Professional development of sustainability competences in higher education: the role of empowerment

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Structured abstract

Purpose of this paper - This article aims to provide insights in the relation between professional development and organisational change processes towards sustainability, with a specific focus on empowerment.

Design/methodology/approach - The article builds upon a constructivist approach, combining a literature review, a desk research on key publications and reports, and a socio-political analysis to reveal the specific context in Flanders, Belgium. Findings are then connected to earlier insights from research on organisational change for sustainability.

Findings - The article provides a number of professional development initiatives that focus on sustainability in general and in a single higher education institution. Framing such initiatives as an organisational change process offers insights on how elements of empowerment are currently incorporated in professional development initiatives and how it can strengthen them to lead to the further integration of sustainability competences in higher education.

Research limitations/implications - Limitations are linked with the kind of sources used in the constructivist approach. The analysis only looks at written reports on the topic, albeit it also builds upon the first hand experiences of educators in the higher education institution focused upon in the case.

Practical implications - The need to frame professional development initiatives as an organisational change process towards sustainability with specific attention towards empowerment. Without this framing, professional development approaches comprise the risk of being left in the margins, or being understood as single initiatives without any connection to the bigger picture, i.e. the transition towards sustainability in higher education.

Social implications – Interlinking professional development and organisational change provides opportunities to frame the sustainability transition within the university in a wider societal context.

What is original/value of paper - The article provides an original contribution to the debate on sustainability competences, as it frames the professional development within an organisational context, rather than focusing on the individual role of educators.

Keywords

competences, empowerment, higher education, human factors, professional development, sustainable development

1. Introduction

Higher education (HE) in Western Europe has become increasingly competence-based and competence-oriented. A variety of policy initiatives, both at the international and regional level have been focusing on competences for sustainable development (SD), e.g. the UNECE competences for educators (UNECE 2011). Also at the national level, sustainability competences have been defined and integrated in policy frameworks. Sustainability competences can be defined as the knowledge, skills, values and attitudes that enable graduate students to cope with the complexity and uncertainty of sustainability issues in society (Lambrechts & Van Petegem 2016). Many authors have developed models and lists of such competences (e.g. Barth et al. 2007; de Haan 2006; Rieckmann 2012; Wiek et al. 2011). Furthermore, the integration of sustainability competences has been analysed (e.g. Cebrián & Junyent 2015; Lambrechts et al. 2013; Segalàs et al. 2009), as well as its implications for higher education curricula (e.g. Cotton et al. 2009; Lambrechts & Van Petegem 2016; Lans et al., 2014; Sterling 2004; Tilbury & Mulà 2011).

This article provides an in depth analysis of how competences for SD have been used as a basis for professional development (PD) of university educators, both at the national level (government initiatives) as at the level of an individual higher education institution (HEI) in Belgium. It looks at the way international validated sustainability competences have been translated into initiatives in Flanders, with a focus on the approach of the Flemish government, Department of Environment, Nature and Energy (Ecocampus 2014; Waas et al. 2012). This department has launched several PD initiatives, ranging from learning networks for university educators to the development of hands-on guidelines to integrate sustainability in competence-based education (Rymenams & Lambrechts 2014; Rymenams & Lambrechts 2015). The article discusses how these initiatives relate to the international context, and which competence frameworks and approaches are used.

In addition to the national context, the article analyses PD initiatives at the level of a single HEI, which has a long and strong tradition in sustainability integration in its education, research, outreach activities and campus operations (Verhulst & Lambrechts 2015). This case offers insights in how a single institution provides PD activities, how these activities support sustainability competences, and how they relate to the national and international context.

Furthermore, the article presents thorough insights on how PD initiatives, on the level of the HEI as well as on the national level, relate to a change management approach in HE. The specific link between PD and organisational change is important as it provides insights on which approaches are successful in addressing effective and systemic change, necessary in the context of the whole-school-approach.

2. An organisational change perspective: barriers to change and empowerment

In the Higher Education for Sustainable Development (HESD) literature, considerable attention has been paid towards barriers to change, preventing a systemic integration of sustainability in HE. Pittman (2004) indicates that the lack of sufficient money, time and commitment are the most commonly cited causes in HEIs as barriers to the integration of SD. Other authors point towards such factors as well, and see the specific disciplinary structure and conservative culture of HE as key barriers (Disterheft et al. 2015; Filho 2011; Hoover & Harder 2015; Lozano 2006). Verhulst and Lambrechts (2015) give a detailed overview of barriers and distinguish three main groups: (1) barriers related to the lack of awareness, (2) barriers related to the structure of HE and (3) barriers related to the lack of resources. Many of these barriers are related to people, i.e. human factors, such as a lack of interest and involvement of the majority of students and staff members or SD seen as a threat to academic freedom and credibility.

Furthermore, these barriers to change might influence each other, and change over time (Verhulst & Lambrechts 2015). In order to overcome such complex barriers and successfully implement competence frameworks through the use of PD approaches, it is important to place them in the broader context of the transition towards HESD. Change management as a field offers approaches for organisational change, whereby an organisation moves from a current into a future, wanted state. Organisational change approaches focus on the process, context and content of change, with profound attention for human factors (Pettigrew & Whipp 1991). Human factors can be defined as: (1) organisational culture; (2) resistance against change; (3) empowerment and involvement; and (4) internal communication on change (Verhulst & Lambrechts 2015). They provide valuable insights on which and how PD approaches are successful in addressing effective and systemic change towards HESD. This article argues that, without taking these human factors into account, PD approaches comprise the risk of being left in the margins, or being understood as single initiatives without any connection to the bigger picture, i.e. the transition towards sustainability in HE. Therefore, both the competence frameworks as the PD approaches need to be understood and framed within a specific contemporary context of HE, especially when it comes to issues of resistance against change and empowerment of employees. This article goes deeper into how empowerment as a (significant) human factor can offer explanations for the progress and strengthening of the implementation of PD approaches that support sustainability competences.

Empowerment comprises different aspects, including (1) group potency, a belief that a group can perform well; (2) meaningfulness, a belief that a group performs important and valuable tasks; (3) autonomy, having independence and discretion in performing the work; and (4) impact,

experiencing a sense of importance and significance in the work performed and goals achieved (Kirkman & Rosen 1999). Different dimensions are defined for the process of creating and attaining empowerment. Based on their work and that of other scholars, three dimensions can be identified that provides operational measures to study and employ empowerment in practice (Verhulst & Boks 2014):

(1) authority: including power, decision making and responsibility;
(2) resources and specialisation: including information, knowledge and skills;
(3) self-determination: including initiative and creativity and autonomy.

These measures can motivate employees and simultaneously optimise their skills in function of the change that is taking place in an organisation. The chance on a successful change for example rises when one gets the advocacy of a group of people within the organisation that have the authority and power to make a change happen. This gets supported further when advocators and sponsors of a change show true engagement and provide clear and certain accountability towards employees and individuals that will get affected by the change process (Adams 2003). Literature on organisational change management emphasised empowerment as an aspect of a change process that can significantly lower resistance against change and that can support a change process (Kotter & Schlesinger 2008).

Some scholars also emphasise the need for empowerment in the implementation process of SD in HE. Already in the 1980's, Badley (1986) highlights the role of the teacher as a change agent, in which it is important that teachers are aware of the various elements (innovation, change agent and context) and stages of change (analysis, implementation and evaluation). The author also brings forward the demanding and varied roles of a teacher as a change agent, including training in specific skills, innovator creating new ideas and practices, practitioner adopting new skills and practices, consultant to the client group, amongst several other roles. Such varying roles are defined in the context of Education for Sustainable Development (ESD) as well, in which educators and researchers acknowledge the need to switch flexibly between the roles of coach; change maker; facilitator; critical friend; participant; activist; etc. (Lemon et al. 2016). With his whole system design approach, Pittman (2004) proposes five elements that are integral to success in organisational change for SD in HE. These include institutional commitment, shared vision of the future, sustainability indicator reporting, participatory management structures and external partnerships. Empowerment is – both directly as indirectly – incorporated in most of these elements.

3. Method

As argued in section 2, this article connects the concepts of PD initiatives regarding sustainability competences with change processes. Although these two concepts (sustainability competences and change processes) are being strongly developed in HESD literature, they are evolving as rather separate tracks. Therefore, this article seeks to answer the following research question: how do PD initiatives relate to the human factors as described in change management approaches, specifically regarding empowerment? Connecting both concepts provides possibilities to strengthen the sustainability integration process in HE.

The article builds upon a constructivist approach (Mackenzie & Knipe 2006) and a hermeneutic interpretive approach as developed for educational settings (Van Manen 1990). The different research steps combine a literature review, a desk research on key publications and reports, and a socio-political analysis to reveal the specific context in Flanders. Findings are then connected to

earlier insights into organisational change for sustainability and the influence of human factors on this process. In order to do this, the research steps followed are:

Step 1. Literature review with focus on competences for SD, PD and organisational change processes;

Step 2. Desk research;

> 2.1. Key publications provided by the Flemish Government, Department of Environment, Nature and Energy (see section 5.1. and table 1);

> 2.2. Key documents, publications and reports of the HEI (see section 5.2. and figure 1);

Step 3. Socio-political analysis and context in Flanders, with focus on how (international) concepts of sustainability competences have been translated into PD different initiatives in the Flemish context;

Step 4. Connecting PD initiatives on sustainability competences and human factors in organisational change processes, with a specific focus on empowerment.

These research steps are applied to the specific context of sustainability competences and PD initiatives in Flanders, Belgium, organised by the Flemish government and by an individual HEI, as described in section 4. Data was based on public available reports, papers and articles (see table 1 for references), publications of the HEI in focus (see Verhulst & Lambrechts 2015), and the accessibility of internal reports of the HEI focused upon.

4. Context

This section describes the context and provides the necessary background for the research analysis. Section 4.1. presents the reception of sustainability competences in Flanders, section 4.2. focuses upon the PD initiatives both at the broad Flemish level and at the level of the single HEI.

4.1. Competences for SD in Flanders

In Belgium, one must distinguish between the national, federal level, on the one hand and the level of the communities and regions on the other. Education, and therefore also ESD, is a responsibility of the communities. In this article, we will focus on HE in Flanders, and not in the French and German Communities, since they have separate policies. ESD is a topic in the Flemish Strategy for Sustainable Development, the Memorandum of the Education Department 2009-2014, the ESD-platform and the Flemish Implementation Plan for ESD. Most of the initiatives and policies endorse the UNECE strategy (UNECE, 2005), thus focusing on capacity building. Policy documents both at federal and Flemish level seem to mention ESD in rather general terms, failing to describe or promote actual ESD processes and approaches (Lambrechts, Van den Haute, & Vanhoren 2009; Rymenams & Lambrechts 2014).

Two practical initiatives at the Flemish level, the ESD platform and the Ecocampus Initiative do promote explicit and practical ESD processes and approaches. The ESD platform provides guidelines and good practices on ESD in formal, non-formal and informal learning environments (Van Poeck et al. 2014). Ecocampus promotes several processes and approaches, specifically for HE, i.e. policy development (through guidelines, theoretical frameworks, reflection instruments); competences for SD (through guidelines); learning networks (e.g. for social work, teacher training, economic study

programs) (Rymenams & Lambrechts 2015). Both initiatives are situated at the level of practical translation of ESD processes in individual organisations with an educational focus, and not (thoroughly) at integrating ESD at the Flemish policy level. The result is that ESD still is the exception (organisations interested in the topic are supported) rather than the norm (there is no policy that requires all organisations to integrate ESD) (Rymenams & Lambrechts 2014).

Sustainability competences have been the focus of different studies and publications. In an early project, a European consortium coordinated by the Leuven University College (now University Colleges Leuven-Limburg), the Flemish government and the international NGO Environment and School Initiatives (ENSI), developed a framework for sustainability competences in teacher training. The project 'Competences, Sustainability, Curriculum, Teacher Training' (CSCT) was funded by the European Commission within the Lifelong Learning Programme and ran from 2004-2008. The competence framework developed referred to De Haan's 'Gestaltungskompetenz' (de Haan 2006). The results of the project were published in Dutch (Sleurs et al. 2008), allowing to be communicated and spread among teacher training educators across Flanders (for the English project report, see Sleurs 2008).

In 2007, a number of learning networks, oriented towards HEI representatives, were launched, one of which was devoted to competences for SD. Not only the competence model for teacher training was presented in this learning network (Sleurs et al. 2008), also the competence model developed by Roorda (2010), known as RESFIA+D (in Dutch: VESTIA+D), was picked up by the learning network. The learning networks thereby provided a platform for university educators to discuss the sustainability competences.

The models developed by De Haan (2006), Sleurs et al. (2008) and Roorda (2010) were in turn, and due to the influence of the learning networks, picked up by a number of HEIs, using it to analyse their competence schemes in order to find out to what extent sustainability competences were already integrated in their study programs. Results are available for study programs in business management, office management and applied information technology (Lambrechts et al. 2013), teacher training, social work, health care and technology (Lambrechts et al. 2010).

In 2012, Ecocampus commissioned the development of a reference framework for HESD, to be written by academics in the field. This reference framework refers to sustainability competences, mainly the list of key competences developed by Rieckmann (2012). Ecocampus also developed a publication on the translation and operationalization of sustainability competences. The guidelines refer to competence frameworks developed by Roorda (2010) and Rieckmann (2012), but most extensively to the model developed by Wiek et al. (2011), including: systems-thinking, anticipatory thinking, normative competence, strategic competence and interpersonal competence (Wiek et al. 2011).

In these initiatives and examples, reception of different sets and models of sustainability competences could be detected. On its turn, outcomes of the initiatives have had influence on the further development in the field, e.g. Sleurs' model (2008) was used as an inspiration source for the UNECE's framework for sustainability competences (UNECE 2011).

4.2. Professional development initiatives by the Flemish government

PD aims at developing an individual's skills, knowledge, expertise and other characteristics as a teacher through different types of activities ranging from training, reflections, mentoring,

conferences, workshops or other programs (OECD 2009) and is still considered as the best bet for changing teaching practices (Supovitz & Turner 2000). Kadji-Beltran et al. (2013) emphasise a strong need for rethinking PD for SD by exploring suitable and effective forms of preparing teachers that are in accordance with the nature of ESD. This section goes deeper into PD initiatives with a focus on SD in Flanders. Such initiatives have been mapped and described within the European project 'University Educators for Sustainable Development' (UE4SD, 2013-2016), in which Flanders is a member (partner institution: University Colleges Leuven-Limburg) (Kapitulčinová et al. (eds.) 2015).

The Flemish 'Implementation Plan for ESD' contains a section dedicated to the competences that educators need to be equipped with to integrate SD in their educational activities: "ESD is more than simple transfer of knowledge. The great insecurity and complexity of sustainability issues require a set of competencies teachers and educators are sometimes still not so familiar with". It also stresses the need to develop a vision: "Sustainability issues are complex and are highly unpredictable, they have long-term effects and effects on a system level. That's why it's important to gather people from different contexts to engage a broad debate so that the individual vision on SD can evolve" (cited in Rymenams & Lambrechts 2014).

Table 1. Professional development initiatives organised by Ecocampus

Type of PD initiative	Title	For which stakeholders
1. Conferences and workshops	Symposium "Sustainable Higher Education – beyond knowledge" (19 April 2012)	All HEI stakeholders
	Policy Seminar "Competences for SD" (13 December 2012)	Middle management in education (e.g. head of study programs, educational coordinators)
	Integrating Ecodesign in higher education (29 November 2012) (Verhulst & Van Doorsselaer 2015)	Educators
	Systems thinking (25 April 2013)	Educators
	Conference "Sustainability in study programs: twinning, competences, pedagogical approaches, professional development" (14 December 2015)	Mainly middle management in education, but also individual educators
2. Thematic learning networks (Rymenams & Lambrechts 2015)	Social Work	Educators
	Teacher Training	Educators
	Economics	Educators
3. Science - and Debate Cafés	Science Café Climate change	Educators & students
	Debate cafés for educators	Educators & students
4. Publications	Manual Environmental Management System in Higher Education (Tratsaert et al. 2007)	Staff working on Health, Safety and Environment on campus
	Inspiration guide and Reference Framework SD in Higher Education (Waas et al. 2012)	Higher management, middle management, educators and other staff members
	Guidelines SD as a compass for the development of learning outcomes (Ecocampus 2014)	Middle management in education (e.g. head of study programs, educational coordinators)
	ESD competence profile for Teacher Training (Ecocampus 2013)	Educators
	Advisory report: Sustainability in Research (Ecocampus 2015)	Middle management in research (e.g. research coordinator) but also individual researchers

Specific for HE, Ecocampus coordinates the majority of initiatives on ESD PD for university educators. During the years, Ecocampus has organised a variety of PD initiatives, as presented in table 1. These initiatives can be clustered into four types, and are oriented towards different stakeholders. Conferences and workshops are organised since 2012. The first one (19 April 2012), was oriented towards a very broad public of different HEI stakeholders (management, educators, researchers), while the others were oriented towards educational stakeholders, namely middle management (e.g. educational coordinators) or individual educators. PD initiatives on educational and pedagogical topics are oriented towards educators, while initiatives on the organisational conditions (e.g. how to ensure that sustainability competences get structurally embedded) are oriented towards middle management. The learning networks and science- and debate cafés are oriented both towards educators and students, and enable them to organise such an initiative within their local context, by providing practical guidelines and support. In their publications, Ecocampus tries to reach different stakeholders, not only educators, but also management representatives, researchers and staff working on Health, Safety and Environment (HSE)[1]. In this approach, Ecocampus tries to work on both fields: on the one hand, ensuring PD of individual educators, and on the other hand, providing the necessary conditions for organisational change processes towards systemic embedding of sustainability.

4.3. Professional development initiatives in one HEI

The general PD initiatives provide an overview of the possibilities and context in which Flemish HEIs develop an understanding of sustainability competences. It is also interesting to look at the level of HEIs, in order to analyse their individual approach. Therefore, this section provides a longitudinal overview of all PD initiatives undertaken by a single HEI, University Colleges Leuven-Limburg (formerly Leuven University College), for the period between 2003-2015. Starting from a sustainability assessment in 2003, this HEI has undertaken a process of SD integration, focusing on educational aspects on the one hand (competences, curriculum, pedagogical approaches), and organisational change on the other (campus operations, ecological footprint analysis).

Figure 1 provides an overview of the different initiatives included in the longitudinal overview. Most of them were project-based, with the exception of the AISHE audits and the PD trajectory, which were embedded in the organisational structure[2]:

(1) 2003-2004: *Project: ECHOes of Sustainability*: mapping of courses and study programs; AISHE audit of study programs: 1-star certificate; periodic staff induction in the topics of sustainability, corporate social responsibility and business ethics;
(2) 2005-2008: *Project: DOHO (Sustainable Development and Higher Education)*: screening of competences; AISHE audit of study programs; development of SD policy plan; individual

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[1] It should be noted that due to the Belgian and Flemish legislation regarding health, safety and environment, every organisation needs to appoint a staff member responsible for these aspects. Also HEIs fall under this legislation. HSE coordinators typically focus on wellbeing and safety of staff and students on campus (e.g. in laboratories) and also follow the legislation regarding environmental care. This focus on HSE was only present during the first phase of Ecocampus, in the second and third phase the focus shifted towards educational approaches.

[2] Initiatives and projects received funding from different sources: (1), (2), (3) funded by the Flemish Government; (4) funded by the European Commission, LLP; (6), (7) funded by the Province of Flemish Brabant (Provincie Vlaams-Brabant); (8) funded by the National Lottery of Belgium (Nationale Loterij België); (5), (9) internal funding.

initiatives for staff development (Lambrechts & Ceulemans 2013; Lambrechts 2015; Verhulst & Lambrechts 2015; Lambrechts et al. 2009).

(3) 2007-2010: *Project: SD in Marketing Programs*: integrating the topic in the curriculum; organising a seminar for internal and external stakeholders;

(4) 2008-2010: *Project: REBEL – E-learning modules for Responsible Business (REBEL)*: development of online modules for business ethics and corporate social responsibility; periodic staff induction;

(5) 2009-2010: *new AISHE audits in the Department of Business Studies*: 2-star certificate for Sustainable Higher Education (Lambrechts 2015);

(6) 2011-2012: *Project: Calculation of the Ecological footprint*: Organisation of a seminar on the use of ecological footprint in higher education (Lambrechts & Van Liedekerke 2014);

(7) 2013-2014: *Project: ESD-competences for marketing teachers*: defining competences; developing tools and instruments for educators;

(8) 2014-2016: *Project: ECHO for a sustainable future – transition towards sustainable higher education*: curriculum screening, staff development and AISHE 2.0 audits in the Department of Business Studies (Lambrechts & Rymenams 2015; Lambrechts et al. 2015);

(9) 2013-ongoing: *staff development trajectory for university educators.* The trajectory aims at (a) staff induction on sustainability (general), (b) staff induction on specific SD topics in business, (c) staff induction on specific SD topics related to the study programs (finance, marketing, etc.).
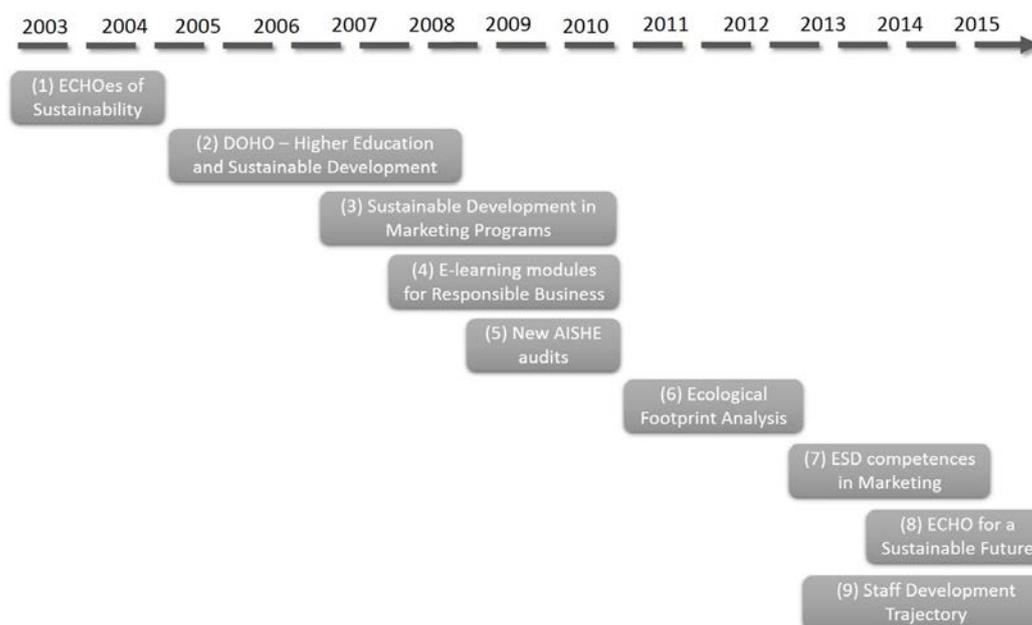

Figure 1. timeline of the different initiatives

The different PD initiatives in this case clearly focus on three main approaches. A first approach is screening or assessment of the current situation, i.e. oriented towards finding out where and to what extent SD is already integrated. This approach has been used for sustainability competences, for campus operations, and for general sustainability assessments based on AISHE. A second approach is the development of tools and instruments, to enable the university educators to integrate SD in their course or study program, e.g. the development of a general SD implementation model and guidelines to operationalize competences for SD in study programs. A third approach is

the development of a planned and controlled staff induction to enable university educators to start working on SD. This staff induction was organised with a range from general sustainability topics to specific SD topics within business management studies. It offered educators the opportunity to develop their own understanding of what sustainability is, why it matters, and how it is linked with the study programs in which they are involved. The majority of initiatives are characterised by a bottom-up approach, enabling individual educators to participate and get involved.

This example shows the process an individual HEI can undertake to indulge its educators into the topic of sustainability. We see a variation in approaches and initiatives, with the end point of a (still on-going) structural staff development trajectory. This has been a very "organic" process, involving projects, audits, working groups, seminars, etc. The impact can be described at different levels. At a general level, raising awareness is an important incentive, based on insights into the degree of SD integration in campus operations and curricula. Then, when stakeholders are aware of what has been done, and what needs to be done further, capacity building comes into sight. It is oriented at developing understanding of SD in general, and into SD in business related issues in particular, and being able to integrate a specific course or topic in the curriculum. Furthermore, this capacity building is oriented towards sustainability competences, and enabling educators to integrate these competences in the curriculum. Nevertheless, it is important to note that the process is never "finished": a constant movement is necessary to keep the integration going, as sustainability-fatigue and demotivation are real threats for a successful and ongoing change process (Verhulst & Lambrechts 2015).

5. Results: empowerment in professional development

The subsequent paragraphs describe how the operational measures of empowerment (authority; resources and specialisation; self-determination) have been applied in the PD initiatives described in section 4, and how this has supported the presented PD approaches.

5.1. Authority

Within the thematic learning networks of Ecocampus
The Ecocampus thematic learning networks in social work, teacher training and economics are oriented towards individual educators, coming from different HEIs in Flanders, but affiliated in the same disciplinary study programs. The thematic learning networks are an example of self-organisation, in which participants can propose discussion topics, and present didactic materials and experiences in their own courses. As such, educators learn from each other and enhance their teaching abilities in the field of sustainability. Occasionally, other stakeholders are invited as well (e.g. external experts, NGO representatives), providing opportunities for cross-fertilisation. A description of how the learning networks are organised is provided in Rymenams & Lambrechts (2015). A key success factor of the learning networks is the co-creation of didactic materials: "*The learning networks (LN) try to deal with the workload of educators by creating optimal conditions to share and to put into practice the key concepts of ESD. (…) one of the main goals is to provide HE educators with concrete ideas and materials that can be integrated into their own course practice without significant extra work, e.g. didactic presentations on a specific topic which can be adapted and used by other participants. Furthermore, co-creation is one of the key factors of the meetings: participants are invited at all times to discuss the themes proposed, make suggestions, participate in the development of output materials, etc. This idea of "co-creation" even seems to be a premise to*

make the LN succeed. Without a "common goal", LN face the risk of not providing added value for the participants" (Rymenams & Lambrechts 2015).

The Ecocampus learning networks are regarded as a good practice to enhance educators' capabilities to integrate sustainability into their courses. It is a way to empower them by dividing responsibility and power to take decisions on how the learning networks develop. The learning networks also help raising awareness and confidence amongst educators to start working on the 'difficult' topic of SD. They provide an answer to some of the barriers to change, such as the lack of interest and involvement, the lack of professionalization, the lack of recognition, and the fact that SD is not seen as relevant in relation to their courses. Furthermore, in taking the specific context of Flemish HE into account, in which educators are dealing with high workloads, the learning networks also acknowledge the barrier concerning 'high work pressure and lack of time' (Verhulst & Lambrechts 2015).

Within the project "Higher Education and Sustainable Development" (HEI level)

This 3-year project (2005-2008) aimed at integrating SD across the different levels within the HEI, including education, research and outreach, and operations. The project worked towards the development of a vision, policy plan and strategy towards HESD. Different participatory approaches were used in this process. The SD vision and policy plan were developed through a bottom-up approach, incorporating input from staff members from all study programs. A key role was also given to the Sustainable Higher Education working group, a group of 10 ambassadors of SD, representing study programs, research and management of the HEI. Being a member of this working group was part of the official work load of each member, however, after the DOHO project-based funding ended, no structural support of the group was provided, which made the ambassadors feel left alone and demotivated (Verhulst & Lambrechts 2015).

The responsibility and power given to this group of ambassadors to work on the integration of SD in the HEI enabled to assemble individual initiatives that took place, to gather relevant knowledge and ideas, and to develop approaches to support the HEI in its change process towards SD. Empowering the working group also ensured a two-directional flow of gathering and spreading information, as well as provided the right tools to enthuse other employees about SD. The different approaches for involving employees on different levels and from all departments offer a way to deal with some of the barriers to change such as the lack of interest and involvement, the lack of support by management and policy makers, the lack of policy making to promote sustainability, the lack of recognition of change agents or ambassadors and inefficient communication and shared information both top-down and bottom-up.

5.2. Resources and specialisation

In Ecocampus publications

This example on empowerment through the use of resources and specialisation focuses on two publications of Ecocampus: the general reference framework (Waas et al. 2012) and the guidelines for sustainability competences (Ecocampus 2014).

The reference framework 'Sustainable Higher Education. Understanding and moving forward' (Waas et al., 2012) explores the critical dimensions of HESD from a whole systems approach, including education, research, and campus operations, as well as the change process within the organisation. The reference framework provides a normative picture on HESD: why it is important, and how it should be put into practice. Furthermore, it provides alternative approaches and perspectives to current approaches, e.g. sustainability in science and research.

The publication 'Guidelines SD as a compass for the development of learning outcomes' (Ecocampus, 2014), aims at integrating sustainability competences in HE study programs. The publication refers to different competence frameworks, including Roorda (2010), Rieckmann (2012) and Wiek et al. (2011), and provides examples and possibilities to translate and operationalize these competences. Furthermore, the guidelines include references towards citizenship education and transformative learning, as a way to frame the sustainability competences. In addition to the competence models mentioned above, the guidelines also refer to concepts of relativism, uncertainty and democracy (Wals 2010a), transformative learning (Wals 2010b), and citizenship-as-practice (Lawy & Biesta 2010). This publication thus provides internationally validated information concerning sustainability competences, and furthermore frames them in a wider societal context of citizenship and democracy.

Apart from providing valuable resources that can support and encourage the reader to learn more about SD in HE, such publications support taking away barriers related to accessibility to information and the need for standard definitions and concepts of SD in HE.

In the AISHE audits (HEI level)

A recurring initiative taken by the HEI described in the case, is the use of the Auditing Instrument for Sustainability in Higher Education (AISHE) (Roorda 2001). This sustainability assessment tool has been applied for the first time in all departments of this HEI in the period 2003-2006, a second time in the period 2009-2010 (Business Studies) and a third time in 2015 (Business Studies). A lack of visibility and communication on sustainability issues came forward as a weakness from the first audits, which led to a lack of awareness, and a lack of acknowledgement of the topic. As a result, the HEI started a range of initiatives to improve the visibility of its sustainability efforts. Communication thereby happened in the form of seminars and round tables, staff development initiatives, internal communication on SD through the internal communication platform and external communication through press releases about SD initiatives. These efforts were awarded in the second audit in 2009-2010, where communication got evaluated to be very strong. Several PD initiatives were also taken in the period following this second audit, such as the calculation of the Ecological Footprint and structural integration of sustainability criteria in campus operations (Lambrechts & Van Liedekerke 2014). The results from a third series of AISHE audits in 2015 however indicated a status quo of most of the criteria. Lambrechts and Rymenams (2015) found that a lack of visibility of the initiatives and a lack of awareness of individual staff members are some reasons that explain these findings.

What is interesting here is that the HEI made great efforts on improving communication regarding SD in the period between 2006-2010, by providing the resources and organising PD. These turned out to have a positive impact on the visibility of different SD initiatives. However, a lack of focus on communication in the subsequent period in time seems to take away all the work and effect from previous efforts. The assessments itself indicated a growing awareness on SD as a topic in general as well as on the specific initiatives taken within that HEI.

5.3. Self-determination

In the Debate Cafés

Ecocampus developed the Debate Cafés for HE students and educators. The method is based on the World Café method, a simple, effective and flexible format for hosting large group dialogue that can be modified to meet a wide variety of needs. The aim of the Debate Café is to challenge the participants to have a dialogue on (specific aspects of) SD and to think about their engagement as a

future professional and citizen within a society in transition. A Debate Café can get organised in the context of a specific course, amongst students or amongst the educational staff. The format of the Debate Café provides a whole range of short movies that introduce different themes, accompanied by a list of questions.

This approach gives autonomy to the organising educator to incorporate his or her own perspective, and simultaneously encourages the educator to reflect on which aspects of SD are most relevant for the students in the targeted study program. During the Debate Café, the participants get stimulated to think and talk about the topics covered in a creative and autonomous way. As such, the Debate Cafés provide an answer to some of the barriers to change dealing with the lack of awareness, such as the lack of interest and involvement, and SD that is often not considered relevant in relation to their courses and their future profession.

In the staff development trajectory for educators (HEI level)

The example of the individual HEI provided here is the ongoing PD trajectory. This trajectory started in 2013, with a staff induction for all educators, in general topics of sustainability. External experts were invited to provide lectures on the bigger picture of sustainability, such as climate change, the energy debate, responsibility of enterprises, etc. This approach enabled the educators to make the connection between their own Department (Business Studies) and the wider societal context of sustainability. In the second phase, specific SD topics in business context were focused upon, such as corporate social responsibility and business ethics. In a third phase, specific sustainability topics in relation to the in-house business management study programs were focused upon, e.g. marketing, accountancy.

The PD trajectory thus provides an approach starting from the very broad bigger picture, over the context of business and enterprise, towards the specific context of the own study programs. This enables the educators to frame their own efforts into the context of HESD and sustainability. It is an example of gradually providing the necessary conditions for empowerment and self-determination within a change context.

6. Discussion

In this section, we revisit the results of the analysis of PD initiatives and connect them to the insights from the literature on change management and human factors approaches. The specific focus on empowerment enables us to frame the results within the current HESD literature, focusing on the many barriers for change towards sustainability in HE.

The lack of awareness and acknowledgement of SD are seen as major barriers to the operationalization of sustainability competences (Verhulst & Lambrechts 2015), also referred to as the lack of commitment (Pittman 2004). PD could provide the necessary conditions to raise awareness and motivate individuals to commit to the integration of sustainability competences. We see this in the thematic learning networks initiated by Ecocampus and the project based initiative at the HEI described in section 5. However, PD initiatives should always be clearly framed within a broader context of change towards sustainability. If this is not the case, the effect of the PD initiative will be minimal, e.g. in the case of an isolated workshop without considerable connection to the broader context. This is specifically what is referred to as the connection to a shared vision of the future (Pardo del Val and Fuentes 2003; Pittman 2004).

Providing resources and information proves to be an inevitable part of PD, as individual educators often lack the specific and specialised knowledge to implement sustainability competences. It could enable tackling some of the barriers for change as described in the literature, such as the lack of knowledge regarding sustainability issues (Lozano 2006; Verhulst & Lambrechts 2015). In this sense, providing resources and information can avoid resistance against change (Kotter & Schlesinger 2008; Pardo del Val and Fuentes 2003). The publications provided by Ecocampus are a good example of translating the often broad and theoretical concept of competences into tangible and practical resources for HE stakeholders. Information on the actual use of these resources in Flemish study programs is however lacking, so it is not clear what the effect of them is in the everyday practice in curricula. Again, resources and information can only be meaningful if framed in a larger context of sustainability transition and systemic organisational change. Furthermore, the example of the AISHE audits, shows the importance of creating momentum and awareness among stakeholders. Nevertheless, the case of the HEI also showed that this focus on information and resources should be continuously in order to enable systemic change.

Another important barrier referred to in HESD literature is the concept of "academic freedom", in which university educators cannot be forced to integrate a concept like sustainability (Lozano 2006; Verhulst & Lambrechts 2015). This barrier is closely connected to the concept of self-determination. The issue of whether to encourage specific types of sustainability education is referred to as the paradox between normative approaches, comprising a risk of indoctrination, and pluralistic approaches, comprising a risk of relativistic interpretations (Jickling & Wals 2008; Van Poeck et al. 2016). The analysis of the PD initiatives shows the challenge in addressing issues of autonomy while providing concrete guidelines which enable educators to start working with sustainability competences without forcing or indoctrinating them. This is in line with the findings in change management literature, referring to the importance of engagement of stakeholders (Adams 2003) and autonomous regulation (Strauss et al. 2009).

In general, the many examples of PD initiatives initiated by Ecocampus and the HEI described in section 4 and 5, provide further guidelines to enable a successful and systemic integration in HEIs, i.e. (1) framing the initiative within the broader context of change towards sustainability; (2) continuous attention towards information and resources, including changing demands on such resources; (3) considerable attention towards autonomy, providing specific and tangible guidelines without comprising the risk of indoctrination. In recalling Badley's (1986) appeal for the teacher as change agent, the role of PD in providing educators the necessary surroundings and abilities to integrate sustainability cannot be underestimated. Nevertheless, critical questions remain regarding the context in which such processes are initiated. If change processes and PD initiatives are started within an old and conservative context, it comprises the risk of losing support from stakeholders. In other words, PD initiatives without considerable connections to institutional commitment, a shared vision of the future, accountability and reporting, participatory management structures and (external) partnerships (Adams 2003; Pittman 2004) will be less successful in bringing systemic change.

7. Conclusion and recommendations

This article highlights the importance of connecting PD initiatives to the aspects of organisational change within HE. The different initiatives in the Flemish context and the longitudinal overview of the HEI, reveal a focus on sustainability competences and attention towards organisational conditions as well. From a change management perspective, human factors are an important aspect

within change processes, whereby empowerment and involvement of employees are important drivers. PD initiatives show relevant opportunities to enhance empowerment, and to strengthen the integration of sustainability competences in practice. Furthermore, an important asset is that empowerment diminishes resistance against change. The different examples of PD initiatives in this article indicate that they already incorporate elements of empowerment. This in turn can have an effect on the success of the initiative itself, and the wider integration process of SD in HE.

It is of utmost importance to frame PD for sustainability into the organisational context, and even within the bigger (societal) picture of sustainability. The staff development trajectory in the HEI focused upon in this article, providing such a bigger picture and interlinking between the in-house study programs and the societal context makes such connection, as well as the Ecocampus guidelines on sustainability competences framed within a bigger picture of democracy and citizenship. As a recommendation for further research, but also the organisation of PD initiatives in HE, additional research that focuses on the effect of empowerment on PD initiatives could further support the successful and structural integration of such initiatives, and also strengthen the integration of sustainability in the organisation. Specific attention should thereby be oriented towards the effects of initiatives over time, as a change process needs continual attention and efforts in order to have long-lasting effect.

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