

# The curriculum in higher education challenged. Discussion paper

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## 1 Question

The society of the 21st century faces a large number of challenges in social, cultural, economic, demographic and technological fields. De Vlor looks at the implications for curriculum design in higher education.

In order to give graduates the appropriate skills enabling them to participate actively and meaningfully while helping to shape a rapidly evolving society, increasing demands are being placed on the curriculum. Higher education is increasingly expected to strengthen internationalisation, innovation, employability, citizenship, democracy, sustainability, social commitment, interdisciplinarity ... In one way or another, these elements should be translated into the curriculum. How can institutions deal with this?

In this text, the Vlor reflects on the exact definition of a curriculum, the role the learning outcomes play in designing a curriculum, how different major themes find their way to the curriculum and their positioning therein. This text is a discussion text in which questions are raised and submitted to international experts. The text gradually evolves on the basis of the discussions.

## 2 A European trend towards greater transparency: including in Flanders

In recent decades, Flemish higher education has undergone a profound change, driven by a number of international trends. Some of these evolutions have a direct or indirect effect on the way in which education curriculum is designed today.

### 2.1 The Bologna Process<sup>1</sup>

The Bologna Process aims to bring more transparency to European higher education. There is the tendency there to introduce the three-tier bachelor's, master's, and doctorate structure. Flanders did so in 2003.<sup>2</sup> An attempt is also being made in Europe to standardise the number of credits for bachelor's and master's degrees. The introduction of ECTS (and ECTS sheets) hereby enhances comparability. The Dublin descriptors are used to monitor the target level of a bachelor's, master's or doctorate programme.

### 2.2 European Qualification Framework<sup>3</sup>

The introduction of a European Qualifications Framework (wider than higher education) and its translation into national and regional qualification frameworks make it possible to classify programmes into levels. The framework uses learning outcomes to shape this classification. In this way, society, employers and students are informed about the programme's intended

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<sup>1</sup> <http://www.ehea.info/>

<sup>2</sup> *Decree on the restructuring of higher education in Flanders*, April 4, 2003

<sup>3</sup> <https://ec.europa.eu/ploteus/en>

objectives. This also makes it possible to compare programmes. Describing learning outcomes is essential to this.

In Flanders, the European Qualifications Framework was translated into the Flemish Qualifications Framework by a decree of April 30, 2009. Recently, the structure of higher education was completed with the so-called 'short cycle' in the form of graduate programmes.<sup>4</sup> Graduate, bachelor, master and doctorate programmes are assessed at levels 5, 6, 7 and 8 of the Flemish qualification structure.

## 2.3 Quality care

One of the objectives of the Bologna Process is to achieve European cooperation in the area of quality assurance in European higher education and to develop more comparable criteria and methodologies. To this end, the European Association for Quality Assurance developed the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG).

Flanders initially developed an (external) quality management system of programme accreditations. Each programme was monitored by an external independent committee of peers, potentially followed by accreditation. However, this system became increasingly bureaucratic and due to the strong focus on training assessment, the broader perspective of the institution's offer became compromised. It was therefore decided to introduce an institutional review. The institutional review is a periodic review by an external committee of policy processes established by a higher education institution to ensure that it adequately performs its education tasks.

The system of training accreditations is currently in a transition phase. The accreditation period has been extended by decree for most programmes by eight academic years, which in practice means to 2020 or later. The institutions are expected to develop their own direction for the quality assurance of their programmes.<sup>5</sup> The assessment of a course is based on a discussion with peers and other experts on the content and quality of the programme and provides answers to three key questions:

- What is the aim of the programme?
- How does the programme realise this?
- To what extent are the aims achieved?

In the assessment framework, the accreditation organisation NVAO has translated these questions into three standards in accordance with the generic quality assurance criteria established by decree:<sup>6</sup>

- 1 **Generic quality assurance: intended final level.** Standard: the intended final level of the programme is determined based on the manner in which the level descriptors have been translated into programme-specific learning outcomes that meet the international requirements regarding content, level and orientation.

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<sup>4</sup> Draft decree on the expansion of graduate programmes in the colleges and transferring measures for teacher programmes. First Principal Approval by the Flemish Government on July 14, 2017.

<sup>5</sup> Institutions that do not opt for their own management of the quality assessment of their programmes will continue to be subject to the existing visitation accreditation system.

<sup>6</sup> NVAO. March 2015 Programme accreditation framework Flanders 2015 - 2021.

Criteria: The intended programme-specific learning outcomes fit the level and orientation (bachelor or master, professionally or academically oriented) within the Flemish qualification framework and, if available, relevant domain-specific learning outcomes. They are in line with the current demands placed internationally by the professional world and the field of expertise with regard to the content of the programme.

- 2 **Generic quality assurance: teaching environment.** Standard: The teaching environment makes it possible for the students to realise the intended learning outcomes.

Criteria: The content and the design of the programme, including the programme-specific education and learning modes, the staff deployed and the facilities allow the students to achieve the intended learning outcomes. The programme, teachers and facilities form a cohesive teaching environment for the students.

- 3 **Generic quality assurance: realised final level.**

Standard: The programme has an adequate system of assessment, testing and examination and shows whether the intended learning outcomes have been achieved. Criteria: On the one hand, the realised level is based on the validity, reliability and transparency of the assessment, and on the other hand on the results of the student's assessment and examination, and the degree of employability of graduates in the labour market or flow to further education.

Each Flemish institution of higher education prescribes learning outcomes for each programme and each programme component. Moreover, the institutions describe domain-specific learning results based on the general level descriptors and coordinated by the umbrella organisation for universities (VLIR) and colleges (VLHORA). This description is validated by the NVAO.<sup>7</sup>

## 3 Learning outcomes

### 3.1 Domain-specific learning outcomes<sup>8</sup>

Domain-specific learning outcomes

- are defined as competences, namely skills to integrate knowledge, skills and attitudes into action for social activities.<sup>9</sup>
- are issued jointly. They form a framework: a learning outcome framework that allows for the global positioning of the programme. This framework outlines the characteristics of the programme and determines the common core for the different providers. It is in any case a reference framework for students, society, inspection services and professionals. However, use of a common learning framework does not imply that the programmes organised by the different providers must be uniform. Each provider is free to decide on its own profile,

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<sup>7</sup> <https://www.nvao.net/>

<sup>8</sup> Melis, L. 2010. The description of learning outcomes and profiling of programmes. Topic (5), 44 – 48.

<sup>9</sup> Decree on the Qualification Structure, 30 April 2009.

its own programme, and its own approach, albeit within a mutually agreed and validated reference framework.

- form an integrated, coherent whole that defines a framework for the programme. They describe the programme as a whole and do not address the internal structure of the programme. The organisation of the programme components and their mutual relations are not addressed at this level. These issues are up to the provider.
- focus attention on the typical characteristics that form the core of the programme.

Programmes are the same if they have the same domain-specific learning outcomes. Institutions may use different curricula for the same programmes and thereby determine their identity. An institution must issue learning outcomes for each programme that fit into the reference framework of the domain-specific learning outcomes.

### 3.2 Intended and achieved learning outcomes

In the Bologna process, 'intended learning outcomes' are defined as 'statements of what a student is expected to know, understand and be able to do at the end of a period of learning'.<sup>10</sup> Aerden (2015) adds: 'The programme's intended learning outcomes provide all the information about what students need to be able to demonstrate (achieve) by the end of the programme'.<sup>11</sup>

Aerden (2015) defines 'Achieved learning outcomes' as 'demonstrated through the assessment of students'. These assessments show that all students actually achieve the intended learning outcomes. This also means that all the programme's learning outcomes need to be assessed, otherwise achievement cannot be demonstrated.'

## 4 What is a curriculum?

### 4.1 Possible definitions of a curriculum

We do not find one, all-encompassing definition of 'curriculum' in literature. Different definitions of 'curriculum' are given:

- Aerden (2015): 'a coherent and structured set of educational content (courses, modules, etc.) covered by a programme and, when completed successfully, leading to a degree'.<sup>12</sup>
- Eisner (1979): 'the curriculum of a school, or a course, or a classroom can be conceived of as a series of planned events that are intended to have educational consequences for one or more students'.<sup>13</sup>
- Valcke (2013): 'essentially a plan to support learning. It consists of objectives to focus learning; three types of decisions (1) selection and organisation of content, (2) choice of

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<sup>10</sup> Bologna Follow-Up Group. (2005) *Framework for Qualifications of the European Higher Education Area*. Copenhagen. p. 2017-07-14

<sup>11</sup> Aerden, A. (2015). 'An introduction to international and intercultural learning outcomes'. European Consortium for Accreditation: Occasional Paper.

<sup>12</sup> Aerden, A. (2015). 'An introduction to international and intercultural learning outcomes'. European Consortium for Accreditation: Occasional Paper.

<sup>13</sup> Eisner, E.W. (1979). *The educational imagination. On the design and evaluation of school programs*. New York, NY: Macmillan Publishing. Pp.21-134.

learning experiences that one wants to provoke so that the contents are appropriately manipulated, (3) a plan containing the optimal learning conditions.<sup>14</sup>

These definitions emphasise that the curriculum

- has a structural and planned aspect.
- leads to something, for example, a diploma.
- encourages learning through a programme.

The concept of 'learning outcomes' is crucial within the concept of 'curriculum'. After all, the learning outcomes determine the intention of the curriculum. 'Learning outcomes' can also be defined and interpreted in different ways. In chapter 5, this text goes deeper into the learning outcomes / curriculum ratio.

## **4.2 Characteristics of the curriculum**

### **4.2.1 Profiling through the curriculum**

The curriculum of a programme in higher education is determined by the higher education institution. The curriculum of the same programme may vary from one institution to another. Individual institutions use the curriculum of a programme to distinguish themselves (for example, in the degree of integration of 21<sup>st</sup>-century competences<sup>15</sup>).

A curriculum is dynamic and constantly developing. It can be customised if the higher education institution considers it necessary, for example as a result of societal changes and scientific developments.

A curriculum reflects what the higher education institution considers relevant to a particular programme. It has tested this in the field and with other stakeholders. A curriculum is always a selection. It is reductionist. Social issues are always complex (e.g. sustainability issues). If the curriculum attempts to provide an answer to this, this is always a reduction of the complexity of the reality.

A curriculum also allows room for the freedom of choice of the student: some contents of the curriculum are required, while others are optional. The curriculum also provides guidance to the student. The student also has certain expectations with respect to the curriculum which an institution may or may not anticipate. The institution must naturally also clearly communicate the choices it has made in order to avoid raising false expectations.

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<sup>14</sup> Valcke, M. (2013). *Krachtige leeromgevingen*. Leuven: Acco

<sup>15</sup> Voogt, J. & Roblin, N.P. 2012. 'A comparative analysis of international frameworks for 21st century competences: Implications for national curriculum policies'. *Journal of Curriculum Studies*, (44, 3), pp. 299-321.

### 4.2.2 The power of a curriculum

Some authors emphasise the strength of the curriculum. Institutions can use it to create accents in education: fostering the student's development of cognitive processes, encouraging growth in various disciplines, providing personal meaning, serving society, ensuring that students are able to approach society critically, and preparing students for the labour market.<sup>16</sup>

Thomas stresses that the curriculum is that which students have in common. She points out the strength of the curriculum to involve all the students: 'curriculum is what all students have in common, irrespective of their diversity, and is within our institutional control'.<sup>17</sup> For Thomas, an inclusive curriculum contributes to study success. She refers to a 'sense of belonging' and engagement. These must be part of a curriculum. Brabon<sup>18</sup> adds that the sense of belonging (not just learning, but also experiencing) is a strong catalyst for (study) success. He sees an inclusive curriculum as a step towards an inclusive society. Only by making curricula more inclusive, can higher education fulfil its role as a driver of change and social mobility.

### 4.3 Different approaches to the curriculum

The curriculum can be approached as:

- An organisational instrument (a policy or management instrument):<sup>19</sup>  
Institutions use the curriculum to shape programmes. It is a format with which arrangements are made with teachers and students about the organisation of content, the choice of educational activities, evaluations, sequence, and certification.
- An experience for teachers and students (an educational platform):<sup>20</sup>  
The theoretical construct, or script - which is a curriculum - is put into practice by students and teachers.
- an instrument that leads to a product (diploma, credits) which a graduating student can use professionally.

The curriculum can be explicit or implicit/hidden.<sup>21</sup> The implicit curriculum includes the unwritten standards. This mainly surfaces in the interaction between student and teacher. Moore (2005) states the following: 'The hidden curriculum often reflects societal values, such as rewarding great success, ignoring average performance, and criticizing or punishing failure. The social 'pecking order' - in terms of gender, language, cultural differences, and socioeconomic status - is an inherent part of the hidden curriculum.'<sup>22</sup>

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<sup>16</sup> Eisner, E.W. (1979). *The educational imagination. On the design and evaluation of school programs*. New York, NY: Macmillan Publishing. Pp.21-134.

<sup>17</sup> Thomas, L. 2015. 'Developing inclusive learning to improve the engagement, belonging, retention and success of students from diverse groups.' In Mahsood Shah, Anna K. Bennett, Erica Southgate (eds). *Widening Higher Education Participation: A Global Perspective*.

<sup>18</sup> Brabon, B. 'Universal Design for the Experience Economy'. Presentation at the Vlor workshop of 2 May 2017 on curriculum design.

<sup>19</sup> See also Prøitz, TS 'Governance, teaching and learning in higher education - what are learning outcomes for?' Presentation at the Vlor workshop of 2 May 2017 on curriculum design.

<sup>20</sup> See also Prøitz, TS 'Governance, teaching and learning in higher education - what are learning outcomes for?' Presentation at the Vlor workshop of 2 May 2017 on curriculum design.

<sup>21</sup> Hewitt, T. W. (2006). *Understanding and shaping curriculum. What we teach and why*. Thousand Oaks, CA: Sage Publications. Pp. 23-48.

<sup>22</sup> Moore, K. (2005). *Effective instructional strategies*. London: Sage Publications. p.44



#### 4.4 Elements of a curriculum

When designing or revising a curriculum, an institution should take into account or give shape to a number of structurally imposed decree provisions:

- study load of the programme;
- domain-specific learning outcomes;
- connecting programmes (inflow, outflow)
- programme components;
- division into academic years;
- study paths (model path, individualised learning path);
- Bachelor's thesis/Master's thesis;
- potential internship.

The institution also translates its vision of education or educational concept into the curriculum through the development of the following elements in particular:

- programme-specific learning outcomes (desired competency development);
- teaching language;
- division of academic year into semesters, modules ...;
- sequence of programme components;
- programme flexibility (electives, major/minor ...);
- work and test types;
- study material;
- studiability (time students are expected to spend on educational activities, the processing of the material and evaluations);
- teachability (professionalisation of teachers and capacity);
- career guidance (inflow, flow and outflow)
- infrastructure (classrooms, ICT, accessibility).

### 5 Relationship curriculum/learning outcomes: the selection of learning outcomes

Aerden (2015) states that 'the curriculum should provide students with the necessary learning opportunity to achieve the intended (...) learning outcomes. If, for instance, the graduates of a Bachelor of Nursing are intended to *"be able to teach, supervise and assess junior colleagues in professional practice"*, the curriculum should cover (and assess) this type of teaching, supervising, and assessing.'

Learning outcomes are a fundamental concept in curriculum design because they determine what should ultimately be achieved by the curriculum. Learning outcomes are a translation of the expectations of society with respect to a programme.<sup>23</sup> They are actually a first choice, a first

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<sup>23</sup> For the translation of 21<sup>st</sup> century skills into learning outcomes, see, for example, 'Four-dimensional education. The Competences Learners Need to Succeed' (2015). Center for curriculum redesign.'

selection. This vision makes the learning outcomes the starting point and the core of curriculum design.<sup>24</sup>

Important social themes can find their way to the curriculum through a translation of the learning outcomes. It is up to institutions and stakeholders to ensure that the programmes remain socially relevant and adequately integrate these themes.

The term 'learning outcome' is a layered concept, just like 'curriculum'. They can also be used as a management tool (at national level, at institution level, at programme level), but also as an educational tool at the level of the programme component.<sup>25</sup>

In order to make this selection, to determine the learning outcomes, consultation is required with the stakeholders and the work field. The selection made determines the identity of the programme. Prøitz, for example, warns against learning outcomes that are excessively economically driven.<sup>26</sup> Prøitz also states that learning outcomes can be of a very different nature: they can define specific key competences or broad, generic competences. Learning outcomes can

- encompass all learning products (Buss, 2008).<sup>27</sup>
- be 'expressive outcomes' (Eisner, 1979) – 'outcomes of learning where purposes are formulated in the process of action itself as outcomes become emergent and clearer during the learning process'.<sup>28</sup>
- be holistic outcomes (Gagné, 1974) <sup>29</sup>- what you know after completing the programme.
- Be 'value-added learning results' (from the learner's own unique journey (Buss, 2008)).

The question is whether learning outcomes can contain everything that a society expects from higher education graduates. Can 'attributes' such as perseverance, ethical behaviour, etc. be included in this?<sup>30</sup> For Horvathova, these 'attributes' are included in the so-called 21st Century Competences, which break down into a four-dimensional model of 'skills', 'knowledge' ('what we know and understand'), character ('how we behave and engage in the world') and 'meta-learning' ('how we reflect and adapt').<sup>31</sup> These skills can be translated into learning outcomes and integrated into the curriculum. According to Macfarlane, these 'attributes' translate into knowledge, skills and attitudes.<sup>32</sup>

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<sup>24</sup> Prøitz, T.S. 'Governance, teaching and learning in higher education – what are learning outcomes for?' Presentation at the Vlor workshop of 2 May 2017 on curriculum design

<sup>25</sup> Prøitz, T.S. 'Governance, teaching and learning in higher education – what are learning outcomes for?' Presentation at the Vlor workshop of 2 May 2017 on curriculum design.

<sup>26</sup> Prøitz, T.S. 'Governance, teaching and learning in higher education – what are learning outcomes for?' Presentation at the Vlor workshop of 2 May 2017 on curriculum design

<sup>27</sup> Complete reference.

Eisner, EW (1979).<sup>28</sup> The educational imagination. On the design and evaluation of educational programs. New York, NY: Macmillan Publishing, 1985(1994), 2002.

<sup>29</sup> Complete reference.

Brabon, B. 'Universal Design for the Experience Economy'.<sup>30</sup> Presentation at the Vlor workshop of 2 May 2017 on curriculum design.

Horvathova, M. '21st Century Competences'.<sup>31</sup> Presentation at the Vlor workshop of 2 May 2017 on curriculum design.

Macfarlane, B. 'Integrating the curriculum based on the principle of student academic freedom'.<sup>32</sup> Presentation at the Vlor workshop of 2 May 2017 on curriculum design.

## 6 How can the curriculum answer increasing social needs?

The social expectations of higher education are high, but at the same time there is a reluctance to increase the study load of the programmes. Stakeholders in higher education want to avoid having to increasingly stack programme components or modules to translate their learning outcomes (competences) into the curriculum. But how could it be done differently?

### 6.1 Determining focus

Macfarlane<sup>33</sup> states clearly that not everything should be part of a curriculum. Focus and a clear goal are important in this regard. The ultimate goal must be to form critical, intellectually independent graduates who can adapt and contribute to the development of society and the economy. In other words, students should not get everything handed to them, graduates should be able to develop themselves through an open attitude and a desire to learn.

Prøitz also emphasises the importance of finding focus in a wide range of learning outcomes.<sup>34</sup>

### 6.2 Independent learning<sup>35</sup>

For Thomas, these additional social expectations can be realised through 'independent learning'. Higher education must teach students to think rather than to transfer knowledge and make them reproduce knowledge. Quality higher education integrates contact hours and independent learning in a balanced way. Independent learning could be defined as self-learning by students outside of contact hours. This can take on several forms (research, papers, studying ...).

Research in the UK<sup>36</sup> indicates that students are still having trouble learning independently. They don't know the material, are not motivated and often do not know how to go about things. They must therefore be given the necessary tools during the contact hours. It is very important that they are pointed in the right direction by the teachers and also receive regular (formal and informal) feedback on this. It is important that institutions think about a vision of independent learning and also properly communicate with students about this.

### 6.3 'Universal design for learning'

Inclusive curricula are strong motors for an inclusive society, says Brabon.<sup>37</sup> The inclusive (accessible) curriculum, intended for all students 'to the greatest extent possible' (without the need for adaptations and specialised design) and which enables social mobility, can be designed

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Macfarlane, B. 'Integrating the curriculum based on the principle of student academic freedom'.<sup>33</sup> Presentation at the Vlor workshop of 2 May 2017 on curriculum design.

<sup>34</sup> Prøitz, T.S. 'Governance, teaching and learning in higher education – what are learning outcomes for?' Presentation at the Vlor workshop of 2 May 2017 on curriculum design

<sup>35</sup> Thomas, L. 'Using independent learning to develop the higher education curriculum for the 21<sup>st</sup> Century'. Presentation at the Vlor workshop of 2 May 2017 on curriculum design.

<sup>36</sup> Thomas, L., Hockings, C., Ottaway, J. and Jones R. (2015) *Independent learning: Student perceptions and experiences*. York: HEA. Thomas, L., Jones, R. and Ottaway, J. (2015) *Effective practice in the design of directed independent learning opportunities*. York: HEA and QAA. Jones, R. (2015) *Compendium of effective practice in directed independent learning*. York: HEA.

Brabon, B. 'Universal Design for the Experience Economy'.<sup>37</sup> Presentation at the Vlor workshop of 2 May 2017 on curriculum design

through universal design for learning. He emphasises the importance of a variety of experiences, partnerships, flexibility and 'belonging'.

The following principles are important in inclusive curriculum development:

- Learning is enriched by different experiences and different students
- Accessible learning is relevant and accessible to all students
- The curriculum and the way it is delivered is part of this accessibility
- Students with full access to 'learning and teaching' are more likely to study deeply

## **6.4 'Interwoven competences'**

Referring to 21st-century competences, Horvathova proposes: 'Many of these competences will not be offered as independent courses or modules in a school's curricular offerings, and must be intentionally interwoven into the relevant parts of existing learning activities. In fact, it is likely that they are generally best learned when grounded in the context of concrete knowledge domains'. She also emphasises that not everything has to be included in the curriculum and that these competences can also be acquired outside the school/programme/institution.

# **7 Curriculum design in the higher education institution**

## **7.1 Continuous development of a curriculum**

Development or the continued development of a curriculum is an intensive and cyclical process. Curriculum (re)design is not a linear process. Rather, it is trial and error, a recursive process. A curriculum is developed, implemented, evaluated and adjusted. Brabon argues that curriculum development requires thinking about goals, intended learning outcomes and attributes'.

The higher education institutions base their interpretation on their own vision of education. This is achieved through a dialogue with faculties/departments/disciplines, stakeholders (teachers, students, graduates, work field), the government and possibly other social actors. Subsequently, the programmes are encouraged to implement these guidelines.

As with any innovation process, it is important to convince teachers and students of the importance of the development. By extension, it is necessary to generate support from all the stakeholders. Thomas, for example, emphasises the importance of 'staff development'.<sup>38</sup> Macfarlane emphasises student involvement and the fact that 'students should own the curriculum in the sense that the boundaries of their studies should be shaped by their interests, intellect and passions'.<sup>39</sup>

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Thomas, L. 'Using independent learning to develop the higher education curriculum for the 21st Century'.<sup>38</sup> Presentation at the Vlor workshop of 2 May 2017 on curriculum design  
Macfarlane, B. 'Integrating the curriculum based on the principle of student academic freedom'.<sup>39</sup> Presentation at the Vlor workshop of 2 May 2017 on curriculum design.

A curriculum is a microcosm in which experiments can be conducted with active involvement of the students. Curriculum (re)design is realised through co-creation.

## 7.2 How to integrate additional learning outcomes?

The learning outcomes of the programme are realised using the curriculum. Aerden (2015)<sup>40</sup> proposes visualising the relationship between the curriculum and learning outcomes on a matrix, with on one axis the learning outcomes related to a specific theme (e.g. internationalisation), and on the other axis all the courses, modules, etc. from the curriculum. This can serve as a test exercise for the programme to determine whether the learning outcomes are being realised by the curriculum. Horvathova proposes a similar method for examining which 21st century competences are covered by which disciplines.<sup>41</sup>

Specific learning outcomes are specified for each programme and each programme component. In addition, learning outcomes can also be described for more general skills, such as internationalisation, sustainability, innovation, and citizenship, etc. The question is how to avoid programmes opting for the creation of additional, more stacked programme components and/or modules to translate these learning outcomes (competences) into the curriculum. What is an integrated approach to curriculum design?

De Vlor has found a number of examples where some of these general competences are integrated. De Vlor has not yet found an example of curricula in which all these competences are explicitly discussed.

## 8 Examples of curriculum design today

### 8.1 Integration of competences for sustainability and intercultural skills

The Ecocampus document <sup>42</sup>'Grensoverschrijdende duurzaamheid' <sup>43</sup> (Cross-border sustainability) invites Flemish higher education to consider how to strengthen the synergies between sustainability and internationalisation of higher education in its own institutions, in order to achieve a form of cross-fertilisation.

In order to integrate these two sets of competences, Ecocampus proposes to start from the analysis of sustainability and intercultural competences. It looks for competences that overlap and for competences that are inherent to sustainability or interculturalism. Examples of competences that coincide (synergy): intercultural competences strengthen interpersonal

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<sup>40</sup> Aerden, A. (2015). 'An introduction to international and intercultural learning outcomes'. *European Consortium for Accreditation: Occasional Paper*.

Horvathova, M. '21st Century Competences'.<sup>41</sup> Presentation at the Vlor workshop of 2 May 2017 on curriculum design. And 'Four-dimensional education. The Competencies Learners Need to Succeed' (2015). Center for curriculum redesign.'

<sup>42</sup> Ecocampus is a programme of the Department of Environment, Nature and Energy that is committed to sustainable higher education.

<sup>43</sup> Department of Environment, Nature and Energy. July 2016. *Grensoverschrijdende duurzaamheid. Sustainability and internationalisation in higher education*.

competences of sustainability, and anticipatory, normative and strategic competences strengthen 'global engagement'. Examples of personal competences are language proficiency in intercultural competences and systematic thinking in competences for sustainability. These competences can then be translated into learning outcomes and be realised through the curriculum of a programme.

## 8.2 Integration of 21<sup>st</sup>-century competences into the curriculum<sup>44</sup>

In this example, 21<sup>st</sup>-century skills are integrated into the curriculum. The Arteveldehogeschool explains what methodology was used for this:

### A. Curriculum design:

- 1 Selection of 21<sup>st</sup>-century skills
- 2 Formulation of 21<sup>st</sup>-century learning outcomes (enterprise, digital literacy, research, sustainable development, global citizenship)
- 3 Translate learning outcomes into programme-specific learning objectives
- 4 Screening curricula (learning objectives, contents, teaching practice, evaluation)
- 5 Making learning opportunities visible to students in the curriculum
- 6 Include with major curriculum changes

### B. Organisational culture and structure

- 1 Consultations on the learning outcomes for students and staff
- 2 Professionalisation of teachers and staff
- 3 Quality care

### C. Give students responsibility

- 1 Teach students from the start of their studies to learn to look and act based on the different learning outcomes
- 2 Enable them to discover learning opportunities in the curriculum
- 3 Possibility of dialogue with teachers (co-creation of the curriculum)
- 4 Possibility to introduce experiences from outside the programme, opportunity to excel
- 5 Digital portfolio
- 6 Process support/path coaching

## 9 Questions

- How can a curriculum respond to the social needs of today?
- How can a curriculum stimulate student involvement?
- How can a curriculum do the above in an integrated way?
- Is the curriculum the only instrument for this?
- What is the relationship between the learning outcomes and the curriculum, and is it sufficiently clear?

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Demets, L. & H. Van Puyenbroek.<sup>44</sup> (2016). 'Nieuwe generatie curriculumdesign. Introductie van zelfsturing in het curriculum om 21<sup>st</sup> century skills te kunnen bereiken.' *Onderzoek van onderwijs* (45, December). Pp. 16-21.

- How do we know if the curriculum is doing what is intended?
- How powerful is the curriculum?
- Does an institution have sufficient scope to devise the curriculum of a particular programme?
- How can teachers and staff be professionalised?
- What is the role of the stakeholders in curriculum (re)design? Who owns the curriculum?