insists on 'the student' being registered with DUO.
- Funding streams, buildings, teaching staff and curricula are geared towards 2–4 years of full-time study.
- Companies and participants must pay for certificates themselves that fall outside the publicly funded LLO sector, whilst the business sector's need for certificates is increasing.
- Former radio producer Eric Corton attracted a lot of attention when he wanted to enrol in a vocational healthcare course but first had to pass modules in citizenship, Dutch and maths (despite his prior education and experience). This exposed the barriers to tailored learning and exemptions in education.

Change is hindered by the prevailing mindset: a desire to cling to the old and familiar

For various stakeholders, it seems challenging to get things moving. Teaching staff, for example, generally do not want to work outside office hours, which makes education for other target groups more difficult. In addition, employers have certain expectations of education and attach great value to diplomas or titles, meaning they do not yet consider LLO solutions themselves. Furthermore, many stakeholders in education are 'change-weary': there is a great deal of innovation and adaptation taking place, leading to resistance to moving with major societal developments. This mindset could also be linked to staff shortages in education: due to pressure on the sector, there may be a perceived lack of scope for innovation.

Incidentally, in the case of vocational education (MBO), there is already less emphasis on diplomas; instead, they work with sector-specific certifications and qualification portfolios, where the profession is the starting point. MBO institutions already collaborate extensively with the workplace and incorporate societal developments and labour market needs into their programmes. Staff shortages also look different in vocational education: when the need arises, any teaching staff member is allowed to teach any subject.

Practical examples:

- There is still a strong focus on the 'traditional student', who in reality makes up only a small group of learners in higher professional education (HBO) and university education (WO). (NB: in VET, this provision still plays an important role for mostly younger learners who need to obtain their basic qualification).
- Keeping pace with major developments, such as the rise of AI, is perceived as a burden: people no longer feel like going along with it.
- In the search for partnerships, the institutions' own interests play too great a part.
- In vocational education (MBO), it is striking that the sectors themselves innovate and organise learning, and sometimes work around the formal education system.

Lifelong development still largely depends on the motivation (willingness to learn) and effectiveness (ability to learn) of individual learners

Here too, the structure of the current education system works against lifelong learning for professionals. For professionals, for example, it is much more complicated to enrol (compared to a student who enrols via DUO), which causes them to drop out. Furthermore, lifelong learning could be encouraged more by employers; however, employers who should be encouraging LLO cannot afford to be without their employees (for example, due to staff shortages). This dynamic is likely to be stronger in sectors facing shortages (healthcare, education, energy transition). Honours programmes at universities are also being scaled back, which makes it more difficult for undergraduates to work on societal challenges.

Practical examples:

- People find it harder to keep up with technological developments, which hinders participation in LLO.
- Automation training gap: it is precisely those working in professions with a high risk of automation (higher risk of job loss) who receive relatively little training, compared to those in professions with a low risk of automation.
- The framework for learning is still too narrow, whereas learning also takes place outside the classroom and can take place in the workplace (provided the employer is a good one).

Phasing out

Boundaries between courses and institutions are disappearing: working in 'silos' and an isolated perspective are being broken down, with courses leading the way and developing programmes

together. With fewer students in the region, competitive thinking is waning and institutions are seeking regional collaboration. We are gradually moving away from the traditional view of education: timetables are becoming more flexible, and education focuses on diverse target groups and skills rather than merely possessing knowledge (and a qualification).

Barriers between study programmes and institutions are being broken down and/or thresholds lowered to facilitate collaboration

The tendency to operate as 'isolated units', the 'narrow-mindedness' or 'insular outlook' of study programmes, institutions and other parties is being dismantled; these parties no longer wish to operate in isolation. Study programmes are leading the way in this regard; they are already collaborating to develop programmes for learners. As student numbers decline, it becomes more difficult for institutions to compete within the region. Consequently, competitive thinking is being phased out and parties are seeking collaboration at a regional level.

Practical examples:

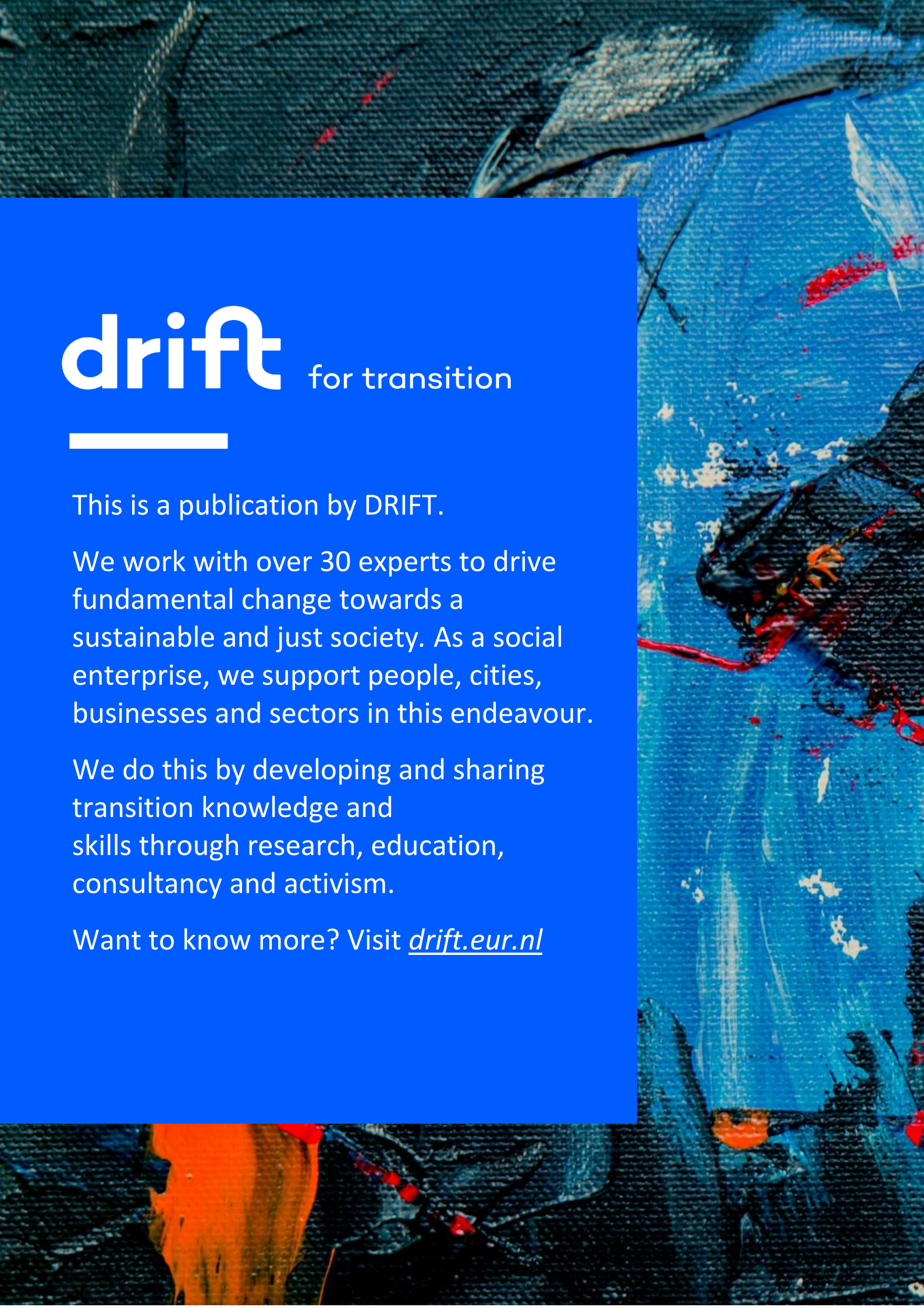
- A move towards a single employment service per region, rather than compartmentalisation and countless separate services for employers and employees.
- Consortia and public-private partnerships bring different organisations together.
- More and more universities see their role as broader than just research and teaching.

We are gradually moving away from a traditional type and form of education and from the concept of the 'traditional student'.

Educational institutions are moving away from rigid timetables, allowing teaching to be organised more flexibly. There is also a shift in how we view the knowledge a learner needs: with the development of the internet, for example, the emphasis is increasingly on being able to find, validate and connect information, rather than simply having knowledge at one's fingertips ('memorising facts'). Companies, too, are placing less importance on whether someone has completed a course of study, provided that individual possesses valuable skills. The value of qualifications appears to be declining, whilst expertise is increasingly valued. The image of a standard type of student also seems to be fading: teaching staff are no longer teaching only students or young people, but also older adults and/or professionals.

Practical examples:

- In vocational education (MBO), a relatively large number of 60–70-year-olds are enrolled, for example to retrain from a physically demanding profession.
- Software companies are less interested in graduates, focusing instead on people with specific software skills (such as the ability to hack effectively, to understand how to secure systems properly).



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