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RÉKA MATOLAY – ANDREA TOARNICZKY – JUDIT GÁSPÁR

RESPONSIBLE RESEARCH AND INNOVATION (RRI) IN HIGHER EDUCATION (HE) PRACTICE: RRI AS A TOOL FOR RESEARCH, REFLECTION, AND CURRICULA INNOVATION

Our special issue provides insights into how the principles of Responsible Research and Innovation (RRI) can fertilise our educational practices in business and management higher education. The articles in the issue analyse teaching practices from various fields of business and management through the lenses of RRI and take us to Bachelor's, Master's and MBA levels of HE. As an introduction to this set of conceptual and research articles, we are providing a brief overview of RRI and a conceptual framework of pedagogical approaches as well as a comparative outline of the articles.

RRI principles

RRI receives significant attention in the fields of science policy and academia – research and education – alike. Its elements are rich and have a long history, though its framework is still relatively new and changing. With regard to its diverse definitions, two sources are most often cited. Von Schomberg (2013) proposed RRI as 'a transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view to the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products (in order to allow a proper embedding of scientific and technological advances in our society)' (p. 63). Stilgoe et al. (2013) suggested a broader approach to RRI by introducing it as 'taking care of the future through collective stewardship of science and innovation in the present' (p. 1570). The current EU approach highlights that RRI 'is an approach that anticipates and assesses potential implications and societal expectations with regard to research and innovation, with the aim to foster the design of inclusive and sustainable research and innovation' (EU Horizon 2020 Portal, n.d.).

From our special issue point of view, for the interpretation of RRI, the requirements and principles with regard to the research and innovation process and output are more essential than the overall definitions. There are two sets of principles that have been introduced to capture the responsible nature of research, development and innovation (R + D + I). The first set applies to the research process and was entitled competencies by one of the first H2020 RRI projects (RRI Tools, 2016), although the elements were introduced earlier. Participants in the R + D + I processes as well as the R + D + I process itself shall be characterised by anticipation, reflexivity, inclusion and responsiveness, 'a framework for raising, discussing and responding' to questions 'the public typically asks scientist' out of societal concern (Stilgoe et al., 2013, p. 1570). These dimensions were later extended to include diverse and inclusive, open and transparent, anticipative and reflective, and responsive and adaptive to change.

To achieve the beneficial – sustainable, ecologically and socially desirable – outcomes of research and science, considerations have been primarily suggested to policymakers. Over time, the number of these key considerations reached eight: inclusion, gender equality, science education, ethical considerations, open access, governance, sustainability and social justice. They have now been reduced to the first five on this list (EU H2020 Portal, n.d.).

These two sets of principles formed the basis of the process we carried out at Corvinus University of Budapest in the framework of the EnRRICH project. 'Enhancing Responsible Research and Innovation in Curricula of Higher Education' (EnRRICH) was a European Commission (EC)-funded project that 'approaches the task of enhancing RRI through HE, at both Bachelor and Master levels within a European context, not solely as a scientific and technical endeavour. Rather, it recognises that this is a complex task that can be related to diverse educational, political, and practical contexts that requires ethical considerations and that can challenge routines in Higher Education practices' (Tassone et al., 2017, p. 286). Therefore, we did not look at the teaching of responsibility to researchers but at how the principles of responsibility are present in our various teaching practices. Our experience suggests that the application of RRI principles in curriculum development sheds light on new, hidden or implicit contents of our courses and directs our attention to the assumptions underlying the role of educators and the practice of education. Consequently, we are providing a brief introduction to various pedagogical approaches in relation to the roles of key stakeholders – students and educators – of HE. These pedagogical stances can later be detected in the articles in the issue as well as in the process and output RRI principles and the ways in which the authors introduced them to curriculum development and their teaching practices.

Pedagogical approaches

The assumptions underlying the practice of education may be uncovered by looking into the various pedagogical approaches (Tassone & Eppink, 2016). The educator might be aware of the practiced approach and take conscious and consequent decisions along the learning process, or s/he might be only partially aware of how the practice fits the desired educational approach. Tassone & Eppink (2016) organised the approaches along an axis defined by the role of the educator and the student in the learning process.

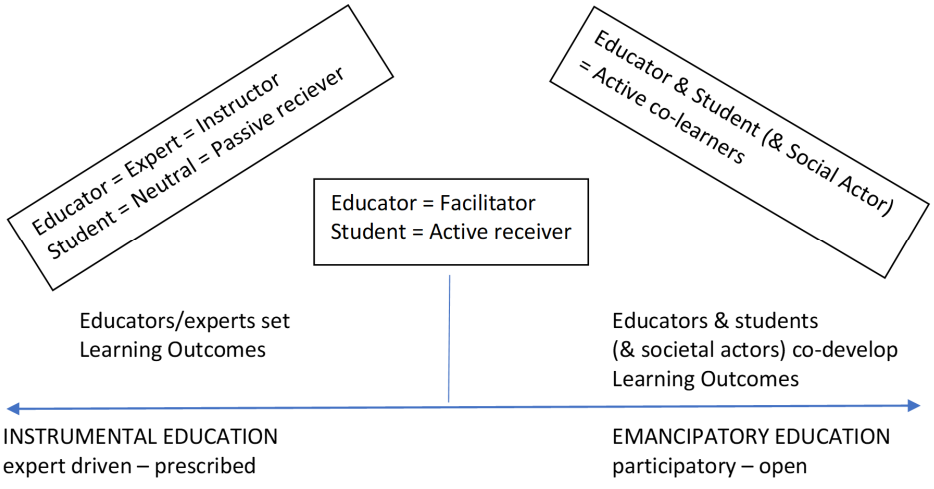
Our aim of uncovering the assumptions underlying the different pedagogical approaches complements their discussion; they focused on fitting methodologies and outcomes: on what is done during the learning process rather than on why it is done. We agree with Newton (2003, p. 330) who stated that "behind the differing applications and methods is a deeper debate; the …. (styles) reflect different beliefs about people, society, relationships, communication, and the purpose of education'. These can be translated into the dilemma of whether it is what the educator does or how s/he does it that teaches the student. We argue that these two cannot be separated; thus, in addition to the focus on 'what', the 'how' should be brought into awareness.

The starting point for this is the axis (Figure 1) offered by Tassone & Eppink (2016). The authors describe the two endpoints as instrumental and emancipatory education. Instrumental education defines educators as experts, the learning process is driven by the experts, the outcomes are prescribed and the students are neutral or even passive receivers of information (Tassone & Eppink, 2016). This description suggests a rather transmissive and predetermined educational process in which the educators are taking an authority position (Jickling & Wals, 2008). According to the emancipatory approach, the educator and student are equal partners in a co-learning situation. They assume mutual participation and continuous change from all parties involved (Tassone & Eppink, 2016). At the middle of the axis, the educator is described as a facilitator of the learning process and the student as an active recipient.

Tassone and Eppink (2016) depicted these three approaches as defining points on the educational axis and suggested that further approaches possibly exist along the axis. The writings of Newton (2003, 2014) and Barrow (2009) may further our understanding of the educational axis. They agree with the idea that the different pedagogical approaches can be organised as a continuum, and they fill the axis with further educational approaches which provide a more detailed understanding of the continuum; they also suggest the possibility of combining the pedagogical approaches in practice. Newton (2014) described six different pedagogical approaches – dogmatic, liberal, technological, progressive, humanistic and radical – highlighting that the difference lying at the core is related to the purpose of education. The first three approaches focus on the outcome of the educational process; however, the learning process is different in its nature. Liberal education emphasises thought and reason and educates the intellect, aiming for a critical thinker, while technological education is organised around standards and defines competences to be reached. The progressive and humanistic focus is on the educated as a whole person, and his/her development towards their own best 'wholeness' is the aim. Progressive education does this through problem solving and skill development, but its aim is to facilitate individuals to take personal responsibility for their decisions and actions. Humanistic education does this through personal development and aims at personal growth and wholeness. In both cases, the educator is facilitating and mentoring the process rather than controlling it, and he/she is an equal partner with the educated person. The radical school has at its heart the change itself wherein the educator and educated can act and change by reflecting on their own experience. All participants are equal partners, and their change is embedded in their relationship. The

Figure 1.

Role of educator and student in the learning process



Source: Tassone & Eppink (2016, p. 20)

instrumental approach may be linked with the first three approaches as long as the emancipatory resembles the radical approach, thus the six schools can offer us a deeper and continuous understanding of the educational axis.

Introduction to the articles

All authors of the special issue are in a double role: they are educators as well as researchers reflecting on their educational practice. In most articles, RRI principles also serve a double purpose. A selected set of RRI process and output principles is not only employed in the teaching and/or the development of the course and analysed here but also applied in the research designs. The educators' reflections through the lenses of RRI are a conscious step towards a deeper understanding of the potential impacts of RRI on the life of students and local communities or even on the wider environment, that is, society as a whole. The reflections also allow for an understanding of their roles and the – often mixed – pedagogical approaches they follow.

Educational practices at Corvinus University of Budapest, University of Szeged and – via an elective block-seminar – University of Passau are covered here. In the course of editing the special issue, authors participated in workshops to reinforce shared knowledge of their individual initiatives. Thus, not only individual summaries of articles are presented here, but also a comparative table of aims, methodologies and outcomes. (Table 1.)

Judit Juhász, György Málovics and Zoltán Bajmócy introduce their service learning course and give evidence of how a single university project can bring long-lasting changes in the life of local communities. By creating spaces for interventions of co-creation, transformation and reflection, student awareness of societal issues is raised and student actions are achieved. The case study reveals the high and caring level of involvement of educators both on the professional and personal sides.

Gabriella Kiss, Tamás Veress and Alexandra Köves emphasise the importance of experiential and transformative learning in the HE context and the need for collaborative work, dialogue and discussions in a reflection process. The

Table 1.

Comparative introduction to the articles of this issue

	Juhász, Málovics & Bajmócy	Kiss, Veress & Köves	Neulinger	Zsóka & Ásványi	Fazekas & Beck-Bíró	Kozma
Courses	Local environmental and social problems, civic solutions	Decision techniques (BA), Degrowth (MA)	Theory of Consumption and Consumer Behaviour (MA)	Corporate sustainability and CSR (block seminar)	Organisational Development (MA)	Business Economics (BA, MBA)
Research focus	to explore social impacts of service learning	to teach sustainability in business school	to develop curriculum and reflection through RRI	to measure effectiveness of course on responsibility	to make course and practices as educators and researchers more responsible	to make students understand the role they can play in addressing major societal challenges
Research methodology	case study	conceptual paper with illustrative cases	survey	mixed methods research	case study	action research
RRI focus	co-creation, reflexivity, transformation	sustainability, reflexivity	reflexivity, inclusiveness	sustainability, reflexivity	inclusivity, reflexivity, responsible, responsive, transparent	RRI principles
Pedagogical foundations	civic responsibility of students, active citizenship	transformative education	inclusive education	education for society, educating whole person	humanistic psychology and pedagogy	critical pedagogy
Learning concept in focus	service learning, community engagement	experiential learning	critical discourses for reflexivity, autonomy	reflective learning	student-centred learning	in-class discussions of RRI principles
Key messages	professional, moral development, institutional change, community building	critical approach to business school's mainstream educational practices	by putting inclusiveness as focus, improvement in students' reflexive thinking can be achieved	personal commitment and credibility of the teaching faculty is crucial	a critical mirror for all actors to make higher education collaborative	improvements in student engagement, creativity, critical thinking, and conscious self-awareness provide the foundation for HE of lasting value

Source: own compilation

authors use a critical voice to describe the difficulties of implementing the teaching of sustainability in a business school and conclude with a strong dedication to teaching sustainability despite the less supportive environment.

Ágnes Neulinger employs two RRI process principles – reflexivity and inclusion – to assess the educational process of a marketing course. She presents quantitative research in which students evaluate their own competency development through an online survey. Her RRI-driven research suggests that inclusive methodologies reinforce reflective thinking even in a classroom setting.

Ágnes Zsóka and Katalin Ásványi discuss the effectiveness and impacts of utilising RRI tools as teaching methods in a one-week long, elective block-seminar on corporate responsibility. Their mixed method research includes Q-method to assess changes in responsibility-related preferences of students and semi-structured interviews to explore the perceived impacts of the course on student skills and competencies.

Nóra Fazekas and Kata Beck-Bíró focus on the student-educator relationship in their self-reflective research and share their understanding of how lecturers lose touch with students and become less responsive, despite innovative, benevolent, student-centred and value-driven educational and pedagogical principles. The authors discuss how RRI principles can contribute to meaningful course improvement at both curricular and social levels by fostering dialogue, genuine cooperation and shared responsibility.

Miklós Kozma, in his loosely structured action research, offers a learning space for students as a series of discussions to find their role in addressing major societal challenges as future business leaders. In these RRI principles-driven discussions, he highlights the relevant and inspirational moves to boost critical thinking and self-reflection which may lead to more inclusive and responsive practices. He concludes his paper with a few recommendations and implications for university management to foster the responsive co-creation of knowledge.

This special issue could not be complete without the professional, open and inspiring support of our colleagues who participated in writing, reflecting and sharing their learning journeys. Special thanks to the coordinating team of this Journal for their support and guidance.

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JUDIT JUHÁSZ – GYÖRGY MÁLOVICS – ZOLTÁN BAJMÓCY

CO-CREATION, REFLECTION, AND TRANSFORMATION: THE SOCIAL IMPACTS OF A SERVICE-LEARNING COURSE AT THE UNIVERSITY OF SZEGED

KÖZÖS ÉPÍTKEZÉS, REFLEXIÓ ÉS ÁTALAKULÁS: A KÖZÖSSÉGI ÖNKÉNTESSÉG KURZUS TÁRSADALMI HATÁSAI – A SZEGEDI TUDOMÁNYEGYETEM ESETE

This paper highlights three aspirations, which are shared by the diverse concepts and practices of responsible research and innovation (RRI): co-creation, reflexivity, and transformation. The authors analyse a service-learning (SL) initiative at the University of Szeged, Hungary, based on the model by Chupp and Joseph (2010). This provides a typology of SL practices and identifies four main approaches to the social impact of SL: traditional, critical, social justice oriented, and an institutional change-focused approach. The authors also use this model to analyse the effects of their initiative with regard to the RRI principles of co-creation, reflexivity, and transformation. They provide evidence that their SL course may reach beyond its traditional (student-learning-based) effects in the Hungarian context, and embrace social justice and critical approaches. While the authors also found certain instances of institutionalisation, embedding critical SL into a Hungarian university and inducing significant institutional transformation seems to be a long way away.

Keywords: **responsible research and innovation (RRI), service-learning (SL), critical approach**

Jelen tanulmány a Szegedi Tudományegyetemen folyó közösségi önkéntesség (service learning) kurzus társadalmi hatásait elemzi Chupp és Joseph (2010) modelljét felhasználva, amely a közösségi önkéntesség gyakorlatának társadalmi hatása alapján négy fő megközelítést (hagyományos, kritikai, társadalmiigazságosság-orientált és intézményiváltozás-orientált) különböztet meg. Ez alapján, valamint a felelősségteljes kutatás és innováció (responsible research and innovation – RRI) koncepciójának három alapelve, a közös építkezés (co-creation), reflexivitás és átalakulás tükrében reflektálnak a szerzők kurzusuk társadalmi hatásaira. Eredményeik alapján kijelenthető, hogy hazai kontextusban a kurzus és általában a közösségi önkéntesség hatásai túlmutatnak a hagyományos (egyetemi hallgatók tanulására fókuszáló) megközelítésen, és kiterjednek a társadalmi igazságossági és kritikai megközelítések által hangsúlyozott hatásokra is. Ugyanakkor, bár a hatások közt megjelennek az intézményiváltozás-orientált megközelítés egyes elemei, a kritikai közösségi önkéntesség hazai egyetemi működésbe történő beágyazása és az RRI elvei mentén történő intézményi (egyetemi) átalakulás, még a vonatkozó szándékok megléte esetén is, hazai kontextusban bizonyosan hosszú időt vesz igénybe.

Kulcsszavak: **felelősségteljes kutatás és innováció (responsible research and innovation – RRI), közösségi önkéntesség (service learning), kritikai megközelítés**

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'Responsible research and innovation' (RRI) is rooted in the understanding that the current operation of research and innovation (R&I) systems do not provide adequate answers to acute environmental and social challenges.

RRI is an open-ended concept, often used as an umbrella term (Bajmócy et al., 2019). Its claim for transforming the R&I system has some core elements. First, it calls for *co-creating change* with actors who are often neglected by the current R&I systems (e.g., citizens, civil society actors). According to Stilgoe et al. (2013, p. 1570) RRI is 'taking care of the future through collective stewardship of science and innovation in the present'. Inclusion and/or deliberation are thus core to the concept of RRI (Bajmócy & Pataki, 2019; European Commission (EC), 2012): in the European Union the term RRI has been taken up as part of the 'science with and for society' discourse (Owen et al., 2012; de Saille, 2015).

Secondly, according to *reflexivity,* RRI is a call to confront ourselves with our assumptions, and to integrate ethical reflection and a focus on social impact into the processes of the R&I systems (Stilgoe et al., 2013). Third, *transformation* means a call for learning, researching, innovating differently (although the concept remains somewhat unclear regarding the exact meaning of 'different'). This implies that the 'uptake' or the 'mainstreaming' of RRI is central in the RRI discourses.

It has long been argued that innovation systems are complex, consisting of various interdependent actors, processes and institutions (Edquist, 2013; Nelson, 1993). Interactive learning is key to the operation of these systems (Lundvall, 1988). It is a multi-actor process, which transgresses spheres and organisational boundaries. RRI's claim to transform the operation of the R&I systems therefore has consequences for the various building blocks, actors and processes of the innovation systems. It is not sufficient to focus solely on research actors and processes, and the actors and processes of education and its interdependence with research should also be scrutinised.

This paper makes its contribution to the RRI discourse by connecting it to the above core aspirations of RRI (co-creation, reflection and transformation). We analyse a service-learning course at the University of Szeged, Hungary, and its social effects. Service-learning (SL) is an approach that links academic coursework with community-based service (Butin, 2006a). There has recently been an increased interest in the effects of SL with regard to social justice and institutional change (Chupp & Joseph, 2010; Marullo & Edwards, 2000).

Chupp and Joseph (2010) provide a typology of SL practices. They identified four main approaches to SL social impact: traditional, critical, social justice-oriented and institutional change-focused approaches. They concluded that most SL practices confine their intended effects on student learning by prioritising the outcome of providing experience and exposing students to a real-world context.

We demonstrate and analyse an SL case which has two distinctive features. First, critical reflection on social justice, and the endeavour to bring about social change, as well as institutional transformation, have been our core aspirations from the beginning. Second, the course emerged as the bottom-up cooperation of a handful of teachers; SL was not an identified strategical direction of the university.

Our aim is to connect our case to the typology of Chupp and Joseph (2010) and to assess the effects we have made so far in line with their typology. We examine the difficulties and leverages of an SL approach with the aim of inducing social change and institutional transformation in a higher education context in Hungary.

The paper is structured as follows. We begin with an introduction to SL and its diversity, based on the model by Chupp and Joseph (2010). We then introduce our case and methodology. This is followed by the empirical results of our analysis and our conclusions.

The concept of service-learning

There was a wave of innovation in higher education in the late 1960s and early 1970s, based on the applied philosophies of education grounded in experiential and emancipatory approaches to learning (Kezar & Rhoads, 2001). It became increasingly important that students (1) gain real-life experience during the class; (2) personally experience what they learn about in theory; (3) participate actively in shaping the classes and the curricula; and (4) take responsibility for their own learning processes.

Interest in SL is a response to three frequent critiques of conventional academic teaching: the lack of (1) curricular relevance, (2) faculty commitment to teaching, and (3) institutional responsiveness to the larger public good (Kezar & Rhoads, 2001). Practical applicability and usefulness also support commitment towards non-conventional, non-frontal learning, and more "experience-rich", experimental forms of education that are directly related

to the "public good". University cooperation with civil society organisations (CSOs) is also seen as a public interest (in certain countries) (Butin, 2003; Kezar & Rhoads, 2001).

There are numerous definitions of SL in the scientific literature. According to the National Society for Experiential Education, service-learning is *"any carefully monitored service experience in which a student has intentional learning goals and reflects actively on what he or she is learning throughout the experience"* (Furco, 1996, p. 2).

According to Ballard and Elmore (2009, p. 70), service-learning *"is a type of experiential learning that engages students in service opportunities within the community as an integral part of a course. Service-learning enhances a 'traditional learning' course by allowing students the opportunity to link theory with practice, apply classroom learning to real-life situations, and provide students with a deeper understanding of course content."* As the above definitions show, SL:

- is a non-conventional and non-frontal form of education, where students can leave behind their conventional passive and subordinate roles as "receivers",
- supports experiential learning,
- is a university course that has credit-value for students,
- is a university course where students participate in the activities of different CSOs during their course,
- includes activities that are (1) relevant for students concerning their academic studies, and (2) attempt to contribute to the solution of local/global social/environmental problems,
- includes regular and structured reflection on the experience of students and related theoretical knowledge with professional university teachers serving as mentors, and
- builds bridges between the university and the local community, and in this way also contributes to university community engagement and social responsibility.

SL as responsible university practice

Universities often see SL as a tool that enables students to practically experience and assign meaning to the theoretical content of university courses (Johnson, 2000). In this way, a direct connection is made between theory and practice, cognitive and emotionally focused learning, and also between the university and the community (Butin, 2003; 2006b). Statistical data manifests in the form of real people, processes and actions, which, in exchange, later constitute a basis for theoretical (classroom) thinking and reflection (Johnson, 2000).

In most cases, learning and community service are equally important within SL. All participants are supposed to profit equally from the process (Furco, 1996; Johnson, 2000). Participants (1) have to show respect for the circumstances, perspectives and lifestyles of the community involved (Johnson, 2000), and (2) an academic context supporting the positive reinforcement between community service and learning is also needed (Furco, 1996). Community service should thus be relevant concerning both academic content and community needs (Butin, 2003).

Well-prepared SL courses are supposed to have significant positive outcomes for participants. Conventional roles within higher education are transformed into more egalitarian dynamics, in which students are active agents who take responsibility for their own actions and learning, thus realising their own capacities. SL thus supports the active citizenship and civic responsibility of students, and social equity in general (Astin et al., 2000; Butin, 2003).

SL might also have a positive effect on the quality of learning. It supports students in better remembering theories and knowledge, and applying these more efficiently in practice (Johnson, 2000). According to students, voluntary experience supports their deeper understanding of theoretical course material compared to conventional classes, also enhancing enthusiasm and commitment towards learning and the class itself (Astin et al., 2000; Ballard & Elmore, 2009).

Another positive effect of SL is that students (1) commit themselves to activities, and (2) meet people that they otherwise would not – such "border crossing" can be physical, social, cultural or intellectual, and provides students opportunities to get to know/become immersed in a reality previously unknown to them (Butin, 2003). On a larger scale, SL might also support universities and their faculties to become more connected to their direct and wider socio-environments.

SL may also support students in dispelling stereotypes they may hold prior to this interaction; it also supports critical thinking and respect for cultural diversity (Astin et al., 2000; Ballard & Elmore, 2009). Direct experience also affects the perspective of students, and thus it supports a meaningful, deep understanding of complex social processes (Ballard & Elmore, 2009; Johnson, 2000).

Certain studies have also reported improved cognitive results for students (Butin, 2003). Frequent reflections in writing (diaries, essays) as vital course components improve writing skills (Astin et al., 2000). Participation in community service and activities, and related reflection supports communication and leadership skills, and activities and consciousness concerning carrier choices (Astin et al., 2000; Ballard & Elmore, 2009). SL also catalyses faculty research and scientific work by introducing new problems, ideas, methods and connections to both students and university (research) staff (Johnson, 2000).

Diversity of SL

The actual effects of SL depend on its practical realisation. Opportunities for this are clearly diverse (Chupp & Joseph (2010) (Table 1)).

Traditional SL focuses primarily on student learning as a *"pedagogical process whereby students participate in course-relevant community service to enhance their learning experience"* (Chupp & Joseph, 2010, p. 193). *Social justice SL* is "*designed to expose students to the root causes of social problems, structures of injustice and inequity that persist in society, their own privilege and power, and their potential role as agents of social change"*

Table 1

Four Approaches to Service-Learning Impact

Service learning approach	Focus of impact	Summary definition	Priority outcomes
Traditional service learning	Students (learning)	Community service that enhances academic learning through student action, reflection and application	Service experience and exposure to a real-world context with better retention and application of course content
Social justice service learning	Students (learning and moral development)	Community service that integrates theory and practice to foster critical thinking and moral development in students	Deepen student moral and civic values and student potential and commitment and change agents
Critical service learning	Students and community	Service learning that promotes critical consciousness among students and community members who together seek meaningful social change	Redistribution of power, more equitable and mutually beneficial relationships between students and community members, social change action
Service learning with institutional change	Students, community and university	Service learning as an opportunity to examine and change institutional structures and practices	Institution-wide reorientation toward more equitable and mutually beneficial relationships between the university and the community

Source: Chupp & Joseph (2010, p. 192)

(Chupp & Joseph, 2010, p. 195). Contrary to these approaches, *critical SL* emphasises the principle of *reciprocity* and aims to generate more lasting social change for the community and its members. Finally, *service-learning with institutional* change also explicitly aims to influence the attitudes, behaviours, and future roles of entire academic institutions (in our case: universities) by focusing *"on the way that institutional structure, operations, and subculture can often promote the very social inequities that SL aims to help students confront"* (Chupp & Joseph, 2010, p. 196). In this approach service-learning thus aims to support the transformation of higher education (institutions) into *"agents of social transformation"*.

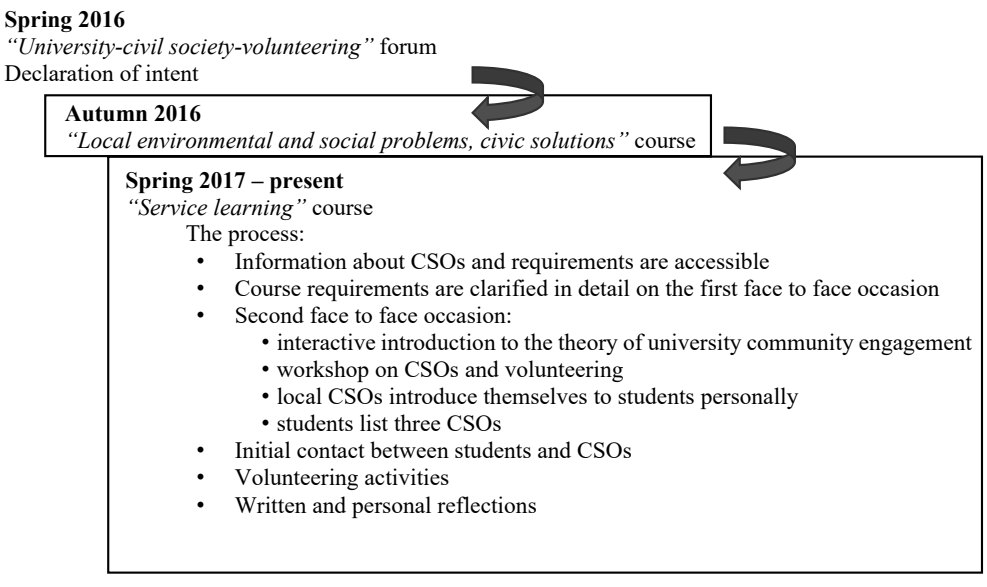
We reflect below on the *service-learning initiative* (including a *service-learning course*) that has been ongoing at the University of Szeged since 2017 February. We evaluate this bottom-up service-learning initiative based on the aforementioned typology and reflect on the potential achievements, shortcomings and possible tensions of bottom-up SL initiatives in a Hungarian higher education context.

The case: A bottom-up service-learning initiative at the University of Szeged

A few university employees (referred to as teacher-mentors below) started a bottom-up initiative in early 2016 to

Figure 1

Actions of the bottom-up service-learning initiative at the University of Szeged



Source: Own construction

enhance and give focus to community engagement activities at the University of Szeged (*Figure 1*). The idea was first expressed in a narrow circle of teacher-mentors based on professional and personal relations, later expanded through professional relations within the university, and resulted in regular joint meetings and conversations. Several community engagement activities had already been present in our lives, in the form of individual and/or small group initiatives without any networking (cooperation, coordination) between us. In order to improve resources, knowledge and community connections, networking activities were started, also involving local civil society actors. The focuses of the initiative were defined as supporting (1) local voiceless/marginalised social groups, and (2) environmental sustainability initiatives.

The first major step was the organisation of a forum entitled "*University-civil society-volunteering".* We, as university stakeholders introduced our ideas while a few local CSOs introduced themselves and their activities to each other and the interested local public. We also created a "declaration of intent" containing our aims and values.

A major step was the launch of a course (entitled *"Local environmental and social problems, civic solutions")* in autumn 2016, which was open to all university students studying at any of the 13 faculties of the university. This course provided opportunities for local CSOs working on social and/or environmental issues to introduce themselves to university students. Based on student and CSO feedback we concluded that: (1) students were interested in more active participation in CSO activities, practical field experience and getting closer to real, living communities and social phenomena, while (2) CSOs are in need of voluntary work. We therefore decided to transform our work through the approach of service-learning.

The service-learning course

The service-learning course started in spring 2017 with the coordination of eight university teacher-mentors. During the semester, usually 6-8 lecturers with diverse educational and research backgrounds (including sociology, pedagogy, educational theory, economics, philosophy, psychology, cultural theory, and social work) cooperate within the course. Teacher-mentors play an organising role in the course and serve as mentors for students: facilitating cooperation among student groups and CSOs, and providing reflection opportunities for students, including "expert" knowledge and feedback. CSOs help students to gain real-life experience about social and environmental issues by involving them in their everyday activities, while gaining significant volunteer support in exchange. The process of the course is the following:

1. All CSOs send data sheets about themselves, their activities and needs concerning voluntary work. These data sheets are made accessible for students prior to the actual start of the course. Opportunities for students are diverse. They can volunteer for organisations focusing on child and adult poverty: afternoon schools that support poor, and often stigmatised Roma children; a network, which supports children through individual mentoring; initiatives that focus on homeless and other extremely poor people; disability and health-related associations: the charity of the local paediatric psychiatry clinic; CSOs of blind and visually impaired people; deaf and hard of hearing children; people suffering from multiple sclerosis; people living with physical or mental disability; and artistic community centres.
2. Transparency is especially important at this point. First, students from all over the university, and with diverse backgrounds, are allowed to apply. Second, the course is non-regular in its schedule and other requirements. As suggested in the SL literature (e.g., Ballard & Elmore, 2009), we therefore provide a highly detailed course description containing exact tasks, time requirements and so on, in order to reduce student stress and support better student time-management, as a flexible time-requirement, in addition to its advantages, is also a challenge for numerous students.
3. A student's personal attendance starts with two face-to-face occasions. After clarifying course requirements in detail, the second, so called "opening" occasion begins with an interactive introduction to the theory of civil society and university community engagement, including the basics of service-learning. This part is followed by a short workshop on the social role of CSOs and the main features of volunteering (cooperation, communication, time management etc.). Finally, local CSOs introduce themselves to students personally, which is followed by questions and answers, and teamwork in a world-café setting. As a result, students list three CSOs that they prefer for their volunteering.
4. Teacher-mentors appoint students to the CSOs based on their preferences during the following week.
5. Teacher-mentors facilitate the initial contact between students and CSOs. Students and CSOs agree on the frames of cooperation in a decentralised way based on the previously agreed and transparent guidelines. The most important general criterion is that the amount of expected voluntary work within the framework of the course is at least 20 hours per student.
6. During the semester, students fulfil their volunteering activities at CSOs. They also have to prepare two written reflection documents and take part in one oral, face-to-face group reflection together with other students and mentors. This latter serves to discuss experience, dilemmas, problems and so on. Mentors also aim to provide feedback for students, to facilitate reflection.
7. At the end of the semester students present their experiences in small groups (students who volun-

teered for the same CSO constitute one group) in front of all course participants (students, teacher-mentors, and CSOs) – creating a rather inspiring event.

Research methodology

Applying the SL method does not mean that all of its theoretical advantages are actually realised in practice. Whether these are indeed realised in our case is subject to continuous reflection. Applying the SL approach for us is therefore definitely not a "conventional" research process, but a process of reflective multi-actor cooperation, learning and development that serves meaningful social change. The current analysis is also part of this wider process, and serves to help us reflect on the strengths, weaknesses, development needs and opportunities of our work in a structured way.

We applied a constructivist approach and carried out ad-hoc qualitative analysis focusing on emerging themes and patterns, relationships and differences (Brinkmann & Kvale 2015, p. 268). The analysis had four main stages:

- First, we collected the interfaces and channels that serve as data sources about the effects of our work (see *"Information sources").*
- Secondly, we focused on the information content (explicit meanings) of these channels: the actual effects of the course (e.g., new partnerships, extent of participation etc.).
- Thirdly, we analysed implicit meanings based on the information content, according to the interpretations of the authors. We focused on the connections between, and reasons behind information, actual doings and events, also considering the wider context (antecedents, chronology, relationship among participants) of the process.
- Eventually, we fed back to the applied theoretical model based on our empirical results, and formulated our conclusions.

Information sources

We can distinguish four main channels of communication within the SL process that serve as information sources for the present analysis: (1) communication with students; (2) communication with CSOs; (3) communication among teacher-mentors; and (4) communication towards the public.

1. The pedagogy of SL rejects the conventional frontal model of education, characterised by one-way communication from the teachers (as the possessors of knowledge) to the students (in passive roles) (Butin 2003). Active communication with students is of outstanding importance within SL. Students share their experience four times during the semester in structured ways. These occur in the forms of written reflective essays (two occasions), small group discussions and a final presentation in front of all course participants. We also started a scrapbook album, which contains valuable feedback concerning the course, although in itself it does not serve as a surface of reflection. Teacher-mentors and the course coordinator (also one of the teacher-mentors) are also in continual contact with students via e-mail and the university's information system (e.g., in case students have questions, concerns etc.).
2. There is frequent communication between teacher-mentors and CSO representatives about the current state of the course, different activities and so on, both personally and via e-mail. We meet CSO representatives at least three times during a semester: on the opening occasion (where they introduce themselves to students), when students begin their volunteering, and on the final occasion of the course (where students present their experience). CSOs are thus just as active and influential participants of the SL course as students and teacher-mentors.
3. There is lively communication among teacher-mentors. Most teacher-mentors participate in the opening and closing occasions, and during the semester we communicate via our e-mail group, where plans, actualities, ideas, memos of personal meetings and so on, are shared. We also organise strategic meetings, usually at least once per semester. Decisions are made by consensus within this group.
4. Eventually, public appearances and events are also bases for reflection, and serve as feedback for us. These include press interviews, scientific conferences, and also the Facebook page of the SL course and initiative. This latter is used to share our activities and experience, pictures about events, and so on.

The effects of service-learning

In the present section of our paper we evaluate the effects of the SL initiative based on the model by Chupp and Joseph (2010) (see *"Diversity of SL"* and *Table 1*). In their model they propose that intentionally aiming for impact at three levels − on students, on the community, and on the academic institution (university) − might be key to achieving substantial and beneficial outcomes in any service-learning project. We found this model suitable in order to (1) categorise the effects of the SL course, which we reveal during our analysis; and (2) evaluate our own SL course in relation to the typology of SL offered by the model. We found this process useful in helping us to structurally reflect on the effects of our initiative so far, and it also supports planning for the future.

Table 2 summarises these effects in the present case. Such a categorisation of effects is to some extent necessarily arbitrary, since effects are interdependent and might be related to more than one category. Being aware of this, we still attempted to rate the experienced effects alongside the aforementioned categories.

Table 2

Categorisation of the effects of the SL initiative

Students (Learning and moral developments)	Community	University
Professional learning depending on the "match" between the student's training programme, the profile of the CSO and the expertise of the teacher-mentor Traditional SL	Cooperative, harmonious relationship among teacher-mentors **Critical SL**	Stronger bottom-up cooperation among university faculties **Critical SL/SL with Institutional Change**
Enhanced active, initiator roles of students concerning their university studies, their participation in opening occasions, meetings and reflection occasions Traditional SL	Widened and strengthened relationships among teacher-mentors and local CSOs **Critical SL**	Professional cooperation among teacher-mentors: joint events, invitations, roundtable discussions, facilitation, publications **Critical SL/SL with Institutional Change**
Students became more conscious and they actually applied to carry out community service and experience learning through volunteering Traditional SL	Smoother communication between students and CSOs **Critical SL**	Contribution to the formation of a local academic community (including CSO members as practical experts); cooperation, networking, knowledge sharing **Critical SL/SL with Institutional Change**
Most students become more and more committed to community service and local community needs during the semester Social Justice SL	Enhanced and developed communication among local CSOs **Critical SL**	CSO partners start cooperating with other university courses **SL with Institutional Change**
Enhanced openness to social problems and injustice, new experience as agents Social Justice SL	Teacher-mentors as resources for students regarding volunteering and local civic activities **Critical SL**	Enhanced institutional embeddedness of the course within the university **SL with Institutional Change**
Numerous students feel personal responsibility towards social issues and continue their voluntary work after the course Social Justice SL	Development of the online profile and community of the course **Critical SL**	Principles and values behind the SL initiative gain official recognition in at least one university faculty (also related to requirements concerning international applications, partnerships and accreditation processes) **SL with Institutional Change**

Source: Own construction based on the typology of Chupp & Joseph (2010, p. 192)

Effects on students

The most direct effect of the initiative is probably related to the participation and cooperation of students. *Traditional SL* is primarily focused on enhancing learning and professional experience (Chupp & Joseph, 2010). In our case, the extent of professional learning depends on the professional closeness of the training programs of participating students, the profile and activities of CSOs where they spend their voluntary period, and teacher-mentor expertise. The course is open to all university students at Bachelor's and Master's levels, and therefore students with diverse majors apply. The courses usually involve students in economics, kindergarten teaching, health education, social pedagogy, psychology, medicine, sociology, history, pharmacy and IT, but also with majors in biology, physics and mathematics. The teacher-mentors also have different competencies, and CSOs are manifold. Student experience concerning professional learning/development is therefore rather diverse. During written and personal oral reflections, many students confirm that they did not feel any professional development related to their majors. However, students often do not choose voluntary activities that suit their studies on purpose, as this is not expected within the course. Others choose according to their majors – they are obviously more likely to develop professionally.

> *"I think, I will surely be able to utilise this experience both personally and professionally. On the personal level, I think, all the people we meet affect and enrich us. On the professional level, we get to know their diseases [multiple sclerosis], but what is more important, them as humans. On the top of this, our communication and team leader skills improve."*

However, there are numerous direct effects for participating students, other than professional development. *"SL has become the principle mechanism for putting students in a more active and engaged role than that of a passive classroom learner"* (Chupp & Joseph, 2010, p. 193), which is an important factor for traditional SL as well. Our SL course is somewhat different from conventional university courses; for example, students have to play an active role from the beginning. They have to collect information about participating CSOs, actively participate and com-

municate during the opening occasion (where CSOs introduce themselves to students) and the reflection occasions. Students thus get used to being more active during their university studies. Numerous students participated in conferences, and in a short introductory film related to the course, beyond mere volunteering. Indeed, it was the student demand for an active course, which made us shift the original profile of the course to the SL approach.

"The fact that I didn't have to meet definite requirements, that I could organise my schedule, and what and how I would like them [children in an afternoon school] to teach/practice gave back my faith in my study area."

Feedback also shows that students become more and more conscious concerning their motivation for participation in community service and experiential learning, which is also crucial for traditional SL. It is a common experience at our university that students subscribe to freely elective courses without knowing their content precisely. Since these are not their main subjects, they often consider them inconvenient necessities. Something similar happened to the SL course initially; most applicants had no idea about the course when they subscribed, however, by now, almost all of the applicants clearly subscribe because of its declared aim: to carry out local voluntary work that meets community needs (of course, there are exceptions). The course is increasingly known at the university among students. Participating students explain it to their peers, and students are also informed about the course by university teachers, CSOs, or through the public Facebook site. Since autumn 2016, the number of participants has fluctuated in the following way:

- 2016 autumn – 25 students,
- 2017 spring – 38 students,
- 2017 autumn – 25 students,
- 2018 spring – 13 students,
- 2018 autumn – 69 students,
- 2019 spring – 33 students,
- 2019 autumn – 56 students,
- 2020 spring – 24 students.

It is not clear why only 13 students applied for the course during spring 2018. One of the reasons could be that at that time the title of the course (the first and probably most important thing student meet/see when picking up such open courses) used to be long and complicated and did not refer to course content. However, this has not been a problem in previous years. On the other hand, according to student feedback, it was also difficult to find the course among the numerous options for open courses, and especially to find it in the complicated university course registration system. The low number of students was probably due to technical and organisational reasons. At the moment, from an organising and pedagogical perspective, the optimal number of participants seems to be somewhere between 20 and 40. As the number of CSO partners has grown during past years, too few students would mean that we are not able to satisfy the "resource" needs of CSO partners. In this case the costs of participation for them might exceed benefits. On the other hand, having too many students on the course is a challenge for mentors because of their limited capacity. The same applies to CSO partners: it might be difficult (or even impossible) for them to meaningfully involve too many student volunteers at the same time.

Social Justice SL highlights social injustice, inequity and the active role of students in changing these beyond experiential and professional learning (Chupp & Joseph, 2010). In our case, at the beginning of the semester, students are relatively diverse concerning their motivation for engagement and participation. Some are enthusiastic about social phenomena and community services, others are curious about the forthcoming volunteering experience, while some just want to fulfil course requirements.

"It is important that we experience all the knowledge that we learn at the university in practice. We cannot expect that learning and listening to the theory automatically will enable us to utilise our knowledge, until we test ourselves in situations where we gain experience."

Regardless of the initial student motivation concerning course application, it is vital for us to provide useful experience, broad insightfulness and awareness about social phenomena for students, their significant role as actors, and to ensure that student and CSO expectations match as much as possible. It is not an expectation that participating students intend to "save the world". When students carry out small and practical tasks that are important and useful for the organisation that they volunteer for, and in the end all parties are satisfied, it makes a significant contribution to local civil society in itself, in our view. Of course, there are students who start with more ambitious plans and focus on broader community goals.

"I started with the aim of doing something good and useful. And I have totally experienced this feeling. On the top if this, I could sense being the glue that keeps a community together."

As a result of the diversity of CSOs and their activities, the perception of students is also diverse. Someone are very happy with the credit they receive for the course, however, feedback shows that the majority of students manage to formulate an engaged and reliable relationship with their partner CSO by the end of the semester. Numerous students report that they gain significant new insights, and greater openness and empathy to social problems and injustice, and that they gathered experience as social agents through community service.

"It helped me overcome my prejudices. I also feel that I got better with kids, I got a lot better in communicating with them."

"What is the most spectacular for me is that I think differently about a whole lot of questions than I did before."

"For me this course and volunteering provide a really positive experience. I had already volunteered formerly, and most of the cases I gained positive experience. I think it really affects our personalities, widens our horizons."

Numerous students feel personally responsibility for social issues, and become more and more committed to community service and local community needs during the semester. Several students emphasised that they intend to continue volunteering for their partner CSO after the course is finished, on a totally voluntary basis. It also happens that ex-students reappear on the SL course later, as representatives for their former partner CSOs. They may also recommend us new CSOs to cooperate with. The experience gained during the course therefore in many cases reaches beyond acquiring credits and experiential learning itself, and contributes to social engagement and university community engagement (albeit in small, bottom-up steps) following some of the recommendations of the social justice SL approach. We also keep in touch with interested students within our closed Facebook group, to support future volunteering, information exchange and networking activities to strengthen our community.

Effects on the community and the university

Critical SL fosters more lasting social change for the community and its members by generating common goals and values, and active engagement in the community served. It emphasises reciprocity, interdependence and aims to redistribute power among those in service-learning. In this way it is a more radical approach than social justice SL, which may be one-sided and exploitative (Chupp & Joseph, 2010).

Goals and desirable activities have been subject to continual discussions and reflections among the initiators since the beginning of our initiative. The joint work (running the initiative) and the continual discussions and reflections mean that we (teacher-mentors) have managed to get to know each other meaningfully, and set common goals and work structures. Most lecturers are actively involved in the opening occasion, and participate in a "co-teaching" process. One teacher-mentor gives a lecture, others (at least four lecturers) run the world café, and others help navigate the representatives of the organisations. On the closing occasion, lecturers again practice co-teaching by reflecting on student presentation and volunteering activities, and participating in the discussions following each presentation. For the rest of the semester, teacher-mentors work with their own students in the first place, but in order to cooperate and discuss questions with other teacher-mentors, we created an e-mail list, Facebook group and site (for the cooperation), and structured communication forms. By now, we can talk of a harmonious, cooperative professional relationship between teacher-mentors, led by shared values. Since the running of the initiative is also a voluntary initiative for most of the teacher-mentors, except for the coordinator, we always respect individual life situations (e.g., changing activity of group members from semester to semester), while common goals and values keep us motivated, both as individuals and as a group.

In addition to the cooperation alongside the SL initiative, teacher-mentors also formed new professional relationships with each other. Examples are participation at roundtable discussions, common volumes (publications) and (scientific) events. We consider the meaningfully developed relationship with local CSOs as one of the most significant effects of our initiative. While we already had connections to certain local CSOs before the SL initiative as individuals, the initiative structured and further supported these connections, and created new ones. During the last three years, the relationship between university teacher-mentors (as a team) and local CSOs developed to a regular, meaningful partnership. As cooperation developed among CSOs and students, and students carried out more and more activities for CSOs – even such unforeseen activities as preparing advertisement films or homepages for CSOs – the process started to be more reciprocal between the different actors.

"The attitude of the leader of the CSO was really touching. She explained with true enthusiasm about the handicraft they do, and how they plant lavender and how they recycle. It was very good to see that she pulled all her strength and motivation together and came to the introductory class, even though she really felt under the weather in the afternoon – as she explained. I would really like to help the members of that CSO either by talking to them or joining them in handicraft work or in gardening."

There are no "bad" volunteers among students. Those who are eventually not interested in volunteering typically disappear at the beginning of the semester after clarification of the course content. Those who get involved, usually do so responsibly. Of course, there are differences in the performance of students – not all voluntary activities are always perceived as outstanding by CSOs. But as some students become increasingly involved within the respected CSOs, these groups have become more and more enthusiastic and started to share their ideas concerning the development of the course and volunteering. It became clear that they are interested in student feedback, for example, by participating in the student presentations in the closing occasion of the course. CSOs also asked us to facilitate their networking activities to get to know each other better. We support these requests through joint events, e-mail lists, and the public Facebook page and closed group.

The SL course started with seven CSO partners. In recent semesters we have cooperated with 12-15 CSO partners per semester. One organisation cancelled for an extended period of time because it could not provide enough voluntary tasks for students. Other organisations have missed a few semesters for personal or other organisa-

tional reasons. The operation of many of the organisations among the cooperative CSOs depends to a large extent on one person. If they have, for example, personal problems/difficulties during the given semester, it affects the functioning of the organisation and thus the management of the volunteers as well. New CSOs joined either by invitation or by application. Cooperation among teacher-mentors and between teacher-mentors and CSOs supported numerous initiatives during the recent years, for example:

- A local academic committee was founded, which also includes CSO partners as practical experts.
- There was new individual-level cooperation between certain teacher-mentors and CSOs (e.g., teacher-mentors themselves volunteer for certain CSOs).
- The teachers of an existing university course (related to non-profit marketing) at the Faculty of Economics and Business Administration became interested in cooperating with CSOs that participate in the SL course. In this this way, CSOs that needed marketing assistance were matched with another university course and can be supported by student volunteers interested and trained in marketing.

SL with institutional change focuses on influencing the structure of entire academic institutions, including attitudes, behaviours, roles and instructors, departments and so on. Very few SL efforts are able to do that explicitly (Chupp & Joseph, 2010). Although there has been some institutional transformation in our case, it is unknown how this initiative will be able to foster institutional change in the long run.

The SL course was not initiated by university strategy/management but arose as a bottom-up initiative of university staff. Nevertheless, it seems that it is also becoming valuable to the university (as an organisation) itself. The Faculty of Economics and Business Administration, in addition to providing space for the course, also provides a supportive institutional environment by recognising it as a valuable resource for the faculty. This contributes to embedding the course into the university structure.

The various forms of these recognitions include the acknowledgement of the initiative within the faculty or the launching of a separate SL course for the international students of the faculty. Values followed by the initiative, including equity, diversity, supporting marginalised social groups, social justice, social and environmental sustainability, inclusion, and probably even reflexivity and transformation, are increasingly recognised as important values in the university. They seem to be especially important regarding practices such as planning tender applications, accreditation processes and international partnerships.

Co-creation, reflexivity and transformation

Although establishing an RRI-kind initiative was not among our initial goals, three principles of RRI – co-creation, reflexivity and transformation – have clearly been present as guiding principles throughout the whole process. Taking these into consideration helps us more thoroughly reflect on our initiative.

Initiating cooperation among university teacher-mentors and involved CSOs, have been vital for us since the beginning, having both practical and symbolical significance. However, when reflecting on the effects of the initiative, one can see that co-creation exceeds cooperation of different university and non-university actors within the SL initiative. The SL course is the result of the contribution of every single actor involved, and requires significant effort from each of them. This results in co-creating "something new" together, which supports actors to take further steps towards the "university with and for society" and "science with and for society".

Reflexivity has also been instinctively present within the initiative and the course since the beginning. Compared to its "purely instinctive" initial presence, activities supporting reflexivity have become conscious, and have become highly significant/important aspects of the initiative. It supports and surrounds each and every process, and it continually appears in new dimensions. Students reflect on social and academic learning effects; teacher-mentors reflect on the social and educational quality of the course, including the quality and effects of cooperation with CSOs; and CSOs reflect on their own new roles as "educational institutions" – tasks and opportunities offered for students, and the quality of related student learning and experience. Meanwhile, the initiatives and actors (individuals, organisations) are continually shaped by common reflection and cooperative communication in order to increase our joint social effect –that is, to contribute to the transformation of the existing social reality around us.

Reflection suggests we have had numerous transformative effects, such as deepening student civic values and commitment; questioning conventional frontal education, which put students in passive roles and distinguishes between those who "know" and those that "do not know and have to be taught"; and encouraging stronger local CSOs. However, there are still numerous challenges and a huge amount of learning in front of us, especially concerning our aims to transform conventional academic research and the institution that we are members of – or at least to significantly contribute to these transformations. Finally, we are committed to moving towards this vision by applying continual reflection and co-creation; indeed, we are persuaded that these are necessary elements/requirements for those transformative changes that we consider desirable.

Findings and discussion: Effects of service learning

This paper analysed a service-learning (SL) initiative at the University of Szeged, Hungary. While the initiative did not emerge as an explicit case for responsible research and innovation (RRI), we believe our results are highly relevant for the RRI discourse.

We argued that the diverse concepts and practices of RRI share certain common aspirations. These are co-creation, reflexivity and transformation. When introducing our case, we linked to these aspirations of RRI. We found

the model of Chupp and Joseph (2010) to be particularly useful in connecting the diverse effects of SL to the aspirations of RRI.

Our analysis showed that effects on and by the students, the community and the university are all important and significant in our case, and these three aspects are closely interrelated. The initiative was initially made possible by the cooperation of university teachers, who were individually embedded in the local community of CSOs and shared similar values regarding the role of universities in local communities. Later on, the stability of the SL initiative was provided by (1) student interest in the course, (2) the efforts of mentors and the course coordinators as a team based on shared values, (3) CSO interest, (4) reciprocal relations between CSOs and university participants, and (5) the institutional embedding of the course in one faculty of the university. Such a diversity of c*oopering actors* makes the initiative lively, functioning and, as it seems for the moment, promising in the long term.

Based on the typology of Chupp and Joseph (2010) we can state that our SL initiative (1) embraces elements of a traditional SL approach, (2) also has a strong social justice character, but (3) can be mostly characterised as a critical SL initiative. While participants are diverse concerning both their social roles and individual views and motivations, our analysis shows that the main motivation for most of the participants − especially for teacher-mentors and CSOs, but also numerous students − is lasting social change. The aspired social change counteracts marginalisation and oppression, and serves social equity, based on equal partnership, and also supports critical (self-)reflection on these issues.

Students play a specific role in inducing social impact. Since the SL course can be chosen by all the students of the university and is not confined to a single professional field, traditional learning outcomes are difficult, and may be difficult to grasp. It is therefore the "moral" learning/development that comes into focus instead: stepping out of comfort zones, experiencing previously unknown situations resulting in changed attitudes and behaviours in relation to marginalised and often stigmatised social groups. However, this does not mean that there is no traditional professional learning. Numerous students emphasise this type of learning, for example, students of social work/social pedagogy working with disabled/stigmatised groups during the course.

The teacher-mentor motivations are strong concerning institutional change: the vision and aim is to transform the university towards what Goddard (2017) calls a "civic university". This is an institution that fully integrates education, research and community engagement, and where the social effects (related to environmental sustainability and social justice) of research and education are highly important and valued. Compared to such intentions, the results so far are moderate and incremental. Although there was recognition and institutionalisation to some extent, this did not have an effect on the wider structure (university) within which the initiative is situated, and which it aims to transform.

The evaluation highlighted further lessons for us as well. The transgression of borders between the university and the community, teachers and students, or students and the community is vital for the concept of SL, however, these effects do not emerge automatically in practice (Butin, 2006a). In order to move towards real transgressions, at least two challenges have to be handled. First, in accordance with the *principle of reflexivity*, the actual functioning of the SL course and the broader initiative has to be continually refined, based on the feedback of students and CSO partners. This potentially affects numerous areas, such as communication (tackling the divergence of the norms of communication among groups of actors), or the practical organisation of the course (dates, schedules, venues, etc.).

Second, social impact also has to be subject to continuous reflection. Here, SL initiatives might face tension. On the one hand, SL – especially its critical approach – is about meaningful social impact, fostering equity, counteracting marginalisation, stigmatisation and poverty. In this respect, it is about social *transformation*, and its voluntary, movement-like character necessarily involves a potentially conflictual relationship with actors in power. For example, it may involve cooperation with CSOs that have a conflictual relationship with local/national politics or the university itself. For example, in a Hungarian context, independent CSOs (those that do not have a close relationship with any of the major political parties and/or companies) often struggle with (1) state-led stigmatisation (such as "foreign-funded" organisations that are the "agents" of foreign powers); (2) lack of continuity of financial resources; and (3) lack of being able to provide proper wages and work-life-balance for leaders and employees (as part of their financial struggles). On the other hand, the sustainability and social effect demands a certain extent of institutional embeddedness (institutionalisation). This can motivate the course organisers to less radicalism and towards more compromises and "neutrality" (Butin 2006b) if such institutional expectations appear. Institutionalisation might thus counteract criticality. Finding a balance here is a complex and uncertain process. Intuitionally embedding critical SL into the University of Szeged, and probably most other Hungarian Universities, is therefore still a long way away.

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GABRIELLA KISS – TAMÁS VERESS – ALEXANDRA KÖVES

LEARNING RESPONSIBILITY – TEACHING SUSTAINABILITY: EXPERIENTIAL AND TRANSFORMATIVE LEARNING IN A BUSINESS SCHOOL

A FENNTARTHATÓSÁG OKTATÁSA, A FELELŐSSÉG TANULÁSA: TAPASZTALATI ÉS TRANSZFORMTÍV TANULÁS EGY GAZDASÁGI EGYETEMEN

The emerging concept of responsible research and innovation (RRI) in some ways always relates to sustainability. In the transition towards sustainability, the authors need to build responsibility for both society and the environment in higher education and management education. Non-formal approaches to learning provide an opportunity to transform a student's 'head, heart and hand', including at the social level as well. This paper showcases the role of experiential and transformative learning in higher education practice. Two of their courses are described and analysed, which are intended to familiarise students with the problem of sustainability within economic higher education. The authors share the theoretical and practical experiences of designing, teaching and assessing these courses. They aim to contribute to the discussion on how business education could be producing useful and credible knowledge that addresses problems important to nature and society.

Keywords: **RRI, experiential learning, transformative learning, education for sustainability**

A felelősségteljes kutatás és innováció (RRI) kialakulóban lévő koncepciója bizonyos szempontból mindig kapcsolódik a fenntarthatósághoz. A fenntarthatóság felé történő átmenet során fel kell építeni a társadalom és a környezet iránti felelősséget a felsőoktatásban és a menedzsmentoktatásban egyaránt. A nem formális tanulási megközelítések lehetőséget adnak arra, hogy ez az átalakulás a hallgatók "fejében, szívében és kezében", valamint társadalmi szinten is megtörténjen. Ezen írás célja a tapasztalati és a transzformatív tanulás szerepének bemutatása a felsőoktatási gyakorlatban. Két olyan egyetemi kurzust ismertetnek és elemeznek a szerzők, amelyek célja a fenntarthatóság problémájának megismertetése a gazdasági felsőoktatás hallgatóival. Megosztják a kurzusok tervezésének, oktatásának és értékelésének elméleti és gyakorlati tapasztalatait. Céljuk, hogy hozzájáruljanak ahhoz a folyamathoz, amelynek eredményeképpen az üzleti oktatás olyan hasznos és hiteles tudást hoz létre, amely a természet és a társadalom számára fontos problémákkal foglalkozik.

Kulcsszavak: **RRI, tapasztalati tanulás, transzformatív tanulás, fenntarthatóság, felsőoktatás**

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The scientific discourse and the political action that appears in the climate movements both draw our attention to the unsustainability of our current modus operandi. For quite some time economic higher education has been reluctant to face its responsibility, however, times are changing, and it is becoming ever more pressing to acknowledge liability. In 2016 the Corvinus University of Budapest (CUB) hosted the annual meeting of deans and leaders of the EFMD (European Foundation for Management Development) universities and business colleges.

In plenary speeches and some sections, the participants spoke with surprising sincerity about how it might be time to conduct self-examination, and to accept that business schools have a serious responsibility in the series of ecological and social crises in the world. This newly-found awareness also takes economic higher education closer to the concept of responsible research and innovation (RRI).

RRI is a flexible umbrella term emerging in both the political arena and in scientific discourse (Bajmócy & Pataki, 2019; Karner et al., 2016;). It proposes to steer research and innovation agendas toward ecologically and socially relevant problems, or "grand challenges" (Schomberg, 2013). Multiple authors – see for example Deblonde (2015), Owen et al. (2012), and Stilgoe et al. (2013) – suggest that RRI's concepts and definitions are linked one way or another with the concepts of sustainability, strong sustainability or sustainable development. Deblonde (2015) explicitly argues that for RRI to fulfil its potential, it needs an ecological dimension that takes the 'strong' version of sustainable development as a normative starting point. Accordingly, RRI can be an overarching program for science, innovation and education, taking clear responsibility regarding society and nature. To reposition our socio-economic systems on sustainable trajectories, there need to be numerous transformations in – among other areas – social values and behavioural patterns (Capra & Luisi, 2014; Steffen et al., 2018).

Economic higher education has an important role to play in such transformations. We educate the next generations of economists, managers, decision-makers, consumers and citizens. We have the opportunity to make our students conscious of their responsibility to the environment and society and develop their critical reflection skills. But how should this responsibility be taught? Is it possible for students – the majority of whom are in their early 20s – to learn sustainability? Can a teacher influence student values and induce change in their frames of reference?

Acknowledging and facing our responsibility as educators and researchers at CUB, we deliberately design courses to build sustainability issues into economic education. The aim of this paper is to introduce two courses – and their underlying theoretical concepts – as attempts to embed sustainability as a major decision-making factor when acting as citizens, consumers or managers. Our basic assumption is that, due to its complexity, sustainability education needs to exceed the merely intellectual dimension (e.g., knowledge about how economic production destroys ecosystems). It should also affect student attitudes, and later have a spill-over effect on society as a whole. Accordingly, when designing our two courses, we turned to non-formal educational approaches: experiential and transformative learning. In this paper, we introduce both the courses and the educational theories inspiring and instructing us. Students on both courses are dealing with ecological and social problems, practice active citizenship, discuss sustainability issues and take part in participatory group learning processes.

The paper first provides a short overview of international and local discourses in the field of sustainability education concerning economic higher education. Second, we introduce the theoretical approaches of experiential and transformative learning and then describe the two courses in which we applied them. In the discussion, we reflect on our teaching practices, whether in our understanding the courses delivered the expected results, and if not, where and why those shortcomings occurred. We intend to contribute to the discussion on sustainability education (see for example Cranton, 2002; Moore, 2005; Foster & Stagl, 2018) based on our own experiences.

Sustainability in economic higher education

Many people all over the world demand the self-examination of economists regarding their responsibility for the ecological and social demises that the economy is creating or reinforcing. Whether it is enlightened students or academics in the Rethinking Economics movement, Harvard professors establishing Economics for Inclusive Prosperity or keynote speakers at the EFMD Deans' Conference in Budapest, they all insist on a reappraisal of mainstream paradigms. These initiatives are not just the demands of some strange, "tree-hugging", heterodox economists. Similarly to the blossoming climate movements, many of these changes are being initiated by the students themselves, as in the Rethinking Economics group who demand pluralism in economics teaching. The ingenuity and motivation of these actors are not relevant in this article, but their call to reassess the way we think and teach economics and management is.

In January 2018, the Rethinking Economics movement together with the New Weather Institute issued the 33 Theses of Economics Reformation and pinned the list to the gate of the London School of Economics (LSE). The following few paragraphs introduce the points they make most relevant to our topic at hand, as their demands closely mirror the criticisms that business and economic thinkers, educators and policymakers are facing. Their central argument is that current economic trends are leading us to ecological peril, and that poverty and growing inequality cause social problems.

While economics prides itself on being scientific and value-free, and hides behind statistics, mathematical models and graphs, in reality, it acts as an ideology and a belief system that no longer questions its basic assumptions (see e.g., Nelson, 2014). Neoclassical economics teaching is highly mathematised, students are rarely required to apply critical thinking and often leave the higher education system fully indoctrinated.

Much in line with the RRI principles, the theses also state that the underpinning theories of utilitarianism sacrifice the ecological environment and social groups at the less fortunate end of the spectrum completely on the altar of supposedly increasing social welfare without considering the uneven distribution of this welfare. The environment is treated as an external circumstance of the economic system rather than recognising that the economy is an integral part of both the ecological biosphere and the social realm. Markets are not abstract concepts, nor are they

simply about supply and demand, and the ultimate goal should not be to keep markets free from interventions.

The reformist theses pinned to the gate of LSE also offered solutions regarding how economics teaching can address these problems. In agreement with many scholars (e.g., Capra & Luisi, 2014) courses should be pluralist in their approaches, offering different perspectives on economic theory. Curricula should be inter- and transdisciplinary in offering sociology, philosophy, environmental sciences, psychology and other disciplines in order to shed light on the complex interrelationships of economic choices. Economics should not be defined as value-free, and its value and moral choices should be made explicit in dialogue with the public. The methodological supremacy of quantitative methods should be rebalanced with qualitative methods.

Similarly to the organisations mentioned above, UNESCO has also been trying to find solutions to introduce sustainability into education (UNESCO, 2014). The Hungarian National Commission for UNESCO, together with Eötvös Lóránd University and the Hungarian Academy of Sciences, held an interactive conference on the topic of 'Sustainability in Higher Education' in November 2018. The report issued (Lányi & Kajner, 2019) on the findings and recommendations of this panel identified the most urgent tasks: the acknowledgement of the ecological crises, and the responsibility of the higher education system in tackling it; the strengthening of the role of philosophical and ethical reflection in education; engaging students in practical experience to change attitudes; rethinking teacher training and methodologies; and encouraging every department of every discipline to include the issue of sustainability.

Sustainability in economic higher education had its own section within this event, and the participants issued their recommendations in the subsequent report. The recommendations significantly overlap with the suggested actions included in the 33 reformation theses, but are more specific in some points, and relate to the Hungarian context. The following points are summaries and partly direct translations of the original document (Lányi & Kajner, 2019, pp. 81-83).

1. Economic training must present all economic activity in the context of its human and natural environment. Philosophical, ethical, and cultural anthropological knowledge should become an integral part of economic higher education. Training opportunities must seek to improve the students' ability for critical thinking, discuss the concept of "good life" (Syse & Mueller, 2014) and the responsibility of humans.
2. Practical, project-based, multidisciplinary teaching methods must replace inefficient frontal education as they are more suitable for encouraging students to take into account environmental, social, and ethical dilemmas of economic activity.
3. Modular "green" courses or subjects are not sufficient. The principles of sustainability must be integrated into the whole spectrum of economic higher education. Offering a select few environmental-based courses does not provide the conditions necessary for transformation or breakthrough, as mainstream education would constantly overwrite the pursuit of sustainability, because its curriculum neglects the considerations of negative environmental and social impacts of economic processes.
4. The institutional environment must support the development of sustainability education. Currently, multidisciplinary education is hampered, as university administrations try to create "clear profiles", and project-based education is hindered as it cannot handle the additional burden that comes with such courses. Suggested means by which university administrations can support the integration of sustainability into the training system are by creating the financial conditions; by developing a faculty career model that focuses on educational innovation; by assisting faculty members to engage in awareness-raising, networking events; publications, translations, and publishing books; and by allowing the harmonisation of curriculum design that focuses on providing students with complex, practically usable knowledge, ways of thinking, and "habits of mind".
5. Faculty members should be trained, and professionally and humanly supported to integrate sustainability into their subjects. Those who teach contrary to the mainstream usually face additional burdens, as they go against the indoctrination of students. There is a need to ensure the continuous update of sustainability knowledge and training methodology and the training of trainers. Many non-economic higher education institutions also deal with sustainability issues. Interdisciplinary dialogue should also be available to get to know them and develop mutual consistency. More workshops, forums, and events that help the exchange of experience between higher education institutions with different profiles should be encouraged.

The recommendations suggested by the various actors at both the national and international level are to be taken seriously, but the devil lies in the details. How can we get these new messages across? How can we deeply transform the ways we teach? What could make students more aware of sustainability problems and more critical of the paradigms that have caused them in the first place? And even if we could manage to get the message across, how can someone practice those principles once they have graduated? To find the answers to these questions, the required shift in higher education must be supported by new methodological approaches, two of which will be discussed in the following chapter.

Teaching sustainability: experiential and transformative learning approaches

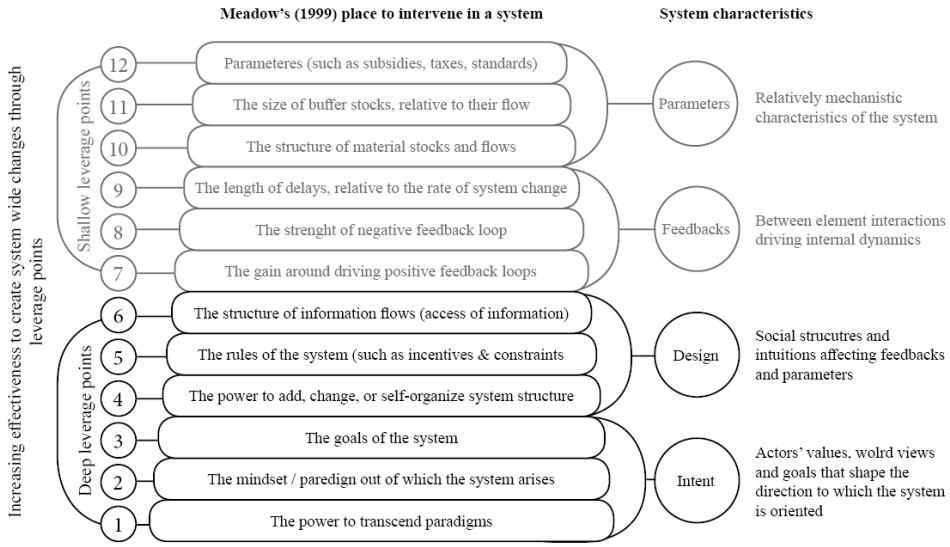
Later in this paper, we introduce two courses that are designed to affect how students frame and problematise sustainability issues. We see these courses as tools and spac-

es of change. Donella Meadows in her *Leverage Points: Places to Intervene in a System* (1999) examined how a system can be modified and transformed. She differentiated between "shallow" and "deep" leverage points, which are affect a given system on a different scale (Abson et al., 2017) (Figure 1).

tainability issues, rarely reach the deep, foundational levels, where currently prevailing values, worldviews, power structures and rules could be challenged and transformed. It seems that management and economics education is successful in developing anti-social behaviour (Etzioni, 2015) and positive attitudes towards greed (Wang et al.,

Figure 1.

Leverage points: Places to intervene in a system



Source: Based on Abson et al. (2017, p. 32)

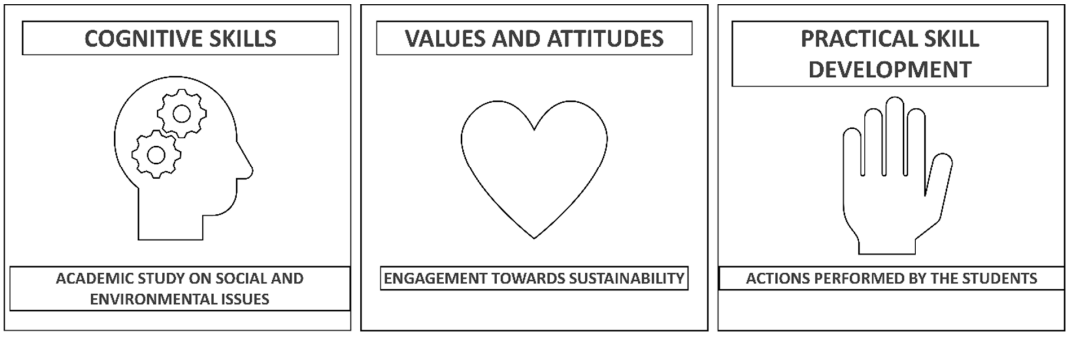
In our opinion, one reason why all "developed" and many "undeveloped" socio-economic regimes are on unsustainable trajectories (O'Neill et al., 2018) is the shallow level of interventions regarding the respective system. For example, Daly (2007) points out that mere efficiency gains can contribute to greater resource depletion, as overall consumption rises due to the lower prices generated by the increased efficiency. A sustainable trajectory means that basic (deep) concepts of what and why we produce/consume have to be questioned. Accordingly, RRI as a guiding research agenda can be successful if it manages to influence the intentions of the socio-economic (deep) structures. Just like other systems, we argue, higher education and more specifically management programs relating to sus-

2011). Sustainability is one subject, one fragment of the whole, a somewhat materialistic-oriented knowledge-mosaic. Inspired by the 'head, heart and hands' holistic educational approach, we intentionally design our courses and practice teaching accordingly. "Head" stands for the cognitive domain, the action carried out for example through academic study. "Heart" represents the affective domain, the process where values and attitudes are translated into behaviour. "Hands" stand for the psychomotor domain, that is learning through practical skill development and physical labour, such as planting or painting (Sipos et al., 2008, p.74) (Figure 2).

As mentioned above, practical, project-based, multidisciplinary teaching methods may be more suitable for

Figure 2.

The 'head, heart and hands' educational approach to sustainability issues



Source: Own compilation

encouraging students to consider the environmental, social, and ethical dilemmas of economic activity. When designing such courses, experiential and transformative learning can serve as guiding frameworks and tools. They have been purposely selected due to their characteristics, which we, as educators, set in line with the RRI vision. A detailed theoretical discussion would exceed space constraints, therefore we only describe those features of the two approaches that we find instructive for our teaching practices.

Experiential learning

Experiential learning theory emerged through the work of prominent twentieth century scholars, such as John Dewey, Kurt Lewin, Carl Rogers, to name a few, who emphasised experience as the essential element of the learning process (Kolb & Kolb, 2005). Alice Kolb and David Kolb (2005; p. 208) argue that action, a participative experience, is key in experiential learning, as *"it closes the cycle by bringing the inside world of reflection and thought into contact with the outside world of experiences created by action".* Experiential learning is more like a philosophy of education based on what Dewey (1938) called a 'theory of experience' (Kolb & Kolb, 2005, p. 193).

In experiential learning theory, knowledge and meaning are contextualised in actual experiences, where knowledge is created through the experience of action and reflection on that action (Kolb, 1984). The learning process within experiential learning theory is driven by conflict, differences, and disagreement, where participants are "[called] *upon to move back and forth between opposing modes of reflection and action and feeling and thinking"* (Kolb & Kolb, 2005, p. 194).

Transformative learning

As Mezirow (1997) explains, transformative learning is a process intended to develop autonomous thinking, and it does so by affecting change in the individual's frame of reference (personal worldview, system of reality). Transformative learning is achieved when a change occurs to our frame of reference as a result of an event or experience. Where such a change occurs, participants can expect to see a subsequent change in action, and this is what is classified as transformative learning (Mezirow, 2003).

Mezirow (1997) sets the ideal conditions for discourse to take place in the learning space. These conditions are met when participants are:

- provided with the information needed to pursue knowledgeable interactions,
- taking part in the learning process by their own will, free of coercion,
- allowed to take various roles in debates, to change their views and express them,
- encouraged to question 'basic truths',
- open to different perspectives, and
- willing to put effort into listening to other perspectives and work to build common ground (Moore, 2005, pp. 81-82).

One of the most challenging dimensions of Mezirow's transformative learning theory is the role of the educator (Moore, 2005). Within the framework of transformative learning, educators take the role of facilitator and provocateur. It is the educator's responsibility to assist students in their critical reflection when challenging previously unquestioned 'truths', and to help develop the habit and methods of rigorously examining new knowledge. In the transformative learning space, every assumption can be challenged, and participants are required to articulate their arguments and lines of logic (Mezirow, 1997). However, Mezirow (1989) made it clear that an educator should not decide on the outcome of the transformation; if they do, then he considers this indoctrination and not transformation (as cited in Cranton, 1994).

How do experiential and transformative learning approaches compare to each other?

Both approaches – experiential and transformative learning – disrupt the habits of frontal educational methods. In both methods students are active participants in their learning process, constantly challenged to reflect on their assumptions, articulate their thoughts and feelings. The learning spaces are also required to provide a safe environment in which to encourage discussion and share doubts and feelings.

Both approaches seem to be fit, at least in theory, to provide a framework which allows participants to learn sustainability issues beyond the intellectual level, and also engage emotionally. In our view, participants have to unlearn the doctrine of unlimited economic growth, to be willing and capable of dealing with the emotionally and intellectually demanding facets of sustainability.

In our interpretation such outcomes are not completed or finished in either transformative or experiential learning. Both are processes, and thus can only be practiced, but not achieved. It can be a source of frustration to be involved in a never-ending cycle of questioning oneself, debating, and resolving conflicts. When it comes to the (rather complex) issue of sustainability, students might encounter the destructive quality of their everyday actions, as most of our consumption and production patterns are intertwined with the hostility of modern life. Such recognition might cause emotional distress.

Table 1.

The main features of transformative and experiential learning

Transformative learning	Experiential learning
Critical reflection	Reflection
Educator's role: facilitator and provocateur	Educator's role: facilitator, safe learning environment
Change in frame of reference	Real-life experience
New habits of mind	Degree of freedom
Autonomous thinking, contested beliefs	

Source: Own compilation

Table 1 above displays the main characteristics of transformative and experiential learning that we hand-picked when designing the two courses introduced in the next section. The features highlighted in the table are important to us as educators looking for tools to design courses with specific attributes and goals.

Two illustrative cases of teaching practices

In this section we showcase two courses: Decision Techniques and Degrowth Economy. The common axioms of both courses are the following:

- sustainability is a transdisciplinary issue that requires non-formal learning methods,
- discourse is a prerequisite for real learning and transformation,
- different knowledge holders possess valuable knowledge,
- the teacher acts as a facilitator in the knowledge co-creation process,
- education plays an important role in social transformations,
- engagement in ecological issues is rooted in our own experiences (it is more than intellectual).

Decision Techniques is a BA level course with the overarching objective of focusing on problem forming and solving, and also on the soft skills required to participate in group work. Accordingly, we relied on experiential learning as a guiding framework when designing the course. As educators, we work on creating and maintaining a safe learning environment where students can practice various problem-solving methods. Experience is generated by the course requirements: students working in groups must set a common goal to find an answer or solution to a real-life problem.

Degrowth Economy is an MA level course, which places students in a participatory decision-making process (a Citizens' Jury), where they are challenged to deal with the complexities and ambiguities of the socioeconomic system. As the name of the course implies, we are designing a learning space which is intended to transform the participants' frames of reference regarding the basic premises of economics.

We gathered primary data from the sources below to describe and analyse the courses:

- reflection papers: student individual and group reflection documents written during and after their participation in the courses,
- data from the university's Student Assessment System (SAS) filled out by students optionally at the end of each semester,
- teacher reflection papers written during and after the courses.

We performed a document analysis on this data (Miles et al., 2014). When formulating the current paper's focus and interpreting data, we also relied on our practical experience as educators, what Gibbs (2007) calls 'practical wisdom'. Our practical experience is influenced – among other things – by the weekly discussions among colleagues where we reflect on the events within the courses (what went wrong, what worked well), and by workshops, conferences and papers focusing on certain elements of the teaching practice. Certainly, there are wider institutional contexts which shape our frame of reference, such as Central Eastern European embeddedness, or the local specifics of CUB; and there might be factors of which we are unaware: the 'unknown unknowns'. In the next subsection we introduce the specific elements of each course: Decision Techniques through the lenses of experiential learning, an Degrowth Economy in light of transformative learning.

Experiential learning case – Decision Techniques

The first illustrative case is a pilot waste treatment problem where students are working together with a civil society organisation (CSO) and focus on waste prevention in the experiential learning course called Decision Techniques. The group of students presented here is from the 2018/19 course. First, the course is described and then the waste management case is introduced.

Decision Techniques is a BA level obligatory course at CUB in business-related degree programs. Scientifically its educational content is based on decision sciences, management and psychology. The experiential learning approach provides the opportunity to integrate a multidisciplinary approach into a comprehensive problem-solving process. The course is an action-oriented semester-long process. Students form groups of six, where they frame problems, and design and realise actions aiming to challenge or tackle their selected problems.

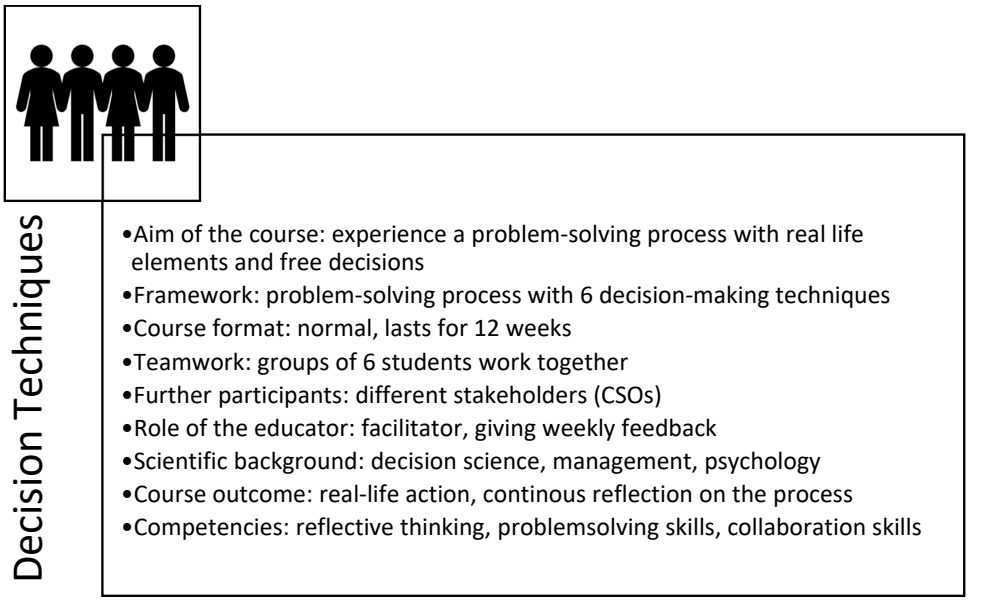
Students meet weekly in 90 minutes classes during the semester, where they design their group actions. The role of the teacher is to facilitate the preparation of the groups for the techniques and give feedback weekly on the ongoing processes. The semester ends with the groups delivering their actions and presenting their experiences to their peers. The performance evaluation is based on individual and group evaluations.

The flipped classroom method is applied during the course to facilitate preparation for the classes and effective group work in the classroom (Bergmann & Sams, 2012). Students also receive videos and written study materials as part of their individual online preparation. We also use the blended learning approach (Friesen, 2012) whereby students upload their weekly reflections and output and receive feedback from the teacher online before the next class. The learning instructions and materials are all available online. Students can also follow their progress and performance continually throughout the semester using an online interface (Figure 3).

The course is intended to develop decision-making skills, facilitation skills, and problem-solving skills, and offers a choice of decision-assisting techniques. The course allows students to make decisions on their own group's terms, but they are required to reflect on their roles as group members, and they are provided with feedback

Figure 3.

Main characteristics of the Decision Techniques course



Source: Own compilation

from both their peers and from the educator. Such habits of reflexivity are intended to help deepen student consciousness regarding their role/actions within the group. It also deepens student knowledge of the topic selected for the course during the problem-solving process. The problems are freely selected by the students themselves and they usually involve environmental and social problems e.g., sustainability issues.

Our basic assumption is that engagement cannot emerge without a degree of freedom (Kolb, 1984) that offers the basis for the experiential learning method. During the course, students have responsibility for forming groups based on their fields of interest – they are free to bring topics to the table, and form groups around them. Students are free to decide on the data collection methods assisting their action-design, and the interpretation of the collected data is also within students' competence. What action is taken, and how, is also left to the students to decide and plan. There are however certain elements that remain beyond their influence: the course itself is obligatory, the six decision-assisting techniques are pre-determined, assessment methods for reflecting group and individual performance are given, class attendance is obligatory, actions must be performed and feedback from the teachers must be received.

According to the experiential learning concept, students go through and experience a problem-solving process. In this way they gain real-life experiences and contact real stakeholders involved in the selected problem. To realise the action plan, the group must leave the safe space of the school and measure their ideas and the effect of their actions in real life. The scope of the action depends on the problem chosen by the group at the beginning of the semester and the decisions they took during the problem-solving phase. Every group thus takes different actions in different contexts, and therefore the knowledge they personally build remains unpredictable and diverse.

One of the basic elements of experiential learning is reflection (Kolb, 1984). Reflection is a highly personal and subjective activity, and as such, students may interpret the form of their opinion in many different ways (Humphrey, 2009). A template for a weekly 'reflection diary' is provided, as well as an analysis session for the group work, to help reflection during the course.

According to experiential learning, teacher's role is that of a facilitator of learning (Rogers, 2013). The teacher is responsible for the safe learning environment and gives feedback weekly regarding the reflections and output of the groups.

In the specific case presented here, a group of students – called Clear Corvinus – identified the problem of waste management, explaining that *"too much waste is generated at the university"*. The group formulated the question they were able and willing to solve in the process with the help of decision-making tools: *'How can we increase the amount of social media content that makes Corvinus students aware of waste prevention?'* They decided to make a short video about waste prevention alternatives in the university related to student lifestyles. They worked together with a CSO specialised in waste prevention called HUMUSZ. Students consulted with the experts of the CSO and received feedback from them. The video was shared through social media with university students, and also shared by the CSO (13 December 2018 Facebook).

The group concluded after the course:

"We can say that during our project we have also learned a lot about our chosen problem, and we will pay more attention to reducing waste in the future. It was surprising to see how many things we need to think about in order to reduce waste ... but it also surprised us how many

projects were created on this topic, which led to the conclusion that many students are interested in this problem, and many want to do something about it. Ultimately, we also raised our awareness, as during the lessons we saw how embedded this problem was, how many stakeholders were involved, and we heard useful and shocking information during the interview process (with CSO)."

The course presented here corresponds in theory to the principles of experiential learning based on the freedom of choice and reflection. According to our analysis, student feedback on the course is contradictory. Students who are committed to the course highlighted teamwork, real-life experiences, immersion in the subject, and the pleasure of working together, however, many students were unable to commit to the course. The students identified several reasons for this: frustrating teamwork, meaningless tasks, time-consuming tasks, inappropriate topic selection, non-professional knowledge transfer, and questioning the role of the teacher. These students did not understand the role of 'reflection' and could not engage in their topic either.

In response to feedback, the team of teachers are reflecting weekly and further developing the course (teaching materials, teacher facilitation, tasks, tests etc.) every semester. We assume that some elements of the course do not provide decision-making freedom for students, and we are moving forward to breakdown these barriers.

Some feedback also raise questions that are rooted in the Hungarian higher education system and our operating environment:

- soft skills development is not recognised or valued,
- the role of the teacher is based on power relations, and does not facilitate the development of partnerships between students and teachers,
- the role of the teacher as facilitator is not accepted in our course.

Finally, we assume that – based on our illustrative case – teaching sustainability embedded in an obligatory business school BA course allows the mindset of sustainability to be established in everyday thinking in a learning process. The real-life experiences of knowledge sharing practices and action-oriented cooperation can enhance student engagement and a deeper understanding of sustainability-related issues, and also serves the third mission of the university. However, in our experience, the education system can hinder the achievement of these goals. Discrepancies can arise between the teacher's intentions (curriculum and methodology of the course) and the requirements and constraints set by the university's bureaucratic apparatus, which can lead to frustration for both students and teachers. For example, in our case, we would like to create a learning environment where students are encouraged to take risks, raise questions, take a stance and be willing to change their minds, however, as educators, we are required to give grades that introduce numerical assessment into the student-teacher relationship, which is not exactly a comforting environment that invites students to open up. Also, since the course is obligatory, the experiential learning principle of taking part freely, without coercion, is violated, and therefore student engagement is suppressed.

Transformative learning case – Degrowth Economy

The second illustrative case built on transformative learning is a Master's level course called Degrowth Economy, built on a participatory decision-making tool called Citizens' Jury. It was first launched in the autumn of 2018/19. The 18-member student group presented here attended this first course at CUB.

Degrowth Economy is an elective course open to all Master's degree programs. Its scientific content is based on ecological economics. Its format is a so-called 'intensive course' as the course lasts for three intensive days (4x90 minutes per day). Blended learning, online reading materials and instructions are shared before the course and can be used by students at any time during the course. After the three-day intense work, students prepare a reflection paper contemplating the overall process individually and receive individual feedback from teachers in writing on the online platform.

The organisation of the course aligns itself as much with the methodology of the Citizens' Jury as possible. It lasts for three days, and experts from the field of degrowth and ecological economics are invited. The whole framing of the course is established as a Citizens' Jury, including the communication of the teachers (they call the students 'citizens' from the beginning).

In the Citizens' Jury, participants do not need to have extensive knowledge of the matter at hand, as they receive balanced information from experts regarding the pros and cons of the issue discussed. The transdisciplinarity of the issue also comes across better to students, as experts from different fields provide their insights. The experts are invited from various sectors: CSO, academia and business. Students discuss the experts' statements and afterwards deliberate on them with their peers. On the third day of the process, they prepare a recommendation for the decision-maker on the topic. The outcome of the course is a document written by 18 participants based on their consensus.

The course runs in cooperation with the National Council for Sustainable Development in Hungary (NCSDH), as the real decision-maker in sustainability issues in Hungary. In this particular course, the Secretary of the Council was invited to ask the students a real-life question at the beginning of the process. The NCSDH is also open to considering the results. Even though they have no obligation to follow the suggestions made by the Citizens' Jury word by word, the advantages of this cooperation are clear for both sides. For the decision-maker it provides a clearer picture of how citizens react to an issue, and the consensual solutions that may arise. This cooperation makes the course more realistic and provides sincerity to the process.

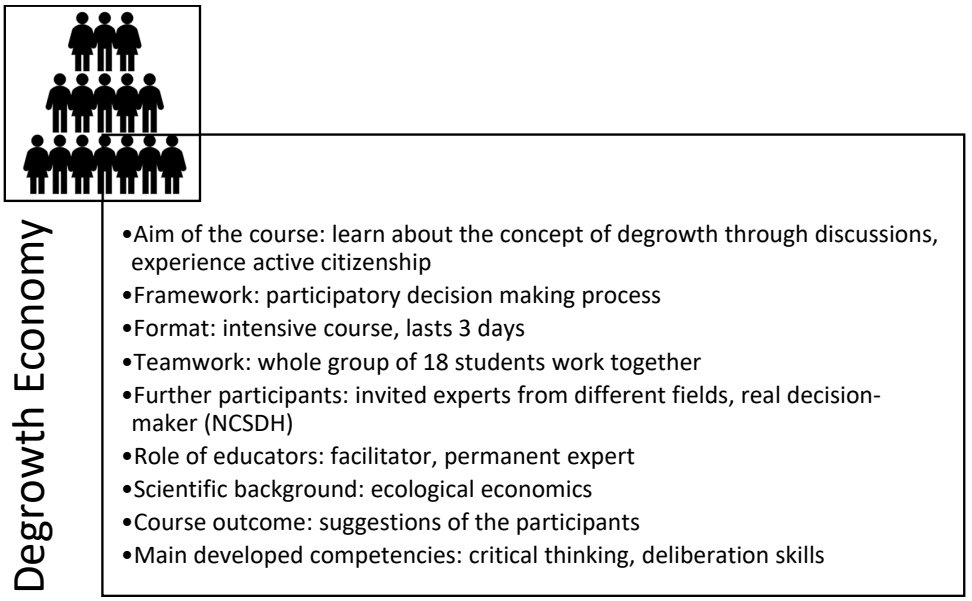
The role of teachers in that process are twofold: one is a so-called 'permanent expert' participating throughout the whole three-day process, but behaving like an expert,

giving short introductions to topics but intervening only when addressed by the participants. The other teacher is the facilitator, behaving as a non-expert, facilitating the discussions, and conducting the three-day meeting according to a pre-published schedule (Figure 4).

tions: after the course they thought or talked about things that were discussed over the three days, they learned things more deeply, experienced real discussions, and felt responsibility for the common output. A few examples of their feedback:

Figure 4.

Main characteristics of Degrowth Economy course



Source: Own compilation

Citizens' Jury is a decision-making method which is designed to allow stakeholders to formulate well-informed opinions, and suggestions regarding complex situations affecting them (Coote & Lenaghan, 1997). By default, a small group of 10-18 persons work for 3-4 days, and formulate suggestions addressed to the decision-maker based on various input and consultations with experts. The Citizens' Jury method is built on Habermas' (1984) concept of an ideal speech situation: fairness, competence and transparency are among the important principles in the participatory decision-making processes (Kerkhof & Wieczorek, 2005; Renn et al., 1995).

A university course has a great deal to do to create a safe and democratic environment in which students can meet the criteria for an ideal speech situation. The number of participants must be low (up to 20 in our case). The power relationship between teacher and student must be equal. Democracy in education can be realised on the basis of the notion that the role of the teacher is that of a facilitator, and the knowledge holders come from different fields: experts, citizens, teachers and students.

Our analysis shows that the circumstances of learning were a great pleasure for students and teachers alike. All the students were engaged in the discourses and gave positive feedback on the course. Not all of the students were immersed in the degrowth concept, but everyone assumed that this way of learning was enjoyable; the topics were interesting and made them think about new concepts. The transformation was also mentioned in the students' reflec-

"The great advantage of the method was that it helped my creativity, and the opinions of others were very inspiring to me."

"I read in advance there would be a CJ, but there is a huge difference between description and living. You can really understand the essence of the method if someone is involved."

"It was very important to me that I did not have to rush with the material like any other subject, but that there was time to think about things and share our thoughts with others."

"In my opinion, the output is much more worthwhile. We discussed, talked, evaluated and came to a common point together, so that really everyone came from around the world, growing up and experiencing things around the country."

In addition to the positive feedback, the students made several criticisms. Most concerned the topic, or the presentation of the invited experts. This also leads to the conclusion that emerged from the debates. Teachers have a huge responsibility for selecting the topics and inviting the experts, as these have a real impact on the experiences.

These results reinforce the way that the Degrowth Economy course illustrates transformative learning. This is based on its main characteristics: built on critical reflection and the role of teachers as facilitators and provocateurs. The methodology of the course is a real-life deliberative process that can induce changes in the frame of reference, new habits of mind, autonomous thinking and the validation of contested beliefs through discourses.

Students are free to express their reservations, feelings and concerns in this course, and at the same time they need to aim for some form of consensus on the matter. As they deliberate the matter at hand among themselves rather than being given ready-made thoughts, paradigms and solutions by lecturers, reflexive processes are more likely to occur. The suggestions they make at the end of the process is fed into a real decision-making process. In this way the methodology assists critical reflection on both the topic of degrowth and on mainstream economic paradigms. This methodology is intended not just to inform students about the concepts of degrowth but also to experience what active citizenship would mean.

Teaching degrowth or ecological economics in business schools is a challenge, going against all concepts and paradigms that students will have been taught by the time they participate. As a novelty, this course is based on a deliberative methodology, where students have the freedom to make up their minds on what they think about the issue of degrowth.

This learning process is suitable not only for transferring knowledge and changing the frame of reference of participants but is also expected to contribute to real social change. Transformative learning is not about storing knowledge, but about initiating longer-lasting changes in attitudes, mental representations and the connotations created in meaning-making (Ormrod, 2011). At the same time, there can be social learning "side-effects'' of participatory decision-making techniques (Kerkhof & Wieczorek, 2005; Voss et al., 2009). Moreover, it was also important in the design of an ecological economics course to promote active citizenship, which is considered vital in inducing social transformations.

There were some contradictory experiences for teachers, in addition to the enjoyable process. In contrast with the frontal teaching method the topics that were discussed were not always in line with ecological economics or strong sustainability. As is clear in transformative learning, the freedom of expressing feelings and thoughts through discourse leads to unpredictable outcomes (Cranton, 2002). The teacher does not have a direct effect on learners' individual changes in their frame of reference. The autonomous thinking of students and the facilitator role of teachers mean that the conclusions of debates can contrast with the intentions of the teachers or experts or can lead to solutions that are off the desired track. It needs to be accepted that discourse alone cannot ensure that our decisions will support the protection of natural values (Brulle, 2002; Eckersley, 1999). Despite these shortcomings, deliberative democracy and participatory decision-making are considered important tools in advancing sustainability (Arias-Maldonado, 2007).

The real result of the course is happening at a personal level in every student's 'head, heart and hands' and making changes in their habits of mind, however, these changes may not be clearly visible to the teachers themselves.

Discussion and Conclusion

The two courses provided insights on how the non-formal – experiential and transformative – learning approaches assist our quest (in line with the RRI vision) to change the way sustainability is framed, responsibility is encouraged, and frames of reference are shifted. In many aspects these courses are successes, and in some they are failures. We sum up these experiences in the discussion.

Kolb (1984) states, regarding the experiential learning concept, that to gain genuine knowledge from an experience, the learner must have the following abilities. Firstly, the learner must be willing to be actively involved in the experience. From our cases, it is clear that engagement is a prerequisite of all forms of learning, and educators need to focus on how this engagement can emerge during the course itself. However, a compulsory course – such as Decision Techniques – is seriously hindered in this regard compared to an elective course – such as Degrowth Economy – where students were actively expressing their willingness to become familiar with the topic from the very beginning. This suggests that it might be better for university administrators to try and allow as much freedom of choice for individual curricula for each student as possible. When the freedom of choice is violated – as in the cases of obligatory courses – there is still room to allow students some level of agency over their learning process – but limitations need to be considered. For example, grades must be given, which introduces a whole set of incentives and power relational dynamics among students, and in the learner-teacher relationship; or the fact that a significant number of students claim to prefer frontal knowledge transfer by an approved knowledge-authority rather than participating in tasks designed to polish personal soft skills.

Secondly, the learner must be able to reflect on the experience. This means that educators need to provide space and tools for reflection. However, reflection is a skill in itself that is barely taught in the Hungarian school system and is also a skill that ripens with age (and through practice). Even in these two cases, the difference in the willingness to reflect may be the result of the age and experience gap between Bachelor's and Master's level students. In the case of Decision Techniques, it is contradictory in itself that one of the aims of the course is to develop reflective skills but these skills seem to be a prerequisite for making the most of the course itself.

Lastly, the learner must possess and use analytical skills to conceptualise the experience, and decision making and problem-solving skills in order to use the new ideas gained from the experience. In our experience, student learning and attitudes about class participation often involve the gaining of positive knowledge in a frontal, one-way educational setting, rather than an interest in working on soft skills, where they are required to take agency over their learning process. In many cases learning is thus positive knowledge seeking for them, and they feel lost in a setting when the knowledge must be processed by their own experiences and decisions.

Much of the feedback indicated that some student expectations of what learning and knowledge are, differ significantly from the paradigms behind these two learning approaches. As an example, some of the students focused on what they can use the techniques learnt in the Decision Techniques course for, and whether that knowledge can be used at all, while others see having gained experience with these techniques as a tool for applying this in a real-life environment. This is not to say that positive knowledge is not necessary to understand the world, but a balance needs to be found between focusing on both. This mismatch in expectations can be a source of frustration for both students and educators, however, if this balance is struck, it can also be uplifting, as it was in the Degrowth Economy course. There can also be a mismatch in the way the "truth" is accepted by different knowledge holders. In Decision Techniques courses it is often a struggle to make students accept that CSO representatives are the holders of significant knowledge, and that an interview with them may shed new light on the matter at hand.

This takes us to the topic of the perceived role of the teacher according to the experiential and transformative learning concepts. Some students believe that the educator does not possess knowledge when they take a facilitator's role, and this is the reason why they "pass the responsibility on to the students". On the other hand, it is also difficult for the educator not to pass on their knowledge, but only provide the facilitation that the students need to come up with answers on their own. This is also where power relations come into the picture. Power relations need to be broken down in order to provide safe space for learning at a student's own pace, but this is difficult when the whole educational structure is founded on different roles. Another challenge of the different role of educators in these approaches is the lack of necessary skills on their part. Completely new skills are necessary when taking up facilitation or provocation compared to when teaching frontally. For example, difficult psychological situations can occur during experiential and transformative courses (e.g., a heated debate or a conflict) that need to be resolved on the spot, otherwise, the complete process can take a bad turn. University teachers do not receive pedagogical education nor psychological preparation for such situations. Students are required to become active agents of their learning processes, and their peers' learning processes, which calls for a range of (mainly soft) skills.

Currently, when using transformative learning approaches to induce change it is hard to accept the fact that these transformations are neither visible nor have immediate effects. We may induce personal changes, but these are not conscious and rational, but often unconscious and unpredictable, and may only happen in the longer run. In experiential learning, the development of various skills is not always recognised by the students by the end of the course.

In this paper, we have focused on changes that happen on the individual level of students, however, for a real sustainability transition, social structures must also change. Changing how we teach and introducing new methods into the educational systems that rely on dialogue, reflectivity and deliberation, may just contribute to such transitions.

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ÁGNES NEULINGER

REFLEXIVITY AND INCLUSIVENESS IN CURRICULUM DEVELOPMENT: THE EXPERIENCE OF A MASTER'S CLASS

REFLEXIVITÁS ÉS INKLÚZIÓ A TANANYAGFEJLESZTÉS SORÁN: EGY MESTERSZAKOS KURZUS TAPASZTALATAI

The concept of responsible research and innovation (RRI) has increased in popularity in the context of European Commission policy since 2010; promoting inclusive and sustainable research and innovation. The present paper introduces a curriculum development effort following the RRI principles in higher education in order to demonstrate the potential positive influence of an RRI-inspired course design on the self-perception of students related to their own reflexivity and inclusiveness competencies. The paper first outlines the use of the RRI approach in higher education, with a special focus on two areas, reflexivity and inclusiveness. The development of a marketing-related subject will then be introduced, described and evaluated. With the aid of a master's course, the selection of appropriate learning/teaching methods and related assessment practices will be introduced in relation to the competencies of reflexivity and inclusiveness. The results of a quantitative study are also presented, as students evaluated their own competency development in relation to reflexivity and inclusiveness topics at the end of the semester, with the help of an online survey. According to the main findings, the student perception was that course development served the aim of competency development well, and the various teaching methods supported inclusiveness, which also assisted the improvement of reflexive thinking.

Keywords: **RRI, reflexivity, inclusiveness, higher education**

A Felelős Kutatás és Innováció (RRI) koncepciója egyre nagyobb hangsúlyt kap az Európai Bizottság tevékenységében. Jelen tanulmány azt mutatja be egy felsőoktatási tananyagfejlesztés kontextusában, hogy egy RRI-szemléletű kurzus hogyan támogathatja a diákok reflexivitással és inkluzivitással összefüggő kompetenciáit a részt vevő diákok saját megítélése szerint. A cikk először ismerteti az RRI-megközelítés szerepét a felsőoktatásban, hangsúlyosan érintve a reflexivitás és inkluzivitás témaköreit. Ezután egy marketingtantárgy esetében értékeli az elvégzett tantárgyfejlesztési munkát, kiemelten a reflexivitáshoz és inkluzivitáshoz kapcsolódóan. Az érintett diákok véleményének megismerésére egy kvantitatív kutatás eredményeit is bemutatja, az online felmérés során a diákok értékelték a kurzust és saját magukat a reflexivitás és inkluzivitás témáihoz kapcsolódóan. A kutatás eredményei szerint a kurzus támogatta a diákok kompetenciáit, a változatos oktatási módszerek pedig erősítették az inkluzivitást és egyúttal hozzájárultak a reflexív gondolkodás fejlesztéséhez.

Kulcsszavak: **RRI, reflexivitás, inklúzió, felsőoktatás**

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The document dedicated to the integrated promotion of responsible research and innovation (RRI) was signed by the organisers and participants of the "Science, Innovation and Society: Achieving Responsible Research and Innovation" conference in November 2014. The so-called Rome Declaration emphasises that research and innovation activities must recognise the founding principles of the European Union (europa.eu, 2014, p.1): "*the respect of human dignity, freedom, democracy, equality, the rule of law and the respect of human rights, including the rights of persons belonging to minorities"*. This concept has gained visibility and popularity in the EU, and more specifically

in the context of European Commission (EC) policy, since 2010 (Owen et al., 2012).

The different definitions of RRI primarily belong to the world of academia, technology and policy-making (Tassone & Eppink, 2016). According to Von Schomberg (2011, p. 9) RRI is "*a transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view to the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products (in order to allow a proper embedding of scientific and technological advances in our society)".* The European Commission (2012, p. 1) considers both the processes and outcomes of responsible research and innovation, which should be in line with the *"values, needs and expectations of European society*".

This inclusive and value-based approach calls for a general application of the concept. Although science education is mentioned amongst the eight criteria of RRI (EC, 2015) – governance, public engagement, gender equality, science education, open access/open science, ethics, sustainability, social justice/inclusion – education can do more for the broader understanding of the societal embeddedness of research and innovation. Students can learn about RRI principles during different courses and modules, and they can also be encouraged towards a critical reflection of their own work.

The aim of this paper is to demonstrate how a course design aligned with RRI principles can influence the self-perception of students related to their own reflexivity and inclusiveness competencies. This paper introduces a curriculum development case for one of the subjects of the Marketing master's programme at the Corvinus University of Budapest. The 'Theory of Consumption and Consumer Behaviour' course was developed with the aim of better serving two dimensions of the RRI competence framework, inclusion and reflexivity. These two areas have been the focus of course development considering both the nature (topics) of the module and the interrelatedness of these two fields. As Ratner and Jensen (2012) argue, reflexivity can be the means to achieve inclusion. Content and teaching methods were aligned to these purposes, and student perceptions of the applied practices were measured. This paper considers the role of RRI in higher education, highlighting the importance of reflexivity and inclusion, and presenting a curriculum development process from the planning until the evaluation phase.

RRI in Higher Education

Owen et al. (2012, p. 757) suggested that there is a need for a shift from science in society to science *for* society, *with* society. They also call responsible innovation a *"collective duty of care"* considering the collective effect on the creation of innovation. The Horizon 2020 programme of the European Commission emphasises the importance of the scientific literacy of society, and its need to be strengthened and improved. For these reasons, the relevance of higher education institutions is indisputable in the training of future social actors (including researchers, managers, decision-makers etc.), who will be the future participants and stakeholders of research and innovation processes. Universities need to recognise their role in this situation, and as Escrigas (2016) stated, they need to rethink their strategies, including their curricula, research activities and interaction with society.

There are programmes that aim to increase the awareness and application of the RRI concept in education, such as the Higher Education Institutions and Responsible Research and Innovation (HEIRRI) training programmes. The main objective of HEIRRI was the development of RRI training programmes for the different levels of education (Bachelor's, Master's, PhD) in order to share knowledge and develop skills related to the relevance and ideas of the RRI concept (see http://heirri.eu). The 'Deliverable 3.2 Training Programmes' document (HEIRRI 2017) introduces ten training programmes for teaching RRI, including full courses, modules, workshop and summer school programmes, and online courses for students (Bachelor, Master's, PhD) and for academic and non-academic teachers. Another example is the Enhancing Responsible Research and Innovation through Curricula in Higher education (EnRRICH) project, which aims to support and encourage educators in higher education institutions to apply the RRI concepts to their higher education curricula. The formal EnRRICH tool includes guidelines for educators as to how to design a course according to the RRI principles, with the help of reflective questions and rich examples (Tassone & Eppink, 2016).

In terms of student skills development regarding RRI, Bayram-Jacobs (2015) suggests five skills to be improved: critical thinking, problem solving, questioning, responsibility, and creative thinking. The EnRRICH document introduces a similar approach with four competencies – anticipation, reflexivity, responsiveness and inclusiveness – to help students become responsible researchers and innovators (Tassone & Eppink, 2016).

In relation to anticipation, the report of 'EnRRICH tool for educators' (Tassone & Eppink, 2016) emphasises the importance of future-studies related abilities, future-oriented ethical abilities and proactive, well-timed engagement. With the help of these abilities, students will be able to foresee possible future societal challenges and the implications of scientific and innovation practices, including ethical aspects and constructive and meaningful ways of contributions. Reflexivity relates to different types of awareness (self, situational, social), together with ethical and disruptive thinking, while inclusiveness focuses on the knowledge, understanding and engagement of diverse stakeholders so that they will be aware of the variety of needs and perspectives, while valuing diversity, openness and transparency. Finally, the dimension of responsiveness implies the ability to manage and respond to new challenges while being flexible, adaptable, supportive and proactive in complex, controversial and uncertain situations.

The above approaches are also valued in management education, helping to improve student skill sets and enable

them to deal with complex, ever changing and uncertain business environments in an ethically responsible way (see e.g., Hibbert & Cunliffe, 2015; Osiemo, 2012; Starkey & Tempest, 2005).

Considering the above teaching approaches, this paper focuses on two competencies, reflexivity and inclusion, and introduces a curriculum development example from the practices of Corvinus University of Budapest. The articulation of learning outcomes and the selection of appropriate learning/teaching methods and related assessment practices will be introduced with the help of the Theory of Consumption and Consumer Behaviour Master's degree course.

The Role of Reflexivity and Inclusion in Education

Reflective thinking and reflexivity in the classroom

John Dewey, the American philosopher and educational reformer, argued that schools should educate students to be reflective, autonomous and ethical individuals through critical discourses (Dewey, 1916). According to his approach, reflective thinking is *"an active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends"* (Dewey, 1910, p. 6). Based on Dewey's approach, Rodgers (2002) defined four criteria for the concept of reflection. The first relates to the continuity of learning and the progress an individual (and society) makes, on the basis that reflection enables deeper understanding while a learner moves from one experience to the next. The second criterion emphasises the mode of thinking, which must be systematic, rigorous and disciplined. According to the third criterion, reflective thinking requires community and interaction with others. On top of this, it also includes openness and positive attitudes towards personal and intellectual growth. In relation to reflectivity and reflexivity, the clear differentiation between reflective thinking and critical reflexivity should be considered. Cunliffe (2004, p. 415) suggests that reflectivity is single-loop learning, while critical reflexivity starts with double-loop learning: *"Whereas reflective analysis is concerned with a systematic searching for patterns, logic, and order, critically reflexive questioning opens up our own practices and assumptions as a basis for working toward more critical, responsive, and ethical action".*

Fullagar and Wilson (2012) introduced several teaching approaches for reflective learning, such as work-integrated learning methods and the use of group projects. The latter requires students to work together and understand each other, as well as bring together different interpretations and perspectives. Gray (2007) listed further tools for reflective learning, including: 1. storytelling (with self-understanding, self-insight and self-respect), 2. reflective and reflexive conversations and reflective dialogue (understanding of personal intentions, contributions and the subjective focus on reality), 3. reflective metaphors (symbols, images for deeper understanding), 4. reflective journals (personal anecdotes, descriptions, stories for self-reflection), 5. reflecting on critical incidents (interpretation of typical and untypical events to uncover patterns), 6. repertory grids (diagnostic instrument with the rating of elements related to specific constructs), and 7. concept mapping (graphic technique for understanding of concepts).

According to Belhassen and Caton (2011, p. 1392) a broader curriculum – taking a critical pedagogy approach – enables students to consider and discuss *"values, power interests, and desirables ends … thus allowing students to reflect critically, as free thinkers, on the kind of world they want to build."* They also emphasise that instead of learning technical information, students should understand how to use their creative potential, and how to continue learning for their intellectual growth. Wigginton et al. (2019) recognised the importance of reflexivity in their pedagogical framework when they applied reflective methods for course assessment in relation to a health promotion course. They noticed that this approach enabled students to understand the meaning and crucial role of health and health promotion practices. As a result, they argue the formal recognition of reflexivity in core competencies within the curriculum.

There is a good variety of digital/software tools available for higher education to support reflexive learning. Lovell and Baker (2009) argue the use of digital narratives for a deeper understanding of course material, and for the engagement of students. Digital narratives combine components from audio and video materials together with images, animations and text, in order to create personal stories. Baker (2012) applied classroom karaoke in a mass lecture environment in order to promote interaction between students and decrease the sense of isolation due to group size. Costa et al. (2017) worked with digital videogames to improve media and information literacy. They concluded that the creation of videogames had a positive effect on children's critical thinking and participative skills. Takata and Curran (2009) used visual teaching tools to encourage critical thinking, and also built trust and fun with the help of these approaches. Horváth et al. (2015) and Horváth et al. (2018) similarly applied various cooperative techniques (including film-making and the design-communication approach) to encourage creative and critical thinking in marketing-related classes.

The use of blogs – according to Yang (2009, p. 14) – *"pulls together several of the most recommended pedagogies from learning theory: scaffolding, student-centred learning, the incorporation of multiple perspectives, and the use of learning communities".* Overall, blogs can be considered learning spaces (Williams & Jacobs, 2004), virtual classrooms (Yang, 2009) and tools for reflection (Tharwa, 2017). According to Williams and Jacobs (2004), the use of blogs in higher education is perceived positively by students, and proved to be an effective tool for teaching and learning. Tharwa (2017) used blogging for the development of writing skills and reflective thinking in EFL (English as a foreign language) major students. She found that the level of learning enjoyment and engagement increased – even amongst previously passive students – re-

lated to the blog exercise. Furthermore, blogging created a positive relationship between reflective thinking and writing skills.

It is important to note that students cannot be forced to demonstrate reflective thinking and reflexivity. These things emerge from co-creation practices, and teachers need to build a productive learning environment which enables meaningful collaborations between students and teachers (Lay & McGuire, 2010). Toarniczky et al. (2018, p. 187) emphasise the importance of relationship among students, faculty and institution in this process, in order to help students to be *"adaptive, proactive and responsible individuals, as well as active citizens".*

This approach seems to worth the effort from both sides, as reflexivity enables students to understand their positions in various situations and to respond properly in order to achieve their purposes (Freda et al., 2017).

Inclusiveness in curriculum development

There is a particular challenge in higher education which relates to the growing diversity of student populations. Faculty members need to acknowledge that students with different backgrounds have different abilities to participate in classroom activities, for example, joining classroom discussions (Bakhtin, 1986). As a result, educators have to rethink their teaching approaches and create curricula that are inclusive for all students. According to Sapon-Shevin (2007), inclusion calls for a redefinition of "smartness" and for the acceptance that there are many ways to be smart.

A framework called universal instructional design (UID) has its roots in the basic concept of universal design, and aims to create learning environments with greater accessibility for all learners, including students with disabilities. The principles that come from the physical world can easily be applied in teaching and learning: flexibility, consistency, accessibility, explicitness, and supportiveness. With the aid of these principles, more inclusive and enriched learning environments can be created, barriers to teaching and learning can be eliminated, and students can maximise the benefits from their classes (Palmer & Caputo, 2003).

Inclusiveness in education includes the incorporation of multiple methods of both teaching practices and performance evaluations. Higbee et al. (2008) described a physical science class that was made more inclusive with a new grading system. The educator of the course used different vehicles of assessment (homework, exam, lab work) in order to consider the various abilities and strengths of the students. They also set a timeframe for the exam that was stress-free, and also suitable for students with disabilities. Arendale and Ghere (2008) introduced several activities that they used for history courses in order to support students with a disability, or those with academic preparation issues. Just a few examples of their practices demonstrate how to create an inclusive learning environment: 1. web-based access to knowledge gave the opportunity for class preparation and helped students to be more confident in class discussions, 2. a Wiki webpage study guide for exam preparation (students co-create answers for potential essay questions), 3. a weekly course podcast created by students which served as a study guide for exams, 4. a modified classroom learning environment with a wide variety of activities (e.g., small group learning, simulations).

According to prior studies, inclusive methods result in better learning outcomes, and specifically grades and skill development. Heemskerk et al. (2011) found that with the help of more inclusive information and communication technology (ICT) tools, students were more participative and collaborative, and attained better reading results compared to those who worked with less inclusive tools. Mack (2012) recognised that the creation of several different opportunities for students to participate in class enabled more diverse interactions, and positively affected the classroom atmosphere.

Ultimately, inclusion and inclusive education should be a high priority for any educational institution as *"good inclusion is good teaching"* (Sapon-Shevin, 2007), and *"inclusion and reflexivity is all about changing one's perspective"* (Ratner & Jensen, 2012. p.88).

Course Planning in the Light of RRI Guidelines: Cases of Reflexivity and Inclusiveness

Institutional and classroom context of curriculum development

The Marketing MSc programme started in 2009 at the Corvinus University of Budapest, and 148 students were accepted for the program in 2018. The Theory of Consumption and Consumer Behaviour class is a mandatory module for all Marketing MSc students, and in 2018 a total of 119 students took the subject. In this course students learn about models, concepts, and actual trends in consumer behaviour. Topics such as consumer society, subcultures, consumption rituals, gender roles, family roles, aging, complexity of consumer decision-making, consumer well-being, online consumption, innovation acceptance, alternative/ second-hand consumption and consumer protection are covered during the course.

Teaching methods for this course include traditional lectures and seminars. Lectures focus on theoretical considerations (models, concepts, definitions) together with real-life examples, with the aim of helping students to obtain theoretical knowledge. Seminar work deepens the understanding of the subject with the help of interactive exercises, case studies and discussions. Upon completion of the course students should be able to (1) gain a well-grounded understanding of key concepts in marketing and consumer psychology/sociology, (2) be able to apply these concepts to real-life situations, (3) be able to design marketing programmes based on what we know about consumer behaviour, and (4) develop skills in how to work effectively as part of a team, and build a cooperative atmosphere among team members, while analysing and presenting group projects. Course evaluation is based on an exam (45%), a group project (30%), case studies (10%), a class debate (5%) and class participation (10%) scores.

Curriculum development focusing on reflexivity and inclusiveness

The present curriculum development project aimed to improve student competencies in *"reflecting about context, ways of framing, ways of knowing, ways of doing, and ways of being"* (Tassone & Eppink, 2016. p. 17) in relation to consumption, consumer behaviour and consumer society. The course also aimed to improve student competencies in *"including, communicating with and collaborating with others"* (Tassone & Eppink, 2016. p. 18).

In order to create a learning environment which supports critical, responsive and ethical thinking (Cunliffe, 2004), and which is also able to include the needs of all students, the following activities were used during seminars:

• Online access to knowledge

With the help of the Moodle learning management system, all course related materials (syllabus, assignment guidelines, PowerPoint slides, case studies, examples, articles, links to videos) were available for students at the very beginning of the semester and for the whole semester. This access enabled students to be better prepared for classes and to be more confident during discussions.

• Team project work related to the consumer well-being concept in the form of a poster (one-page, digital version)

Team projects are excellent tools to learn about cooperation, an excellent method for idea generation and can also increase efficiency (Alexander & Stone, 1997). Contemporary workplaces often organise their work in teams, and therefore, employers value the ability to work cooperatively highly. In order to solve the challenges of team evaluations (due to often-unequal individual participation and contributions, as well as the unfair distribution of tasks), the application of a peer assessment form helped the better appraisal of individual efforts.

• Classroom debate in small groups

Four themes related to course topics have been used in classroom debates. Lecturers randomly selected students for topics, and also assigned them to predefined roles of agreement and disagreement. Home preparation allowed flexible preparation for class presentation.

• Case studies for class discussion

The approach to case studies was analytical and decision-oriented, focused on being managerially relevant. Early access to cases aimed to help student preparation.

• Online forum discussion (Moodle forum on seminar-related topics)

Online discussions on Moodle (which are similar to blog assignments) offered room for quieter students who wanted to contribute to class discussions. It also allowed the continuance of class discussions that had to be stopped due to time constraints. Frequent and meaningful contributions were rewarded with extra points for the course evaluation.

• Documentary film about the senior generation

The subject of aging and marketing to senior consumers is often an abstract topic to students in their 20s. Visual teaching tools can make this complex and abstract issue tangible and more relevant for students.

Research agenda

An online survey was developed and applied at the end of the semester in order to understand student perceptions about their own competency development in relation to reflexivity and inclusiveness topics, as well as the perception of tools and methods used for their competency development. In order to increase engagement, students were invited to provide input to the questionnaire development. Nineteen questions about the course were used to measure the perception of applied teaching methods, and seven demographic questions to help the interpretation of research results. The evaluation of responses was anonymous. The online survey used Likert scales (from "strongly disagree" to "strongly agree") and open questions. Students were asked to indicate their level of agreement with a series of items relating to teaching methods. The dedicated time (estimated working hours) for the activities was also measured, and statements like "I enjoyed seminars", "Examples were up-to-date", and "I become more sensitive towards social problems" were also evaluated on a 5-point Likert scale. Open-ended questions were used to collect ideas for lecture and seminar improvements. A total of 119 students responded to the questionnaire, and the response rate was 88%. Due to the pairwise deletion techniques for missing data, the sample size may differ slightly from one analysis to another. It should be noted in data interpretation that 81.9% of respondents were female, and 18.1% were male.

It is important to note that this study was only able to measure the students' own perceptions which indicates the subjective understanding of the studied phenomena. The questionnaire also allowed individual interpretations of abstract terms used in the questionnaire like "sensitive", "societal problems", "social awareness".

Research results

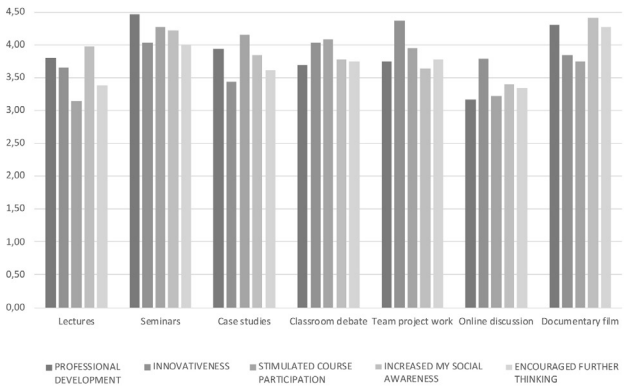
The results showed that the topics on the course were perceived as important, and students are generally satisfied with the acquired knowledge related to these topics. Topics such as online consumption, consumer society, innovation adaption and decision complexity were evaluated as the most important, while the highest level of satisfaction with knowledge was reported in relation to the fields of subcultures, consumer rituals, gender roles and aging. Significant differences were found in two topics, between male and female respondents: the importance of gender roles was more appreciated by females, while consumer decision-making complexity was considered more significant by males.

In summary, the measured teaching methods proved to be effective in light of student perception. Five factors were measured in relation to lectures, seminars, case studies, classroom debate, team project work, online fo-

rum discussion and documentary film: (1) contribution of methods to professional development, (2) level of perceived innovativeness, (3) stimulation of course participation, (4) development of own social awareness, and (5) encouragement of further thinking. As Figure 1 indicates, seminar work contributed to professional development and stimulated course participation to the highest extent, team project work was considered the most innovative, and the documentary film increased students' own social awareness and encouraged further thinking the most.

Figure 1.

Evaluation of teaching methods by students



Source: own elaboration

Table 1.

Results of the factor analysis on the attitudinal questions of course evaluation

Factor	Statement	Factor Loading
Course engagement (∝=0.89. M=4.25)	I had a good time during seminars	0.827
	It was clear what would happen in this course	0.764
	I have learnt useful things from my teacher	0.742
	Processes were transparent	0.729
	I was happy to join class discussions	0.660
	Things I have learnt during classes will be useful for my work	0.618
	Relevant examples were discussed during classes	0.554
	We discussed topics that were interesting to me	0.521
Social sensitivity (∝=0.82. M=3.54)	I become more sensitive towards social issues	0.840
	I become more open-minded about societal problems	0.806
	I have learnt new things about how societies work	0.656
	I have learnt useful things from my classmates	0.579

Source: own elaboration

According to the attitudinal questions, smooth course management was one of the main reasons for high course satisfaction (see the list of statements in Table 1). The factor analysis (maximum likelihood with varimax rotation) of 13 items (three items were eliminated due to low consistency) produced two factors that explained 62.96% of the total variance. Table 1 shows the two identified factors along with their factor loadings. The internal reliability of both scales is satisfactory, with a value of 0.82 for the 'social sensitivity' factor and a value of 0.89 for the 'course engagement' factor. The mean scale values for the two factors are 4.25 and 3.54, respectively (see Table 1).

In further analysis, the two factors served as clustering variables for segmenting students based on their attitudes towards the course. Using initial cluster centres (k-means), the examination of two-cluster and three-cluster solutions led to the selection of the three-cluster solution, based on the ease of interpretation, and the goodness of fit measure and a minimum cluster size of 10% of the total sample was also considered. Hierarchical clustering was performed using the Ward method and was chosen for further analysis due to more compact and distinct clusters. Based on the cluster solution, three groups of students were labelled as follows (see Tables 2 and 3 for a more detailed description of these groups):

1. 'Socially sensitive' students (20%): These students showed low course engagement, however they reported high scores on topics related to their own perceived social sensitivity.
2. 'Enthusiastic' students (60%): Students in this group had high scores for both course engagement and perceived social sensitivity.
3. 'Engaged only' students (10%): They are engaged in the course but provided the lowest scores on perceived own social sensitivity items.

Table 2 introduces the perception of applied methods by student segments. The results show that the documentary film about the senior generation joined by seminars increased social awareness the most, and also encouraged further thinking, according to student perceptions. 'Enthusiastic' students evaluated almost all tools highly, from the point of their increased social awareness, while 'engaged only' students appraised both lectures and seminars in this respect.

In most cases, 'socially sensitive' students reported the lowest results related to the different teaching methods, except for the documentary film. In fact, the documentary was evaluated as a positive influence on their professional development, and was able to increase their perceived social awareness and also encourage further thinking.

Seminars, case studies, the classroom debate and the team project work proved to be the most influential tools for course participation. Case studies worked best for the least engaged "socially sensitive" group, while "engaged only" and "enthusiastic" students were motivated the most by the seminars.

Table 2.

Perception of applied methods by student segments

	'Socially sensitive' students		'Enthusiastic' students		'Engaged only' students	
	Mean	*St. Dev.*	*Mean*	*St. Dev.*	*Mean*	*St. Dev.*
LECTURES						
Professional development	3.40	0.91	3.95	0.81	3.78	1.30
Innovativeness	3.75	0.97	3.72	0.80	3.11	1.27
Stimulated course participation	2.85	0.99	3.24	1.11	3.10	1.20
Increased my social awareness	3.33	0.98	4.10	0.89	4.10	1.10
Encouraged further thinking	3.25	1.22	3.41	1.09	3.44	1.13
SEMINARS						
Professional development	3.74	1.05	4.75	0.65	4.35	0.75
Innovativeness	3.45	1.15	4.31	0.79	3.80	1.01
Stimulated course participation	3.45	1.19	4.58	0.62	4.20	0.62
Increased my social awareness	3.40	1.05	4.54	0.70	4.00	1.08
Encouraged further thinking	3.37	1.21	4.30	0.85	3.70	1.17
CASE STUDIES						
Professional development	3.53	1.22	4.27	0.83	3.55	1.15
Innovativeness	3.30	1.17	3.67	1.00	3.00	1.08
Stimulated course participation	3.80	1.06	4.42	1.02	3.75	1.21
Increased my social awareness	3.35	1.04	4.29	0.77	3.00	1.08
Encouraged further thinking	3.53	1.12	3.97	0.96	2.68	1.06
CLASSROOM DEBATE						
Professional development	3.37	1.16	4.02	1.04	3.20	1.20
Innovativeness	3.65	1.09	4.20	0.98	4.00	1.00
Stimulated course participation	3.65	1.14	4.25	1.09	3.85	1.09
Increased my social awareness	3.30	1.26	4.10	0.99	3.21	1.23
Encouraged further thinking	3.60	1.10	4.02	1.07	3.10	1.41
TEAM PROJECT WORK						
Professional development	3.16	1.12	4.15	0.80	3.15	1.27
Innovativeness	3.60	1.47	4.61	0.59	4.30	0.98
Stimulated course participation	3.45	1.10	4.28	0.94	3.30	0.98
Increased my social awareness	3.30	1.22	3.98	0.93	2.90	1.12
Encouraged further thinking	3.50	1.24	4.05	0.95	3.20	1.15
ONLINE FORUM DISCUSSION						
Professional development	2.80	0.86	3.24	1.14	2.93	1.10
Innovativeness	3.71	1.21	3.98	1.08	3.28	1.32
Stimulated course participation	3.35	0.86	3.24	1.26	2.61	1.14
Increased my social awareness	3.19	1.11	3.47	1.25	3.00	1.46
Encouraged further thinking	3.38	1.09	3.37	1.27	2.93	1.67
DOCUMENTARY FILM						
Professional development	4.24	0.90	4.40	0.80	4.00	1.03
Innovativeness	3.83	0.99	3.90	1.02	3.78	1.11
Stimulated course participation	3.68	1.06	3.87	1.16	3.59	1.37
Increased my social awareness	4.37	0.83	4.49	0.81	4.11	1.23
Encouraged further thinking	4.11	0.88	4.31	1.01	4.33	0.91

Source: own elaboration

Table 3.

Perceived importance of course topics by student segments

	'Socially sensitive' students		'Enthusiastic' students		'Engaged only' students	
	Mean	*St. Dev.*	*Mean*	*St. Dev.*	*Mean*	*St. Dev.*
Online consumption	4.45	0.83	4.76	0.47	4.65	0.49
Complexity of consumer decision-making	3.85	0.67	4.51	0.60	3.90	1.07
Consumer well-being	3.85	0.99	4.46	0.68	3.85	0.93
Innovation acceptance	4.10	1.07	4.36	0.71	4.00	0.97
Gender roles	3.95	1.00	4.32	0.73	3.65	0.99
Aging	3.85	0.93	4.20	0.74	3.80	1.01
Family roles	3.80	1.01	4.14	0.78	3.45	1.05
Subculture	3.65	0.99	4.10	0.78	3.25	0.85
Consumer society	3.85	0.59	4.41	0.79	4.30	0.73
Consumption rituals	3.35	0.99	3.88	0.91	3.10	1.29
Alternative/ second-hand consumption	3.00	1.08	3.73	0.94	3.00	1.17
Consumer protection	3.45	1.00	3.92	0.97	3.30	1.08

Source: own elaboration

According to Table 3, the topic of online consumption was the most interesting for all groups, and the documentary film proved to be the most powerful applied tool. Seminars were greatly appreciated (using all the tools mentioned above), especially amongst 'enthusiastic' group of students who rated it highly in several categories.

Conclusions

The topics and applied methods of the Theory of Consumption and Consumer Behaviour course aimed to enhance student competencies related to reflexivity and inclusion. Topics covered in this course – including consumer society, subcultures, consumption rituals, gender roles, family roles, aging, complexity of consumer decision-making, consumer well-being, online consumption, innovation acceptance, alternative/ second-hand consumption and consumer protection – were also selected to support future managers as ethically responsible leaders. These topics proved to be interesting and important for students according to their course perception and their perceived own competencies.

The course development introduced focused on both reflexivity and inclusion. Inclusion can help students to be more reflexive (Ratner & Jensen, 2012), which was found to be true in the present case. Visual teaching tools (including the documentary film) supported reflexive thinking, and also encouraged creative thinking and problem solving as suggested by Tassone and Eppink (2016) and Horváth et al. (2018). The applied visual tools improved the involvement and engagement of all students, including the less active ones. The same was true for the seminar work that used multiple methods (including class debate, case studies) to meet the needs of students with different backgrounds, skills, interests. The applied teaching practices were able to engage students for the whole course, and also encouraged their reflexivity related to consumption and consumer behaviour based on student perceptions.

According to Yang (2009), blogging provides an opportunity for more flexible discussions (both time and space), and moreover, participants can realise additional opportunities to share their ideas with others. In the present situation, a similar approach was applied with the help of the Moodle learning management system – with the use of an online forum discussion on course-related topics – but it received a mixed evaluation from students. According to course statistics, approximately one-fifth of students participated in these online discussions and this activity was one of the least appreciated for its contribution to the students' professional development, while it was perceived to only moderately encourage further thinking and support the development of social awareness. Nevertheless, this tool was acknowledged as somewhat innovative, and more importantly stimulated the course participation of the least interested students ('socially sensitive' segment).

In summary, the curriculum development aimed to enhance student abilities to see the importance of social and environmental challenges related to consumption and consumer behaviour, and furthermore, to make them more sensitive to these issues. As Hackman (2008: 38) pointed out, the respect of differences is not enough, and educators should *"delve into the realities of those differences... to create real inclusiveness and a feeling of being welcomed".* This course made inclusiveness its focus, and as a result was able to achieve improvements in the reflexive thinking of students.

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ÁGNES ZSÓKA – KATALIN ÁSVÁNYI

THE EFFECTIVE USE OF RRI TEACHING METHODS ON A CSR COURSE

AZ RRI OKTATÁSI MÓDSZEREK HATÉKONY ALKALMAZÁSA EGY CSR-KURZUS SORÁN

Teaching with RRI methods makes a difference. This paper aims to evaluate the application of RRI tools in a CSR course. A course is considered effective when objectives, targeted skills, competences, and expected learning outcomes are communicated and reached. The focus of this research is understanding the impact of a specific international blocked course on the social and environmental sensitivity of students through the application of a mixed-method approach. Q-methodology was used to measure the preferences of students before and after the course regarding their individual behaviour and expectations towards companies. Interviews were conducted after the course to assess individual perceptions about the course and its teaching methods. Results suggest that the RRI approach in teaching is clearly appreciated by students, and its effectiveness is estimated as high. Changes in responsibility-related preference order reflect stronger and weaker impacts alike, helping identify effective RRI tools for teaching, as well as opportunities for further improvement.

Keywords: **RRI teaching, measuring effectiveness, responsibility, CSR, Q-methodology**

Az RRI-módszerekkel történő oktatás mérhető magatartásformáló hatással jár. A cikk célja az RRI-eszközök alkalmazásának értékelése egy CSR-kurzus esetében. Egy kurzus akkor tekinthető eredményesnek, ha az oktatás során sikerül a kurzus céljait, a megcélzott képességek és kompetenciák fejlesztését, az elvárt tanulási eredményeket elérni. A tanulmány kevert módszertan alkalmazásával elemzi egy blokkosított nemzetközi kurzus hatását a hallgatók társadalmi és környezeti érzékenységére nézve. A kutatás során először Q-módszer alkalmazásával mérték fel a szerzők a hallgatók preferenciáit, a kurzus előtt és után. A kurzus végén emellett félig strukturált mélyinterjúkat készítettek az egyéni észlelések és a tanítási módszerekkel kapcsolatos vélemények, benyomások értékelése céljából. Az eredmények szerint a hallgatók nagyra értékelik és eredményesnek tartják az RRI-eszközök alkalmazását az oktatásban. Felelősségvállalással kapcsolatos preferencia-sorrendjükben a kurzus hatására bekövetkező változások erősebb és gyengébb hatásokat egyaránt tükröznek. Ezek elemzése segít azonosítani az oktatásban eredményesnek bizonyuló RRI-eszközöket, valamint rámutat a további fejlesztési lehetőségekre.

Kulcsszavak: **RRI-oktatás, hatékonyság mérése, felelősségvállalás, vállalatok társadalmi felelősségvállalása (CSR), Q-módszer**

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The paper uses the conceptual framework of Responsible Research and Innovation (RRI), and investigates its application in higher education – more specifically, in an international blocked course entitled "Corporate Sustainability and CSR". According to the definition of von Schomberg (2011, p. 9), RRI is "a transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view to the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products (in

order to allow a proper embedding of scientific and technological advances in our society)".

Based on this comprehensive definition, Tassone, O'Mahony, McKenna, Eppink & Wals (2018, p. 344-345) suggest three educational design principles for RRI in higher education: education for society, education with society, and educating whole persons. In line with the Lund Declaration (2015), the main goal of the course we analyse here was to address societal challenges and provide students with a set of solutions that can be effectively used for the benefit of society. Teaching methods were selected to relate to cognitive, affective, and conative behaviour patterns for the sake of educating whole persons. This specific course did not include collaboration with external stakeholders; it focused on the first and third principles of Tassone et al. (2018). Also, the course did not aim to address skills related to the relationship between research and innovation (R&I) and society.

The paper is based on the logic of designing a course and measuring whether course objectives, targeted skills, and competences, as well as expected learning outcomes, are achieved. According to Blass and Hayward (2015, p. 36), one of the new roles of management education is "to refocus education to ensure that we educate and develop globally responsible leaders". In this process, the knowledge base, focal issues, approaches, as well as teaching methodologies must be reconsidered (see also Thomas & Wilson, 2011). Although quite a number of research studies have been carried out worldwide about how sustainability and CSR have been embedded into the curricula of management education programs (Christensen, Peirce, Hartman, Hoffman & Carrier, 2007; Burguette, Lanero & Licandro, 2013; Teodoreanu, 2014), only a few of them have specifically addressed the effectiveness of teaching about these issues (Luthar & Karri, 2005; Sleeper, Schneider, Weber & Weber, 2006; Kagawa, 2007, Segon & Booth, 2009). Going beyond the assessment of acquired knowledge (see Zsóka, Marjainé Szerényi & Széchy, 2011), measuring the impact of sustainability and CSR-related courses on skills and competencies and affective and conative behaviour patterns can be considered an understudied research area.

Our paper aims to add value by evaluating the impact of a sustainability- and responsibility-oriented course which makes use of several RRI teaching methods, in particular by discussing how the course can evoke changes in the preferences and behaviour of students, and which RRI teaching methods are perceived to be effective at achieving the desired learning outcomes. Two research questions were formulated accordingly, and investigated with mixed methodology. Changes in the preference structure of students concerning corporate and individual responsibility were measured using the Q-method before and after the course, while the perceived impacts of the course and especially the RRI teaching methods on the learning process and learning outcomes were explored using additional semi-structured interviews.

Literature review

Targeted skills and competencies in CSR courses

Several research studies have confirmed that universities play a critical role in influencing students' attitudes and future behaviour (e.g. Kagawa, 2007; Fischer & Bonn, 2011; Doh & Tashman, 2014). In the literature on education the focal area of authors varies – ethics, responsibility, RRI, and sustainability are frequent subjects of study. Obviously, those foci are not independent of each other and result in partly overlapping targeted skills and competencies. According to Rieckmann (2012, p. 128) "competencies may be characterised as individual dispositions to self-organisation which include cognitive, affective, volitional (with deliberate intention) and motivational elements; they are an interplay of knowledge, capacities and skills, motives and affective dispositions".

Luthar and Karri (2005) examined the connection between studying ethics and doing business. Students stated that studying business ethics had an impact on their expectations and perceptions about what the linkage should be between ethical corporate practices and business outcomes. Sleeper et al. (2006) claim that business schools should have CSR topics in their curricula, and that CSR education has a great impact on donating, volunteering, membership in civil organisations, and the opinion of students that business courses need to incorporate reference to social issues. In the research of Segon and Booth (2009), most of the surveyed part-time MBA students on a dedicated CSR course agreed that business ethics should be a fundamental requirement for good business, and half of them identified CSR concepts as an important part of the managerial skill set.

Focusing on responsibility, Blass and Hayward (2015, p. 39-40) identified a skill set of responsible leaders which includes a long-term view, a wise combination of value-based and rational decision making, reflexivity, an innovative mindset, and a visionary outlook. With a strong focus on "doing well by doing good", responsible global leaders must rely on transparency, shared success, international sensitivity, and address both global and local issues.

The RRI competence framework provides a more systematic approach. Bayram-Jacobs (2015, p. 10) argues that "the emerging skills that should be improved in students according to the RRI approach are critical thinking, problem solving, questioning, responsibility and creative thinking" (see also Svanström, Lozano-Garzia & Rowe, 2008). The EnRRICH project determines four dimensions – anticipation, reflexivity, inclusiveness, and responsiveness – for the categorisation and explanation of RRI competencies (Tassone et al., 2018, p. 346-347). Anticipation includes the capability to explore and manage possible futures, future-oriented ethical capabilities, pro-activity in mindset and action, as well as "describing and analysing those intended and potentially unintended impacts that might arise" (Owen, Macnaghten & Stilgoe, 2012, p. 38 in Klaassen et al., 2017). Reflexivity covers the competencies of self-awareness about one's own dispositions, assumptions, norms, and values, situational awareness, social

awareness and empathy, ethical thinking, and disruptive thinking. Inclusiveness involves the competencies of multi-perspective and inter-cultural communication, participatory ability, trans-disciplinary collaboration, as well as openness and transparency. Responsiveness comprises the competencies of navigating complexity and uncertainties, adaptability, and having the agency to initiate or contribute to change. It is value-based (Owen et al., 2012).

Other authors focus on sustainability-related competencies. Rieckmann (2012) argues that there exists no agreement in the literature about the key competencies higher education institutions should develop when focusing on education for sustainability. His research resulted in the identification of twelve important competencies, among which the three highlighted ones are competency for systemic thinking and the handling of complexity, competency for anticipatory thinking, and competency for critical thinking. For our research, some further competencies from the former set are also relevant, including the competency for acting fairly and ecologically, competency for participation, competency for empathy and changing perspective, as well as competency for evaluation (Rieckmann, 2012). Kassel and Rimanoczy (2018) suggest the necessity of developing a complete sustainability mindset, covering the areas of ecoliteracy, systems intelligence, spiritual intelligence, and emotional intelligence.

The above-highlighted skills and competencies are not fully identical but have much in common, and they can be categorised according to which behavioural patterns they strengthen. A longer-term view, anticipatory thinking and a visionary outlook, systemic thinking, critical thinking and questioning, as well as rational decision making are strongly related to cognitive patterns, while competencies such as innovative mindset, creative thinking, social and environmental sensitivity, problem solving, individual responsibility, and reflexivity go beyond cognitive impacts and mobilise affective (sometimes also volitional) behaviour patterns. Further competencies like value-based decision making, competency for acting fairly and ecologically, competency for empathy and changing perspective, a sustainability mindset, as well as inclusiveness and responsiveness, may clearly exert an impact on conative behaviour patterns.

Those competencies are crucial in our research. The course we analysed aimed to highlight the most important issues associated with sustainability and social responsibility by focusing on how those issues are and should be integrated into corporate strategy to contribute to sustainable development. A further aim was to sensitise students towards sustainability and individual responsibility and provide them with various perspectives to shape their thinking and argumentation. The desired learning outcomes were a higher level of understanding regarding the essence and features of sustainable development; identification of the most important motives and influential factors in the CSR activity of companies; becoming familiar with and being able to formulate opinions about concrete, up-to-date examples of company practice; and, – last but not least – learning from critically assessing corporate sustainability reporting. Targeted skills and competencies included system-level thinking and handling the complexity of sustainable development, critical thinking, and questioning, taking a longer-term perspective, social and environmental sensitivity, problem solving, individual responsibility, reflexivity, value-based decision making, acting fairly and ecologically, as well as being empathetic and able to change perspective. Those skills and competencies are necessary for enabling students to evoke changes in their individual lives, the community, and the companies they will work for.

Identifying appropriate RRI teaching methods for achieving the targeted competencies

To develop targeted skills and competencies, a wide range of appropriate teaching methods is required, regarding which the RRI approach represents a useful toolset. To establish a longer-term view, anticipatory thinking, and a visionary outlook, the understanding of interconnections and causal relationships between different processes and phenomena must be fostered (Rieckmann, 2012). Analysing scenarios, tendencies, and projections can be very useful exercises for this purpose.

To support systemic thinking and to help handle the complexity of sustainable development, Lourdel, Gondran, Laforest, Debray & Brodhag (2007) propose the method of the cognitive mapping of student perceptions. This also helps evaluate how deep the understanding of students related to those complex issues is.

According to Morris (2009), for developing skills in critical thinking, questioning, and evaluating, students need to be given the freedom to control their learning. In this process, teachers are expected to function as facilitators who listen, respond, question, and summarise. The learning outcome itself emerges through the active involvement of students who make their own discoveries and reflect, participate in discussions, and work with others. Critical thinking makes it possible to "think outside the box in a way that breaks boundaries" (Neary & Thody, 2009, p. 40).

To develop the skill of reflexivity, reflective classroom practices are necessary, as suggested by Hedberg (2009). To handle the issues of sustainability and responsibility, critical reflection is crucial as it "can challenge embedded assumptions, beliefs and values…When we reflect, we give the learning a space to be processed, understood, and more likely integrated into future thoughts and actions" (Hedberg, 2009, p. 10-11). In addition to teaching methods which strengthen analytical thinking, reflection should be emphasized more than it has been previously. Hedberg (2009, p. 14) describes three types of understanding when it comes to reflective learning: subject matter understanding ("What am I learning about the subject under study?"), personal (self-) understanding ("What am I learning about myself?"), and critical (contextual) understanding ("What are the broader implications of my learning?"). She states that fostering all three types of understanding through teaching encourages the deepest learning, while reflection is most effective if it is undertaken before, during, and after the course.

Addressing social and environmental sensitivity as well as individual responsibility in competence building is an understudied area. Most pieces of research focus on the different manifestations of environmental awareness, ignoring the social aspects, thereby lacking an investigation of the holistic nature of individual responsibility and sensitivity. Beside using teaching methods targeted at individual environmental awareness, focusing more strongly on social sensitisation and personal (self-) understanding (as suggested by Hedberg, 2009) is expected to lead to the more effective development of individual responsibility and sensitivity, which can directly or indirectly result in acting fairly and ecologically. Demonstrating empathy and being able to change perspective can be fostered through multi-perspective discussions, role play, and situations in which expressing and practicing empathy is crucial (as suggested by Paschall & Wüstenhagen, 2012).

The aim of the course was to make use of appropriate RRI teaching methods. The course deeply integrates reflective learning throughout the whole process concerning the three types of understanding (as suggested by Hedberg, 2009): subject matter-, personal (self-)-, and critical (contextual) understanding. The RRI approaches we applied were: ongoing discussions related to every crucial topic, mapping the risks and opportunities of global sustainability and responsible behaviour during group work, reflecting on conflicting issues in the form of team presentations and related conversations, analysing videos and real-life examples and case studies by highlighting and explaining the relevance of various perspectives, as well as the joint formulation of a holistic overview for 'take-away'. Those approaches were aimed at mobilizing and developing the four RRI competencies of Tassone et al. (2018) in students –anticipation, reflexivity, inclusiveness, and responsiveness.

Methodology

Research questions

For the empirical research, two research questions were formulated:

1. How has the course – through its design, content, and teaching methods – changed the preferences of students related to corporate and individual responsibility?
1. How do students perceive and evaluate the RRI teaching methods we applied and the impact they had on them?

Research questions were investigated during a one-week long, elective blocked course called "Corporate Sustainability and CSR", offered by the authors at the University of Passau in June-July 2019 for 28 international master's students – including German, Chinese, Mexican, and Hungarian participants. Students were selected for the course in accordance with their overall study performance in the master's programme and intrinsic motivation, but their background knowledge and attitudes towards environmental sustainability and responsibility were diverse. We used mixed methodology to answer the two research questions.

Applying the Q method to investigate Research Question No. 1

First, we studied the literature to evaluate which research methods would be appropriate for measuring the effectiveness of the course in changing students' preferences in relation to the targeted learning outcomes. Cognitive learning outcomes are usually measured by assignments, exams, tests, and evaluations of student performance (Chirieleison, 2017). Affective learning outcomes are measured by surveying attitudes towards sustainability and/or to the course itself, involving asking about students' personal involvement and the perceived impacts of the course on their attitudes (Adler, 2002; Gioia, 2002; Crane & Matten, 2004; Davies, Edmister, Sullivan & West, 2003; Evans & Marcal, 2005). Conative learning outcomes are difficult to measure, as actual behaviour is a manifestation of several influential phenomena. The impact of a course is rather indirect and may only appear later in time. In the literature, willingness to act, or behavioural patterns of individual responsibility (e.g. sustainable consumer behaviour) are typically surveyed (Kagawa, 2007; Zsóka, Marjainé Szerényi, Széchy & Kocsis, 2013).

To go beyond traditional performance evaluation methods and avoid the biased responses which are frequent in surveys, the Q-method was applied to analyse students' priority orders in terms of cognitive, affective, and conative behavioural patterns related to individual and corporate responsibility and sustainability.

We chose the Q-method because of its advantages and expected suitability for assessing the impact of the course on students' preferences. The method was previously applied by the authors in several areas of sustainability (e.g. Nemcsicsné Zsóka, 2007; Zsóka, Marjainé Szerényi, Ásványi & Flachner, 2011; Ásványi, 2014; Ásványi & Kiss, 2019). The advantage of the method is that it combines qualitative and quantitative elements, which permits the presentation of different opinions, values, preferences, and social viewpoints related to focal issues (Webler, Danielson & Tuler, 2009; Hofmeister-Tóth, 2005). A further advantage of the Q-method is that a smaller sample size (of 12-50 respondents) is sufficient for the analysis. Representativeness is not aimed at – the main aim is to identify different viewpoints and preference structures about a topic (Webler et al., 2009; Watts & Stenner, 2012).

To capture changes in the preference structure of students, the research was conducted both before and after the course. Based on the main objectives and the learning outcomes of the course, 30 statements were formulated for the research, covering the areas of conscious and responsible consumption and consumer expectations towards companies, as defined in a study by Dudás (2011), completed by further statements about corporate responsibility-related issues included in the UN Sustainable Development Goals (Gore, 2015). Taken together, statements covered four types of responsibility (specific statements

are referred to in more detail in the results section of the paper):

- expected responsibility of companies towards their employees,
- expected responsibility of companies towards their consumers,
- individual social responsibility,
- individual environmental responsibility.

Respondents were required to position the 30 statements in a matrix structured according to a forced normal distribution, shown in Table 1. The procedure is based on the pairwise comparison of statements and an assessment of the degree of agreement or disagreement with each statement as compared to other statements. Statements were formulated in either a positive or a negative way to foster the prioritisation process. Data were analysed using the PQmethod 2.35 software (http://schmolck.org/qmethod/downpqwin.htm).

Table 1.

Preference table used in the Q-method

-3 Disagree	-2	-1	0	+1	+2	+3 Agree

Source: authors' construction

Semi-structured interviews for investigating Research Question No. 2

As reflective learning was one of the main objectives of the course, the Q-method was supplemented by semi-structured individual interviews to obtain deeper insight into the achievement of learning outcomes from the perspective of students' opinions (King, 1994). As the goal was to understand individual aspects and to obtain more detailed information, we used semi-structured interviews (Berg-Luna, 2012). Questions were formulated in an open way, and were not directly related to targeted skills and competencies or to specific teaching methods, as we were interested in how students perceive and recognise factors as shaping their behaviour. The questions were the following:

- Which areas of your life were affected by the course?
- How have the course assignments influenced your consumer behaviour?
- How has your environmental awareness changed during the course?
- How has your social awareness changed during the course?

A total of 10 in-depth interviews were conducted after the course, where respondents' identities were anonymized.

Results

Change in priorities and behaviour patterns

Sixteen of the 28 students participated in the research that employed the Q-method, on a voluntary basis. In the first step, principal component analysis was undertaken on the

Table 2.

Rotated factor score matrix in the pre-course and post-course research phase

Preference orders	*Pre-course research*			*Post-course research*		
	Factor 1	Factor 2	Factor 3	Factor 1	Factor 3	Factor 2
FH	**0.5645x**	0.1238	0.0195	**0.6590x**	-0.0016	0.1731
AG	**0.7291x**	-0.2752	0.2730	**0.9088x**	0.0771	0.0045
BP	**0.7201x**	0.1720	0.3412	**0.6635x**	0.1627	0.5219
DM#	0.0171	**0.6172x**	0.0171	0.2230	**0.8016x**	-0.1073
EK	**0.6151x**	0.3878	0.0538	**0.6879x**	0.1979	-0.0165
JH	**0.6770x**	0.2894	0.1845	**0.6014x**	0.2682	0.0520
KP	**0.8180x**	-0.0731	0.0171	**0.8240x**	0.1507	0.1242
LM#	-0.2376	0.5805	**0.6081x**	-0.0280	-0.1607	**0.8118x**
MS	**0.7983x**	0.2274	-0.102	**0.6906x**	0.2248	0.3509
MG#	0.1449	0.1143	**0.7939x**	**0.6355x**	0.1275	0.2202
GM	0.2275	**0.7671x**	0.1224	0.2174	0.3423	**0.6694x**
MK	**0.5116x**	-0.1142	0.4915	**0.7207x**	.3215	-0.0557
NM#	0.2477	0.2394	**0.7693x**	**0.5317x**	0.1740	0.4802
PL#	0.1903	**0.6552x**	0.1947	0.0614	**0.7990x**	0.2499
JW	**0.5393x**	0.0826	0.3075	**0.7625x**	-0.0686	0.1206
SR	**0.5928x**	0.4324	0.1531	**0.7439x**	0.1126	0.2253
% expl. Var.	**29**	**15**	**14**	**38**	**11**	**12**
Members	**10**	**3**	**3**	**12**	**2**	**2**

Comment: # symbolizes those students whose preference structure changed the most and who were later sorted into another Factor, pre-course Factor 2 transferred to post-course Factor 3, ** Mixed factor*

Source: authors' construction

data, which yielded a total of eight factors. The final number of factors was determined by the eigenvalue of factors (above 1) and explained variance (around 60% or higher). Correlation between factors was also tested so as to be low enough (below 0.4) and each factor had to contain at least two priority structures. Factors also had to be meaningful and significant (Watts & Stenner, 2012).

Varimax rotation was performed for different factor solutions. In the four-factor solution, factors were too similar to each other, and three of the four factors included too few members to permit interpretation of the results. In the two-factor solution, the explained variance did not reach the critical minimum. Hence, both solutions were rejected. The three-factor solution met all preconditions (eigenvalue above 1; explained variance: 58%) and proved easier to interpret. Correlation between factors was less than 0.4 and all respondents' preference orders could be automatically assigned to the factors. Since the comparability of pre-course and post-course priority structures was important, the same number of factors was determined for each research phase. Table 2 shows the rotated factor score matrix for both phases, and also indicates changes in the allocation of preference structures to the factors.

The ten preference orders of pre-course Factor 1 belong to post-course Factor 1 (seven of them with even higher Z-scores), which shows a clearer structure of preferences. Two respondents (MG and NM) changed their preferences the most as their preference orders moved from Factor 3 to Factor 1. The composition of pre-course and post-course Factor 3 is completely different, as the preference orders of DM and PL moved from Factor 2 and became part of Factor 3. GM's preference order stayed in Factor 2 and that of LM moved to the latter from Factor 3, but post-course Factor 2 has significantly different characteristics to pre-course Factor 2.

Pre-course and post-course research results will be interpreted separately, according to the key patterns of the factors which represent 'typical' preference structures of the four types of responsibilities within the sample. Factors will be first characterised according to the statements which received the highest positive or negative Z-score above 1 or below -1 –representing a strong positive or negative position in the preference order. Post-course results will be analysed in accordance with the changes in factor characteristics, distinguishing statements, and consensus statements, and common features of all preference structures will be further analysed to clarify the main impacts of the course on students' preferences.

Pre-course findings identified by the Q-method

We call Factor 1 *responsibility oriented,* as member preference structures express strong expectations about corporate responsibility towards respondents in the roles of both employees and consumers, as well as reflect a desire for strong individual social and environmental responsibility in private action. Factor 2 is entitled *socially and environmentally inconsistent* as the preference structures therein show combined features of preferred and neglected responsible activities. The preference structures of Factor 3 suggest clearly *individualistic* behaviour patterns.

All factors involve expectations about how companies should treat their *employees.* Factor 1 stresses strong expectations about corporate responsibility in relation to general, family-friendly workplace and healthcare measures. Students associated with this factor strongly reject tobacco companies as future workplace. In contrast, students sorted into Factor 2 do not insist on family-friendly operations, while students contained in Factor 3 would not reject working for a tobacco company.

As *consumers,* the preference structures of members of Factor 1 favour recycled, environmentally friendly, fair-trade and cruelty-free products, which reflects a high level of individual awareness as responsible consumers, and expectations that companies should provide such products. The consumer behaviour and expectations of members of Factors 2 and 3 are inconsistent. The environmental impact of products is less important for those in Factor 2, while individuals in Factor 3 would not reject making purchases from unethical companies and choose environmentally friendly and socially responsible products quite selectively.

Social responsibility in relation to individual activity (in the form of volunteering and acting for the community) is only important for students who make up Factor 1. They would have no problem working with disabled colleagues, and they report to being honest in situations which they could in theory utilise for their own benefit at the expense of others. There are significant differences in *environmental responsibility*, as students classified into Factors 1 and 3 do not turn off electric devices, while those in Factor 2 do not separate waste, and members of Factor 3 are ready to take their own shopping bag.

Post-course findings identified by the Q-method

Post-course findings are interpreted according to the changes which are witnessed in the structure and features of factors so as to explore the impact of the course in terms of shaping the preferences of students for types of individual and corporate responsibility. As illustrated in Table 3, changes in the relative positions of statements in the preference structures of factors can be detected for every type of responsibility, but in a diverse way, which makes detailed explanation necessary.

Due to the changing preferences, Factor 1 can be classified as *responsibility-driven*, Factor 2 shows *inconsistent* patterns but *conscious consumer expectations*, while Factor 3 includes *socially and environmentally more sensitive* preference structures, although in an *inconsistent* manner. After the course, all responding students were *less* likely to reject becoming an *employee* of a tobacco company. This might be surprising, but there are many reasons for this. One is the discussion of employee-oriented CSR initiatives in different industries – where "irresponsible" economic sectors such as the tobacco industry perform relatively strongly due to the need to maintain employee satisfaction and retention. Another reason is that in reflecting on the many serious social and environmental issues

Table 3.

Changing preferences as a result of the course

	Post-course research		
	Factor 1	*Factor 2*	*Factor 3*
Expectation of responsibility of companies towards their employees	• Reject working for a tobacco company ↓ • **Lifelong learning ↑**	• Reject working for a tobacco company ↓ • Family-friendly workplace ↓	• Reject working for a tobacco company ↓ • **Family-friendly workplace ↑** • Care about employees' health ↓
Expectation of responsibility of companies towards their consumers	• **Environmental impact of products ↑** • **Pay attention to product labels ↑**	• **Fair trade and cruelty free products ↑** • **Pay attention to product labels ↑** • **Domestic/German products ↑**	• **Fair trade and cruelty free products ↑** • Pay attention to product labels ↓
Individual social responsibility	• **Donate ↑** • **Act for the community ↑** • **Work together with a disabled employee ↑**	• **Donate ↑** • **Act for the community ↑** • Prefer volunteering ↓ • Trust in civil sector ↓	• **Donate ↑** • **Like volunteering ↑** • **Be honest ↑** • Work together with a disabled employee ↓
Individual environmental responsibility	• **Turn off electronic devices ↑**	• Turn off electronic devices ↓ • Impulse buy ↓ • Take own shopping bag ↓ • **Collect waste selectively ↑**	• Turn off electronic devices ↓ • **Carry own shopping bag ↑**

Symbols: ↑ and italics symbolise strengthening preference, ↓ symbolises weakening preference
Source: authors' construction

during the course, the relative importance of the issues increased, restructuring the overall order of preferences. Depending on the factor membership, the relative importance of further employee-related CSR initiatives such as supporting lifelong learning, being a family-friendly workplace, caring about trainees or the health of employees was diverse. As *consumers*, the preference structures of Factor 1 and Factor 2 show stronger expectations in several areas than before the course, including for product labelling and responsible products. Factor 3 is obviously inconsistent in terms of consumer behaviour-related preferences. As *individuals*, students became more positive about donating (in all factors) and acting for the community (Factors 1 and 2). The strong focus of the course on sensitising students and increasing their individual social and environmental responsibility is the reason for those phenomena. However, there are some features for which the relative change in preferences is ambiguous when comparing pre-course and post-course factors, revealing areas where the impact of the course seemed to be weaker, thus an increase in the sophistication of the course content and RRI tools in teaching seems necessary. Members of Factor 2 ranked trust in the civil sector and volunteering relatively lower in the preference order, and the same is true for Factor 3 in terms of the acceptance of working with disabled colleagues. With regard to other behavioural patterns, the preference structures of Factor 3 appear to be socially more responsible. Regarding individual environmental responsibility, some behavioural patterns climbed, and others declined in importance in the preference orders of the three factors, making further clarification of environmental issues in the course and further education for sustainable and responsible behaviour necessary.

Changes in consensus statements

Table 4 summarises *consensus statements* in pre-course and post-course research phases, indicating changes and revealing some impacts of the course on the shared opinions of students. Three types of consensus statements can be identified within Q-method: significant and non-significant consensus statements based on the factors (both are important in the analysis), and consensus statements based on the similarity of Q-sort values.

As can be seen from Table 4, the course contributed to an increase in *consensus statements*, most of which were ranked higher in the preference order. Some non-significant pre-course consensus statements became significant post-course, and the number of consensus statements based on similar Q-sort values increased.

The course clearly encouraged students to formulate stronger expectations about their future *employer* being a responsible workplace and caring about their health, as well as supporting lifelong learning and trainees. These expectations were found to be the strongest both before and after the course. Expectations about responsible banking practices also strengthened. As *consumers*, there was consensus in both students' social and environmental expectations about companies regarding the types of products they would prefer to buy – including recycled, fair-trade, and domestic products. Since the course mainly focused on corporate sustainability and CSR, the impact on expectations about companies is understandable, while features of individual social and environmental responsibility show less consensus. Trust in the civil sector slightly increased, willingness to act for the community and donate through purchasing were also ranked higher

Table 4.

Consensus statements in the pre-course and post-course research phases

	Pre-course research	*Post-course research*
Expected responsibility of companies towards their employees	• Company respondents work for must be a responsible employer. • **Company respondents work for should care about the health of employees.**	• **Company respondents work for must be a responsible employer.** • Working for a tobacco company is rejected less strongly. • *Lifelong learning and managing trainees in a responsible way is expected from the employer.*
Expected responsibility of companies towards their consumers	• Buying products made from recycled materials is preferred. • Responsible banks are preferred.	• **Buying products made from recycled materials is preferred.** • **Responsible banks are preferred.** • **Buying fair-trade products is preferred.** • **Environmental impact is considered more important than the quality of the product.** • **Buying domestic vegetables is preferred.**
Individual social responsibility	• **Weak trust in civil sector.** • Working together with a disabled employee is accepted.	• **Slight increase in trust in civil sector.** • *Acting more for the community is preferred.* • *Stronger preference for donating through purchasing.*
Individual environmental responsibility	• **No-one considers himself/herself an impulse buyer.** • Indifference to turning off electronic devices.	• **Carrying own shopping bag is preferred.**

Explanation: Bold: significant consensus statements. Regular format: non-significant consensus statements. Italics: consensus statements according to similar Q-sort values

Source: authors' construction

by everyone, and the same is true for some "light-green" behaviours such as carrying a bag for everyday shopping. The course obviously could not evoke a uniform shift in preferences regarding all the pressing issues of individual environmental and social responsibility, but the pattern analysis of the factors highlighted some significant changes in this direction for most participants.

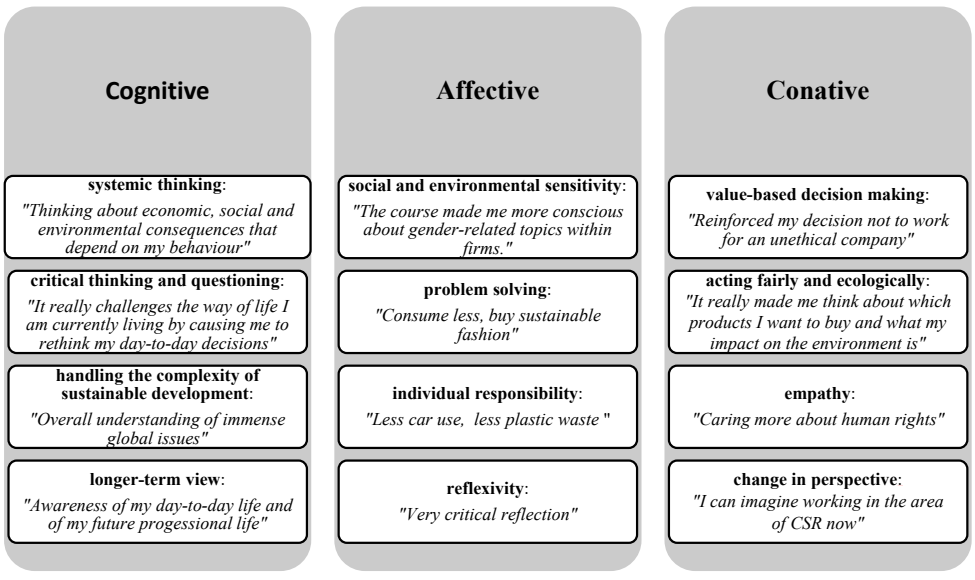
To further evaluate the impact, and especially the effectiveness, of the RRI tools we applied during the course, supplementary semi-structured interviews were conducted, immediately afterwards.

Assessment of RRI tools via semi-structured interviews

The ten individual interviews indicated a very positive overall impression of the course. Respondents strongly appreciated the teaching methods – they highlighted the interactive manner of the course, active involvement of students, discussions in small groups and in the whole class, and the continuous exchange of opinions. They perceived the course as creating an open, democratic atmosphere, where all critical opinions were welcome and appreciated, while the professors reflected on those opinions.

Figure 1.

Recognised targeted skills and competencies according to their behavioural focus



Source: author's construction

The latter feedback was reported to be very important for helping students to psychologically incorporate the new approaches and the discussed perspectives. Case studies and practical examples were considered to be effective starting points for obtaining a holistic overview and integrating sustainability-related issues into the day-to-day lives of individuals.

Beyond highlighting the impactful teaching methods, students also mentioned the importance of the attitude of tutors: "professors seemed to be committed wholeheartedly to the topic". This element is usually neglected by the literature, although it obviously should be given more emphasis, especially in the case of sensitive and complex issues such as sustainability and responsibility. Students' acceptance and integration of the main messages and overall approach are considered to be more successful when the latter experience the personal commitment of teachers towards the topic.

Figure 1 illustrates how the targeted skills and competencies of the course appeared in the answers related to cognitive, affective, and conative behavioural patterns.

Results suggest that all targeted skills and competencies were indirectly recognised and perceived to be strengthened in the cognitive, affective, and conative behavioural dimensions. Among the cognitive patterns, respondents highlighted the systemic and critical thinking they had developed about sustainability and responsibility issues, the "*overall understanding of immense global issues*", and the need to deal with the complexity of sustainable development. They recognised the fact that their behaviour and actions have economic, social, and environmental consequences, so their sense of individual responsibility for the future increased. The course strongly emphasised the long-term view, which factor appeared in reflections related to private day-to-day life and future professional life.

Affective behaviour patterns mainly involved attitudinal change, suggesting an increase in students' social and environmental sensitivity. The latter reported becoming more conscious about gender and human-rights issues. Due to the case studies and discussions, students became more conscious about environmental problems and solutions, which was reflected in their attitudinal change towards car use and plastic waste generation, as well as to everyday life: "*consume less, buy sustainable fashion*". Reflexivity – which was articulated in the discussions and strongly critical reflections about the topics that were addressed – also went beyond cognitive impacts and mobilized affective behavior patterns.

Course objectives targeted at conative behaviour patterns also gained resonance. According to interviewees, the course helped students make value-based decisions – it "*reinforced my decision not to work for an unethical company*". Changes in perspective were also detected: "I *can imagine working in the area of CSR now*". Students reported to have become more empathetic and attentive to human-rights-related issues. The discussion of sustainability issues increased their willingness to act fairly and ecologically: "*It really made me think about which products I want to buy and to think about my impact on the environment*".

Related to the four types of responsibilities, interviews supported the research findings of the Q-method, as students reflected on how the course had impacted their private and work life. After reading and discussing the CSR reports of several companies, students became more conscious and also more critical about what companies do in relation to CSR – *"how firms try to trick consumers with their CSR activities"* – which increased their expectations about companies in terms of transparency and the responsible treatment of employees and consumers. Regarding individual environmental and social responsibility, interviewees reported paying more attention to their impact on the environment: *"After the course I had a closer look in the supermarket at how many alternatives we need to replace plastic."* Social awareness changed mainly in terms of gender-related topics, equal opportunities, and human rights: *"The conditions of employees became a more prevalent part of my thoughts about consumption".* Some students reported to modifying their consumption behaviour by becoming more conscious, thinking more about the environmental impacts of products, and consuming less, especially clothes: *"I am thinking more about whether I really need new clothes."* More students reported changes in work-related attitudes. Beyond a willingness to work in the area of CSR, and to reject companies that behave unethically, we also heard reference to the need for "change agents" (as suggested by Kagawa, 2007) in society: *"The course reinforced my approach to not necessarily work for the most ethical companies, as people with a responsible attitude are especially needed in companies whose behaviour is located somewhere between ethical and unethical"*. This statement provides a further explanation for why some students consider it acceptable to work for a company which is not yet consistently responsible.

The interviews also provided insights into the three types of understanding (as suggested by Hedberg, 2009*).* Students were asked to describe what responsibility means in their opinion, giving us hints about *subject matter understanding.* These interpretations were consistent with the approach of the course.

Personal understanding related to how students connect the learning outcomes to their own individual responsibility and what they apply from the learning outcomes in day-to-day life. In this sense, recognising the consequences of their own behaviour and claiming that responsibility should be taken in relation to the environment and society goes beyond subject matter understanding, and has a strong link to personal understanding. Students mentioned both environmentally and socially responsible activities that they had decided to carry out because of the course, which were in line with the topics discussed therein. However, since the focus of the course was corporate sustainability and responsibility, some students expressed their desire for more information about meaningful ways of changing individual behaviour.

Critical (contextual) understanding refers to the broader implications of learning outcomes, which were

not possible to measure objectively. The interviews served here as an opportunity for self-reflection. Some hints of contextual understanding were expressed in the following statements: "*only the world as a whole can face the issues"* (i.e. the need to involve all stakeholders), and: "*it really challenges the way of life I am currently living by making me rethink my day-to-day decisions*". Respondents recognized that "*all people should be inspired to take responsibility"* and that everybody has to change "*from being indifferent to paying more attention"* to sustainability issues. The course had clearly impacted the critical understanding of students and strengthened their systemic perspective.

As a final note, in line with Zsóka et al. (2013), students stressed the crucial role of education in increasing knowledge about responsibility-related issues: "*a lack of knowledge is most of the time a problem which hinders people from behaving differently"*, as people "*still do not have an overview of how some products actually hurt the environment around them"*, so education could "*help understand the importance of responsibility"*. Beyond increasing knowledge, education can also result in increasing sensitivity: "*young people become aware and will still be aware when some of them become leaders*" – a claim that supports the opinion of Blass and Hayward (2015) that sensitivity is one of the most important skills of responsible global leaders. Students experienced that education "*is the foundation of changing mind-sets in terms of doing something for society and the environment"*, which resonates with the call of Kassel and Rimanoczy (2018) to develop a complete sustainability mind-set within society.

Discussion

Results highlight a clear shift in the responsibility-related preferences of the participating students towards deeper understanding, critical thinking, the expression of stronger expectations about companies as employers and providers of goods and services, and last but not least, towards the better articulation of and higher sensitivity about individual social and environmental responsibility. Students who were already responsibility oriented before the course became more responsibility driven after. Originally environmentally and socially inconsistent students became more sensitive in their individual behaviour, although their preference structure still shows inconsistencies. The factor of individualist students disappeared, while a new factor with conscious consumer expectations emerged. As the course mainly focused on corporate behaviour, an overall increase could be detected in students' expectations that companies should become more responsible in relation to their employees and consumers.

Interview findings indicate the recognition and appreciation of RRI teaching methods, which were perceived very positively, as highly inspiring, eye-opening, and impactful tools which can widen perspectives, provide a good overview and understanding, as well as sensitise the audience in terms of attitudes and behaviour intentions. In addition, the personal commitment and credibility of the teaching staff were also considered to be crucial in transferring the messages and achieving the intended impacts of the course.

As the research results indicate, the RRI approach can be effectively used in teaching to achieve course objectives and learning outcomes, especially when the focus of the course itself is strongly related to responsibility and sustainability. Previous research findings are supported by our empirical research. The aim of applying a mixed method was to address the understudied area of measuring the impact of a course more specifically on soft skills and competencies and the affective and volitional aspects of behaviour, and to show which patterns are easier and which are more difficult to shape via RRI teaching methods. Cognitive aspects are usually measured, and were also measured in this case. The hard skills of students were assessed by evaluating their performance. The initial selection of students for the course – based on their study performance, ambition and intrinsic motivation – generally resulted in sustained, high quality performance. Since participants had more than one month to prepare for the course, including reading compulsory and recommended literature and writing and submitting two individual papers – one on the concepts of value creation, and another on the non-financial reporting practices of a selected company – as well as to compile a group presentation on a specific topic, the course could be considered an advanced one that created a common level of knowledge a priori. Beyond these assignments, individual contributions to discussions were also strongly emphasized in the final evaluation. Each performance unit counted for 25% of the final score and grade.

Cognitive impact was also measured using a "classical" standardised course evaluation form that was implemented at the end of the course, through which students assessed the approach and content of the course, its contribution to students' professional development, the method of teaching, expertise of the tutors, etc. These elements are associated with immediate, short-term impacts, as the indicators mainly focus on cognitive awareness, impressions, and opinions. Comprehensive statistical aggregation of the course evaluation forms supports our research findings, suggesting that the overall objectives of the course and the intended learning outcomes were successfully achieved. RRI-based teaching methods were given very high scores, indicating that students truly appreciated the reflective, communicative, argumentative teaching approach, and how sustainability- and responsibility-related issues were introduced and discussed. The strong focus on developing the skills of critical thinking, as well as contrasting different perspectives in an open, democratic, and reflective way impressed the students and met their expectations regarding the course.

Affective impacts were measured using the two methodologies analysed above, although measuring conative impacts and the explanatory power of the applied research methods is limited. Some volitional aspects and behavioural intentions resulting from the course could be identified and highlighted, but an exploration of actual changes

in behaviour would require longitudinal research as stated preferences (as measured here) and revealed preferences (later action) are not necessarily the same. Similarly, in reality one has to choose from the choice options that are available, if they are not preferred.

Conclusions

The paper describes research aimed at measuring the effectiveness of RRI teaching methods in a course focusing on corporate sustainability and CSR. The Q-method was used to assess changes in the responsibility-related preferences of students, while semi-structured interviews were conducted to evaluate the perceived impacts of the course on students' understanding and the development of their skills and competencies. The use of the Q-method is novel in this area, as it has not yet been used for measuring the impacts and effectiveness of courses before. As the research was carried out before and after the course using the same sample of students, changes in preference structures regarding different types of responsible behaviour could be directly connected with course objectives and targeted learning outcomes. Additional semi-structured interviews further enriched the findings, providing a reflective assessment of the course and the RRI tools applied therein.

The analysed course focused on implementing two of the three design principles for RRI in higher education: 'education for society', and 'educating whole persons', which influenced the scope of effectiveness and the impacts that could be expected from the course. Both the subject matter and critical understanding of students were developed by the course, supporting the principle of education for society, while the impacts of the course on students' personal understanding are closely connected to the principle of educating whole persons. The effectiveness of a course can be further increased by implementing the principle of 'education with society', which enables students to benefit from the concepts of 'learning by doing' and 'doing well by doing good' and strengthening conative behaviour patterns by using approaches that can increase responsibility in real life situations.

In conclusion, the research results show that RRI-based teaching methods can be used effectively, especially when the course itself has a strong focus on responsibility and sustainability. Achieving the intended learning outcomes and developing the desired skills and competencies in all areas of human behaviour makes the application of a wide range of RRI tools necessary, possibly including the implementation of all three design principles for RRI in higher education.

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NÓRA FAZEKAS – KATA BECK-BÍRÓ

LOSING TOUCH? – A CASE STUDY ON STUDENTS' LEARNING BARRIERS WITHIN AN EXPERIENTIAL-LEARNING-BASED COURSE

MIÉRT NEM ÉRTJÜK MEG EGYMÁST? – ESETTANULMÁNY A HALLGATÓK TANULÁSI GÁTJAIRÓL EGY TAPASZTALATI TANULÁS ALAPÚ KURZUSBAN

The research aimed to discover learning barriers that educators unconsciously raise in students of the organisation development master's course at Corvinus University of Budapest within an experiential and transformative educational setting. The research follows the interpretive and critical traditions of organisation studies and applies the concept of responsible research and innovation (RRI) in its research design. This article aspires to present a case that can be used by management educators working with experiential pedagogical approaches in higher education. Research results displayed a lack of emotional security and a lack of common vision and understanding as the main obstacles to students' transformative learning through the experiential learning process. Results suggest dialogical practice for building trust and understanding to eliminate alienation in student-teacher relationship and to improve learning quality. Finally, limitations and further research directions are discussed.

Keywords: **experiential learning, transformative learning, responsible research and innovation, management education, critical pedagogy**

A kutatás célja olyan tanulási gátak feltárása volt, amelyeket a pedagógusok öntudatlanul hoznak létre Budapesti Corvinus Egyetem szervezetfejlesztés MA kurzusának hallgatóiban egy tapasztalati és transzformatív tanulási környezetben. A kutatás az interpretatív és kritikai tudományelméleti hagyományokat követ, és a felelős kutatás és innováció (RRI) koncepciójára épít. Ez a cikk egy olyan eset tanulságait mutatja be, amelyet a felsőoktatásban, tapasztalati tanulási módszertanokkal dolgozó menedzsmentoktatók hasznosíthatnak. A kutatási az érzelmi biztonság, valamint a közös vízió és kölcsönös megértés hiányát mutatták ki, mint a diákok transzformatív tanulásának fő akadálya. A kutatás a dialógus gyakorlatának fejlesztését javasolja a bizalom és a megértés megteremtésére, az elidegenedés feloldására, valamint a tanuló-tanár viszony és a tanulás minőségének javítására. A cikk végén a kutatás korlátait és további kutatási irányokat is tárgyalnak a szerzők.

Kulcsszavak: **tapasztalati tanulás, transzformatív tanulás, RRI, menedzsmentoktatás, kritikai pedagógia**

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As we approach the first quarter of the 21st century, we need leaders and managers to be prepared for the unexpected more than ever. As a recent example, the COVID-19 pandemic has made it apparent that organisations are vulnerable to the volatility, uncertainty, complexity, and ambiguity (VUCA) (Mack & Khare, 2016) of their environment, and it has shown the significance of the role managers play in keeping organisations alive, as well as developing or rethinking them.

Thus, higher education (HE) has the responsibility to provide management students with experiences that equip them for similar challenges and problem-solving. Students also seek educational programmes that offer hands-on, practical experiences to be attractive in the job market. However, business schools seem to struggle to provide dependable practical and actionable knowledge (McMillan & Overall, 2016).

Hence, adult education research is continuously after methodologies that are suitable to prepare management students to be more efficient in the tasks they will encounter during their careers. Moreover, HE is expected not only to develop knowledge and skills but to nurture attitudes and values that are constructive in a VUCA environment. What is the role of educators in this venture and how is such learning possible?

The present article tackles this question by analysing the case of a university course built upon the concept of experiential learning, inviting students into a transformative learning situation. The authors of this study noticed, as the educators of the observed course, that the course's approach was difficult for some students to engage with emotionally and in practice as well. From a reflective and critical viewpoint, the purpose of the research was to discover learning barriers that *course educators* construct unconsciously within students, thereby impeding the above-mentioned educational goal.

The research approach follows the interpretive and critical traditions of organisation studies and applies the concept of responsible research and innovation (RRI) in its research design. Research results show examples of emotional, cognitive, and structural barriers to learning within an experiential learning setting and suggest possible resolutions to these.

Conceptual Framework

Experiential Learning

The observed course has been designed to support the experiential and transformative learning of its participants. Dewey, researching the role of experiences in the learning process, identified a *pattern of inquiry*. Learning starts with the identification of a problem and follows with observation, planning, testing, and reflection (Kayes, 2002). Building on his legacy, one of the most commonly applied models of experiential learning is that of Kolb (2014). In Kolb's concept, experiential learning is an intersection of concrete experience and abstract conceptualisation both in formal and informal learning contexts. First, the learner engages in *concrete experience*, then transfers to a phase of *reflective observation*, where he or she interprets and reviews the experience. In the phase of *abstract conceptualisation,* the learner draws conclusions, defines learnings, and finally enters *active experimentation* based on the learnings completing the cycle (Kolb, 2014).

With the evolution of the concept in education theory and practice, there is a diversity of similar competing and complementary concepts, such as situated learning (Lave & Wenger, 1991), action learning (Revans, 2011), project-based learning (Blumenfeld et al., 1991), problem-based learning (Barrows et al., 1980), cooperative learning (Slavin, 1980), and collaborative learning (Dillenbourg, 1999). We have chosen the frame of experiential learning because it is applied explicitly in the curriculum of the course.

As experiential learning embraces change in cognition and behaviour, we need to visit *thresholds* in students' learning processes (Carver & Hodge, 2019). Threshold concepts address the issue of distinguishing formal contents that, when mastered, open a door to a set of formerly inaccessible concepts, knowledge, and understanding. These contents are especially difficult to comprehend and are usually the core concepts of a discipline. Passing the threshold of understanding may cause significant changes in learning behaviour or even in the learner's identity and subjectivity (Meyer & Land, 2003). When this happens, we can speak of *transformation* within the learning process.

Transformative Learning

Transformative learning theory is an educational approach covering conative, affective, and cognitive dimensions of learning and change in the whole person of the learner. The theory is founded on humanistic and emancipatory grounds. In emancipatory learning, learners encounter alternative ways of interpretation and revisit schemes and perspectives, reorganise former knowledge, and gain novel insights (Mezirow, 1991). Transformative learning, embodied in active participation, critical thinking exercises as well as in dialogue and discussions (Magro, 2009), affects the learner's perspective, worldview, and sense of self (Kasworm & Bowles, 2012).

Consequently, transformative learning can also be painful for students (Hoggan & Kloubert, 2020). According to Mezirow (1991, 2000, 2012) learners can experience disorientation, anxiety, self-questioning, and usually find the learning process risky and frustrating. Mezirow (2000) described the transformative learning process as follows:

> 1. A disorienting dilemma. 2. Self-examination with feelings of fear, anger, guilt, or shame. 3. A critical assessment of assumptions. 4. Recognition that one's discontent and the process of transformation are shared. 5. Exploration of options for new roles, relationships, and actions. 6. Planning a course of action. 7. Acquiring knowledge and skills for implementing one's plans. 8. Provisional trying of new roles. 9. Building competence and self-confidence in new roles and relationships. 10. A reintegration into one's life on the basis of conditions dictated by one's new perspective (p. 22).

Transformative learning design is an invasive practice on the part of educators. Michelson (2019) points out that transformative learning plans often involve predetermined and deliberate change and transformation to be made in students' minds or ways of thinking. Hoggan and Kloubert (2020) acknowledge this ethical dilemma by differen-

tiating three educational approaches of transformational learning approaches. First, the *adaptive* approach starts from the perspective that students go through various learning challenges, and the role of educators is to support and guide students through these and foster the opportunity for transformative learning. The approach embraces the notion that during the coping process transformation is likely to happen, but it is not initiated or forced in any way. Second, the *process-oriented* approach promotes learning methodologies designed to enable transformative learning, such as debate, negotiation, and critical reflective practices. Third, the *prescriptive* approach holds to the premise that the educator holds a correct worldview to be integrated by the learners or that learners have to be liberated from a false or dysfunctional one. The latter approach is seen by many scholars as a way of indoctrination, whereby students might rightfully feel disrespected and invalidated.

However, different students cope with their reactions to experiential and transformative learning stimuli differently. Finch et al. (2015) created a taxonomy of educational emotions related to achievement, based on previous literature (Table 1). Research on the connection between educational emotions and learning indicates that, on one hand, positive emotions enhance the level of interest to encourage personal growth and professional development. Therefore, positive emotions are crucial to foster deep learning. On the other hand, negative emotional responses urge students to perform better and can increase engagement with the learning process. Negative emotions can be sources of self-discovery and can transform the students' view of themselves and their worldview. Learning from failures can foster students' abilities to regulate their emotions and to build confidence and professional skills (Finch et al., 2015).

Table 1.

Taxonomy of Educational Emotions

Object focus	Positive		Negative	
	Activating	Deactivating	Activating	Deactivating
Activity focus	Enjoyment	Relaxation	Anger Frustration	Boredom
Outcome focus	Joy Hope Pride Gratitude	Relief	Anxiety Shame Anger	Sadness Hopelessness

Source: Finch et al. (2015, p. 25)

Kaplan and Maehr (1999) explore the connections between student motivation and reaction learning experiences in their achievement goal theory (AGT). Students with *mastery goal orientation* will seek challenging tasks, invest greater effort into them, and have a higher level of motivation to overcome negative emotions generated by the task to improve their competencies. Students with *performance goal orientation* are motivated by completing the tasks while defending the picture of their competent (self-) image. If negative emotions emerge during the learning process, performance-goal-orientated students are more likely to disengage and quit the process mentally or even physically.

A Critical Take on Student-Teacher Relationships

As the above literature suggests, educators play an enormous role in influencing students' learning journeys at the level of their emotions or even deeper – their picture of self. In our quest to understand how educators block learning processes, how educators become a "problem" in education, we need to look at the critical literature of education. According to this tradition, education is always a political act (Freire, 1996), and "pedagogy is never innocent" (Giroux, 2016, p. 66). It is impossible to talk about neutral, objective education, as it is intertwined with power relations, values, and political intentions (Giroux, 2016). Teachers become oppressors, and students become the oppressed, mere followers of instruction, which turns into internalised self-oppression and self-depreciation as a result of socialisation during participation in public education (Freire, 1996) and develops into a conflict-handling strategy of avoidance and compromise (Jamieson & Thomas, 1974).

The perceived power of the teacher has various social bases, according to French and colleagues' model (1959), such as (1) reward power (expectation of reward), (2) coercive power (expectation of punishment), (3) legitimate power (perceived right), (3) referent power (desire for a friendly relationship), (4) expert power (perceived knowledge), and (5) informational power (information capital) (Jamieson & Thomas, 1974). Assumed power deficiencies lead to power conflicts, which can erupt as a product of intolerable frustration.

The "oppressors" hold their position of power also through the cultural context. Conflict and frustration can be the result of cultural convictions, communication failures in higher education, attempts to "fix" students, pathologising them rather than reflecting on aspects of alienation. Educators adopt a superior stance representing the "unquestionable" culture and expectations of academia – usually unintentionally and unaware.

As a result, both sides get lost in translation due to (1) the failure to discuss and explore the personal and institutional processes involved in academic study and assessment, (2) the lack of acceptance of a wide range of motives and types of engagement, (3) the lack of explicit discussion of the key assumptions and principles of the academic discipline, (4) the opaque and alienating use of language, (5) and students' ignorance of the more complex aspects of the process via which disciplinary aims may be realised (Haggis, 2006, p. 11).

However, conflicts created by power relations and miscommunication can, at the same time, be transformed into a catalyst for change that can be achieved through collaborative conflict resolution (Jamieson & Thomas, 1974).

Dialogue as a Solution

To resolve this inequality and the frustration of oppression, Freire suggests practising responsibility for one's freedom and liberation, pursuing *dialogue* based on love and the hope for the desired outcome, and thinking critically. "Founding itself upon love, humility, and faith, dialogue becomes a horizontal relationship of which mutual trust between the dialoguers is the logical consequence" (Freire, 1996, p. 91).

Dialogue is communication among a group of people that is voluntary and free. Engaging in group dialogue supposes regular, ongoing occasions, the aim of each meeting being to create space for a new, common stream of meaning, for a new common understanding to emerge, and for building participatory consciousness. These can replace the incoherent assumptions of individuals by suspending assumptions and defence mechanisms since there is no competition: in dialogue, everybody wins (Bohm, 2013). As Schein puts it, "… the members share the potential excitement of discovering, collectively, ideas that individually none of them might ever have thought of" (Schein, 1993, as cited in Beck-Bíró, 2010, p. 67). In such a process, power positions can be demolished. Members of a group "… respond spontaneously and productively; they forget about themselves, about the knowledge, the positions they have. Their egos do not stand in their own way… they give birth to new ideas, because they are not holding on to anything" (Fromm, 1979, as cited in Beck-Bíró, 2010, p. 67).

Background and Methodology

Researchers followed interpretative traditions when preparing this case study, concentrating on context-specific meaning-making and aiming to understand the local lifeworld of actors while building on ideas of radical humanism at the same time (Burrell & Morgan, 1979).

The interpretative paradigm favours methods inherently based on dialogical and symbolising practices such as interviews, narrative inquiry, art, and artefact-based sense-making and reflection. Although the methodology is systematic on its own terms and meets the prerequisites of scientific investigation, the research will be deliberately subjective, as the researcher is viewed as part of the interpretation process, unable to separate their own contextual embeddedness from the subject of research (Hatch & Yanow, 2003).

The chosen methodology is the case study method that allows one to build a theory or gain a better understanding of the local context (Bryman, 1992; Eisenhardt, 1989, as cited in Gelei, 2002; Marshall & Rossman, 1989; Yin, 2009). As Maaloe (2004) suggests, the case study research method gives the chance to trace links between discrete happenings and to understand how and why a certain chain of events may be released. Furthermore, according to Stake's approach, a case study enables us to understand a particular case as thoroughly as possible, hence the research question is the following: "What can we learn from a single case?" (Stake, 1994, as cited in Denzin & Lincoln, 1994, p. 236).

Table 2.

Participants in the Specific Research Events Within the Research Project

	Current student (CS)	Former student (FS)	Current consultant (CC)	Former consultant (FC)	Current teacher (CT)	Lead researcher (LR)
Focus group discussions						
CS1	X					
CS2	X					
CS3	X					
FS1		X				
FS2		X				
FS3		X				
CC1		X	X			
LR1		X	X			X
LR2		X		X	X	X
Interviews						
FC1		X		X		
CC2		X	X			
Research diaries						
LR1		X	X			X
LR2		X		X	X	X

Source: own editing

The basic assumption of the research initiative was that for students to learn, there needs to be mutual trust and cooperation between students and educators (Freire, 1996). This emancipatory assumption called for the RRI framework to be the basis of the research design. RRI aims for greater democracy in science; thus, the two parties of the course, students and educators, researched the issue together with the guidance of the two lead researchers. "Co-RRI is an anticipatory, reflexive, inclusive, and responsive R&I process, where stakeholders collectively translate these features into local reality through a deliberative process while realizing and reflecting on the political nature of this process" (Bajmócy et al., 2018, p. 26). As the essence of the concept is in the *process* of the research, researchers followed the RRI process dimensions in their design ("RRI process dimensions", n.d.): (1) inclusion (2) reflexivity, (3) transparency and openness, and finally (4) responsiveness and adaptive change.

Research data came from three main sources: focus group discussions, individual semi-structured interviews, and the lead researchers' research diaries. Co-researchers and their participation in specific research events are displayed in Table 2. Because of the nature of interpretative and qualitative research, the researchers placed great emphasis on the use of multiple types of research data to provide credibility within the case study (Yin, 2009) and on the length and depth of the research events to reach data saturation (Lincoln & Guba, 1985). Co-researchers were invited via open and individual channels, following a purposive sampling method (Guest et al., 2013) to involve all relevant roles within the course. Participation was voluntary.

The main body of research data came from three focus group discussions involving the same nine co-researchers. Each meeting took 2.5 hours and was organised every two weeks. The focus group method (Hennink, 2013) enabled complex patterns to emerge due to the group dynamics that caused inspiration and excitement within the group.

The lead researchers conducted two semi-structured interviews (Kvale, 1996) with former consultants of the course. The interviews lasted one hour each. The two main questions targeted the following topics: (1) what kind of learning barriers exist and how do we construct them as educators of the course and (2) are the current course and learning design appropriate, and what changes should be made.

During the focus group discussions and interviews, real-time reflection and member checking (Guba & Lincoln, 1985) took place, during which all participants could share their assumptions about the process and content of the research as well as their current cognitive and emotional state in the research processes. During these research events, the lead researcher took notes.

The two lead researchers wrote research diaries (Corbin & Strauss, 2015) after each focus group discussion and individual interview. A research diary "enables the researcher to become more self-aware not only of his or her biases and assumptions but also of the reason for making certain decisions and to obtain insight his or her own behaviour" (Corbin & Strauss, 2015, p. 37); thus, it helped the lead researchers to ensure the validity of the findings. These diaries were separate online documents written within one day of the research events. These writings are personal reflections on the research event, based on the personal experiences and field notes for the research event, displaying the thoughts, emotions, and dilemmas of the researchers.

The research data were analysed iteratively throughout the focus group meetings, interviews, and separate member-checking conversations between the lead researchers aiming at a deep and unified understanding of the phenomena emerging from the research.

The Case and Findings

The field of research has been the organisation development (OD) course at Corvinus University of Budapest (CUB). CUB counts as one of the best business schools in Hungary, obtaining several accreditations (AMBA, EQUIS, EPAS, BSIS, EAPAA as of 2020). The course constituting the case study belongs to the Master's in Management and Leadership programme offered by CUB, a programme ranked as 84th in the *Financial Times* in 2019 (Financial Times Business School Rankings, 2019).

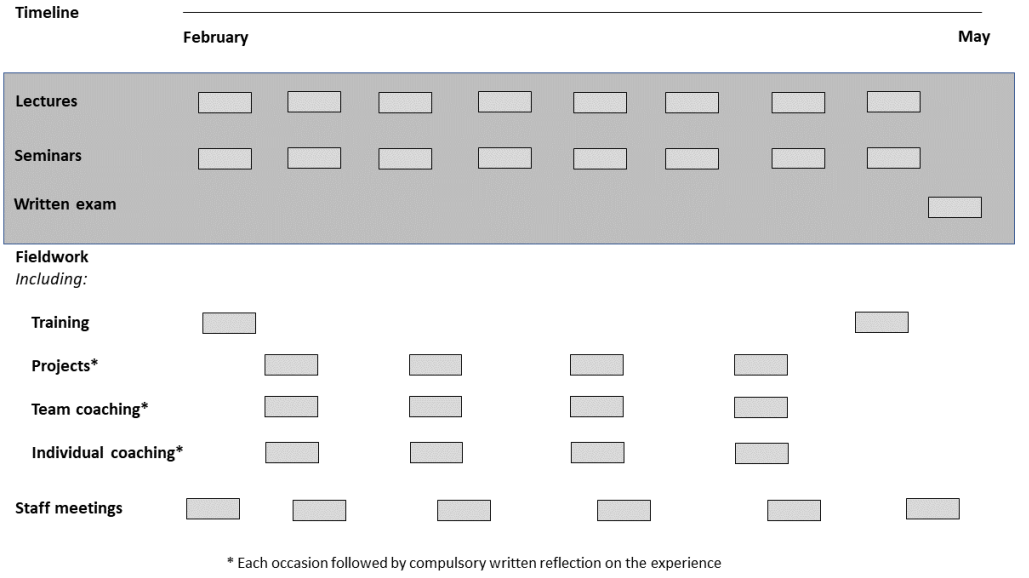
The OD course was established in 1998 by Professor Gelei, who is still the course director and who aims to provide students with theoretical knowledge (concepts and ways of thinking) and practical skills in organisational development. "Organization development is a planned organizational change intervention, the goal of which is, on the one hand, to solve mounting organizational problems (in the long run), and on the other, to develop the organization" (Gelei, 2002, p. 114).

The course has two overlapping tracks. The compulsory track contains 12 lectures and 12 seminars, 90 minutes each. Professor Gelei, the course director, holds both the lectures and seminars. The lectures are mostly frontal presentations, whereas the seminars are rather interactive with structured exercises, aiming to teach about the core values of OD philosophy and practice, including (1) systemic thinking, (2) responsibility and engagement, (3) authentic and honest communication, (4) a process-based approach, and (5) reflective experiential learning. Students have the option to choose only the compulsory lectures and seminars or sign up for the so-called "OD training" track too, which is a project-based fieldwork course, including four interconnected projects. These projects are carried out in smaller teams, facilitated by consultants who are offering training, along with team and individual coaching opportunities throughout the semester. The structure of the programme is displayed in Figure 1.

These 12-week tracks are rather intensive for students the staff as well, especially because both parties consciously engage in an experiential learning cycle (Kolb, 2014). Seminars, fieldwork, and staff meetings are strongly based on gaining concrete experiences that are followed by personal and group-based reflections in a written or oral format, and then, later during the semester, these learnings are challenged in new situations.

Figure 1.

The Structure of the OD Course Offered by CUB – Compulsory Track Marked With the Grey Background



Source: own editing based on Gelei (2017)

There are several actors and roles involved in the course which were all involved in the research:

- teachers hold the lectures and seminars of the compulsory track of the course and also coordinating the OD training track,
- students take part in the compulsory track or adding the OD training track and participate in lectures and seminars or project-based fieldwork, training, and individual and team coaching,
- consultants are alumni of the course, mostly OD practitioners, who are invited by the course director, based on his perception of whether the consultant would be able to represent the OD values and practices taught throughout the course; consultants carry out their work voluntarily,
- course staff are consultants together with the teacher of the course. They participate in staff meetings to share experiences, knowledge, and dilemma emerging throughout both tracks and related occasions and events (projects, coaching, etc.).

The original aim of the research was to discover the learning barriers constructed by course staff unconsciously within the students. However, the research not only identified barriers but also the process, i.e. how staff and students co-construct them. These finding are displayed in the next section along the defined periods of alienation throughout the course, following a chronological disposition.

Prior to the Course: Unconscious Alienation

The research found that student-staff and student-student relationships start in an environment of distrust from the beginning. By the time the students arrive for the master's course in OD, the teachers are, in their view, *enemies* rather than facilitators of their learning (CS2, FS2, FS3), confirming the perception of the existing power relationship discussed by Jamieson and Thomas (1974). Even at the first encounter within the course, there is tangible distrust towards the teacher's role, no matter who is acting out that role (Freire, 1996).

Beyond a general sense of mistrust, students starting the OD course experience further frustration: the specialisation offering the course does not have a particularly good reputation among management students from the other specialisations, and its nickname is "the drawing specialisation" since drawing, among other methods, is indeed applied in reflection exercises. According to OD students (CS1, CS2, FS3), they feel frustrated and even sense a kind of contempt coming from their fellow students.

Another learning point was the contradictory message sent to students by teachers and society in general about the balance between following a more individual strategy and keeping in sight the interests of a group or a community. Students report that several courses offered by the master's programme require teamwork; even the performance assessment is often based on team performance rather than individual effort and results. At the same time, students feel that their fellow students are pursuing individual strategies, putting an unequal amount of effort into teamwork; hence, points obtained during the course or grades received at the end are often perceived as unfair compared to their individual contribution (CS3, FS1, CS1).

These phenomena revealed the blind spot of the lead researchers: students and staff start their work in a distrustful relationship. Consequently, the transformative learning process (Mezirow, 2000) is hindered. The following elements build unconscious distrust:

- between student-staff: The less than positive reputation of the specialisation, not handled or acknowledged by the staff, brings out students' frustration,

sometimes even a sense of inferiority that easily ends up increasing distrust towards the staff and the possibility of sabotaging one's learning process.
- between student-student: There is a contradictory message about individual and collective strategies in reaching a good or outstanding performance. This contradiction is rather confusing for students, discourages them from throwing themselves into intensive coursework and causes distrust among the students, too.

The Beginning of the Course: Initial Experiences of the Alienation Process

When the structure and intensity of the OD training track is presented to the students during the first lecture, showing also testimonials from former students ("I almost died it was so hard, but in the end, it's worth taking the training track as well!" (FS2)), the first reaction of several students is one of anxiety. "I have a life outside this course (other courses, part-time job), why should I die for this one?" (CS1), "I don't even know what OD is, or if I want to become an OD practitioner in the short run, so I'll skip it" (CS3).

Also, when the staff introduce themselves, the basic attitude of consultants is characterised by enthusiasm: "This course had a big impact on my life; I believe in OD values"; "This is why I took on the role of consultant in this course for free" (FC1); "I do it from my heart, so at least let me enjoy it!" (CC2). As was uncovered in the focus group interviews, this enthusiasm caused the mixture of the students' feelings from the very beginning of the course: "Why do they expect me to be committed to something I don't even know?" (CS1). Some even took it for a "fake marketing tool" (CS3).

Even though the first seminar of the course is about making a psychological contract to foster dialogue (Bohm, 2013) among all participants of the course, it does not tackle truly deep issues, mainly due to the lack of student experience of honest dialogue throughout their school years (CS1, CS3).

In looking for a deeper understanding of these phenomena, the main finding has been that students' motivation (Haggis, 2006, p. 11) and staff motivation go against each other and become counteractive. Students sign up with different motives and levels of engagement (goals and attitude). As our research detected, there are twelve clusters of course participants (Table 3) that interact with the staff's motivation.

The staff's (power) motivation is manifested through its enthusiasm via imperatives like "Let it have an impact on your life, too!" and "This course is important and valuable. Make the most out of it!" (LR2). However, this level of staff energy can seem aggressive and neglects the more complex aspects of experiential and transformative learning. The reason for this is that staff presume that students have mastered goal motivation (Kaplan & Maehr, 1999; "Interested in questions", "Arrived" clusters); hence, they have the will and the skills to handle the upcoming complexity offered through the intensive, experiential learning-based course, and students are ready for the transformative learning process described by Mezirow (2000). However, the truth is that there are several performance-goal-orientated students (Kaplan & Maehr, 1999) in both tracks. Students in the "Credit seekers" and "Interested in answers" clusters might feel less valued or even discriminated against by the staff, as the staff become impatient with these students' learning process (Meyer & Land, 2003; Michelson, 2019).

The staff do not discriminate on purpose; it is a defence mechanism because they feel that their power motivation is at stake, i.e. something important to them is, or might be, rejected by the students. Thus, they attempt to engage students but fail to identify to which cluster the given student belongs, thus becoming unable to comply with different needs. They become "elitists" and ignorant, and with their behaviour, they suggest an ideal of maximalist student behaviour (CC2). This is perceived as non-supportive behaviour from the staff and can be viewed as a form of oppression (Haggis, 2006), in that the educators push students to participate in a prescriptive transformative learning situation (Kloubert, 2020).

Table 3.

Student Groupings Within the Course, Based on Goals and Attitudes

Goal	**"Arrived"** *("I want to be an OD practitioner")*		**"Path seeker"** *("I'm not sure if OD or HR is the way for me")*		**"Credit seeker"** *("I just want the diploma")*	
Attitude	Taking the project course	Not taking the project course	Taking the project course	Not taking the project course	Taking the project course	Not taking the project course
Interested in answers *("the easier way" – "Give me the knowledge!")*						
Interested in questions *("the harder way" – "Show me some concepts!")*						

Source: own editing

So, the conscious alienation process starts with the staff's enthusiasm, which is perceived by the students as a heavy expectation that makes the distance between staff and students even greater: "We talk, even 'shout' to each other from the two sides of the river" (CC2). Consequently, the staff indeed miss the opportunity to have an impact on all students, which quickly leads to disappointment and frustration on both sides. Moreover, a gap opens up between students who can meet these expectations and students who are unwilling or unable to do so. Students who are unable to meet such expectations even start to feel ashamed. This originates not only from the feeling of distrust among students but because the staff implicitly convey the message that students who are less willing or less able to meet the expectations are worth less.

Experiences During the Course: Cooperation From a Distance

It is a stressful course, and not only because of its intensity but because several "tension-points" are built into it. Students also mention these "tension-points" during the interviews (CS1, CC1) as extremely difficult for them; however, consultants mostly ignore this complaint, as drawing on their experience as OD practitioners, they claim these challenges "are just a part of the professional life" (LR2). The following methods and practices implemented within the course are based on the assumptions of the teachers and consultants. As the research results show, bringing real-life OD practice as an experiential learning environment into the classroom might also impede students' learning process:

- "short time limits" (FS1): Even though consultants remind students of the importance of starting the upcoming project phase as soon as possible, students do not take this warning seriously but try to relax after the previous project phase. As a result, their work piles up, and they put themselves under time pressure. It is little wonder that students demand a break before the next project tasks. Bearing in mind what has been presented previously about students' distrust towards the staff, it is hardly surprising that students ignore the benevolent warnings about deadlines. Even if consultants share various stories about short time frames from their own OD experience, these are not accepted as good advice, probably because of the "*teacher as enemy"* assumption.
- "there's no one good answer" (CC2): Like all OD projects in "real life", the students' fieldwork has no one good solution either. As a consequence, when students ask the consultants for help, as authentic OD practitioners, the consultants are unable to give one good answer, and instead they ask even more questions to help students find their own "good answer" to their question. This makes students, especially performance-goal-orientated students (Kaplan & Maehr, 1999), uncomfortable (see Table 3 on the different goals and attitudes of the students) and get frustrated: "I prefer to be told what to do, not to discover it myself" (FS1). This perceived lack of self-responsibility and lack of emancipation makes some consultants also frustrated with students (FC1).
- "learn to drive while driving" (CC1): Another source of frustration among students is the process of experiential learning itself, meaning that they learn about OD while doing a quasi-OD project. However, being an OD practitioner requires experiential learning practice during any OD project. Although several students aspire to go into this field, they expect to do such projects only when they are more confident in their knowledge and capabilities.
- "controversial role of the consultants" (LR2): Consultants play an evaluator-developer role for their teams. They give them a final grade for the actual project and, at the same time, help them to develop into a better-performing team via team coaching. This is hard since the two roles have different standpoints. Consultants believe that these roles can fit together and are more and more expected to fit, as for example in the case of leaders. However, the research shows that students expect the consultants to play an "evaluator" role and that they feel uncomfortable in a developmental situation. Although an evaluator needs much less trust from the evaluated person than a developer from the developed individual; students are hesitant to let consultants in.
- "subjectivity in performance assessment" (LR1, CC1): The research shows that staff, knowing that this is a demanding course, have difficulty giving honest negative feedback to the students, as they do not want to destroy the students' motivation. The reason for this kind of "protection" is probably because of their maximalism and because of knowing how hard it is to handle negative feedback. As a consequence, the staff lean on the "OD has no one good answer" statement, and on the subjectivity of the evaluation, which is a common and conscious practice in the field of OD. Accordingly, the consultants tend to give more honest negative oral feedback but a good grade, thereby not showing consistency. Students feel this inconsistency and discuss it with each other among the teams ("What did your consultant say? Ours didn't mention that." (CS2)), which results in unclear expectations.
- "feedback: Pandora's box" (LR1): Feedback throughout the course aims to fulfil the consultants' role not only as evaluators but also as developers. As developers, consultants encourage dialogue within their teams, which often turns into a "complaints session" on the students' side. Experience shows that students are unfamiliar with the proper attitude and techniques for feedback, especially in an academic setting. Hence, by asking them for feedback, consultants open up a Pandora's box and students project all their heartache onto the consultants and the course. At this point, the consultants start to turn both sides' perceptions and experiences into more constructive

cooperation, which requires a good sense of self, knowledge of group dynamics, and adequate communication skills. Whether a student can be engaged in this process is a sign of his or her mastery. Performance-goal-orientated students (Kaplan & Maehr, 1999) are usually either unwilling or unable to take responsibility for their own experiences. This will determine the students' specific personal attitude towards the course for the rest of the semester, as well as towards the final course evaluation.

As a result of all these experiences, most students consider the course to be "mission impossible", a matter of "life or death": "Our group sewed a mascot, a so-called motivation penguin, to have a common survival tool" (FS3) and "It felt like we were comrades in the trenches" (FS2). However, the research shows that many students are not ready for this kind of relationship: several students holding themselves to the prior-to-the-course distrust even "collect" more frustration and anger. Unclear goals and requirements coming from the staff enhance the distance between the parties (see Haggis, 2006 again), even if the consultants convey a consistent attitude of OD practitioners towards their students. This emphasises that if the context (goals and frames) of a course is not clear for the students, they will not feel secure (e.g. how to perform well), and the content of the course can seem shady and abstract despite the authenticity of the staff.

Course Retrospective: When the Learning Arrives

The OD course finishes with a half-day training, during which the focus is on (personal, team, and course) reflection. If ever, then this is usually the moment when the two parties manage to arrive at the point of dialogue. The reason for the students' turnabout is generally emotional.

Students have become frustrated at trying to be comfortable with the uncomfortable (CS1, CS2), and by this time some learning has taken place in both cognitive and behavioural terms. *Tension turns into pride.*

The students' fatigue by the end of the semester is obvious, not only because of the hard work but also because of the emotional rollercoaster they have been on (CS2, CS3, FS1, FS2). Personal and team coaching sessions, the teamwork itself, and the intensive cooperation with the consultants give rise to several painful moments. Disappointment in themselves, in their team members, and in the collaboration, leads to more profound revaluations. *Disillusion turns into self-confidence.*

The impatience to obtain easily implementable OD tools also changes for several students: the efforts invested during the fieldwork bring not only unforgettable moments but also knowledge gained through deep experience that affects their approach to OD, to cooperation, to work, and even to life itself (CS1, FS1, FS3). As the research shows, students have realised by this stage of the course that learning by experience is painful but worthwhile. *Impatience turns into courage.*

Of course, not all students go through these transformations. Feedback on the course generally centres around two thoughts: (1) "This course has been 'dreamlike' [abstract]. I miss specific knowledge"; and (2) "This course has been extremely hard but has made me stronger." The latter satisfies the staff: they have had an impact on the students—as they have in their various OD projects. The former comment gets teachers and consultants thinking about what and how they can develop to reach more people (clients)—also familiar from their OD practice (CC1, FC1, CC2, LR2).

At the end of the course, students calm down due to the change in perspective: leaving behind the intensive days and having time to reflect on the happenings offered by the course helps them to revisit their learning from the course.

Discussion

One of the main findings of this research is that when the "elite" staff, selected by Prof. Gelei, meet "elite" students of the elite master's programme, transformative learning hardly happens. If it does, it occurs only at the very end. The reason for this is that none of the parties experience emotional security in reaching their goals. During the process, they lose control, which is considered a failure, and they struggle to deal with that. Elite students are not used to this, the elite staff have some experience with it, but, in the end, it is still uncomfortable. Consequently, self-defence mechanisms start to work: staff start to be "louder" and more aggressive, while students cling to the routine cognitive elements of a university course in general and become less open to the OD course and the OD profession itself. Experiential learning as well as transformative learning fails on such an insecure and distrustful ground.

Elite meets elite also implies that "it is hard to learn if you already know" (Argyris, 1991; Edmondson, 2017). The participants of the course have been recognised in several situations; they are looked at as "clever people", which implies that when they fail, they have no experience in taking responsibility, and they lose self-confidence. As Finch et al. suggest (2015), positive, activity-focused enjoyment only comes from students with self-confidence. But these students are pushed out of their comfort zone by (1) the intensity of the course, (2) distrust towards staff and fellow students, and (3) the experiential learning methodology. They therefore lack psychological safety, which is essential to start the "disorienting dilemma" phase as the first step of transformational learning (Mezirow, 2000). This reinforces Haggis's (2006) warning about the importance of explicit discussion of the key assumptions and principles of the academic discipline. Only consultant work that focuses on (re)building the student-staff trust will enable students to descend into the painful (Hoggan & Kloubert, 2020; Mezirow, 1991, 2000, 2012) process of transformational learning. Students need to perceive psychological safety to progress to the next phase of transformational learning (Mezirow, 2000): self-examination of feelings of fear, anger, guilt, or shame. Especially because students in the research were recognised by their cognitive

performance in the school system so far, dealing with deep negative emotions like frustration, shame, etc., needs an especially strong "psychological web" in which students can lean in a trusting manner.

Taking into consideration the above-mentioned feelings, we might conclude that transformative learning design is an invasive practice on the part of educators, as it aims to lead students through this painful process. Michelson (2019) also points out that transformative learning plans often involve predetermined and deliberate change and transformation that has to be made in students' minds or ways of thinking. The research concludes that educators should assume a supportive role in this process instead of the role of an aggressive and demanding "evaluator".

Emotions play an important role in transformative learning. Mostly because of the tiredness caused by (1) the intensity of the course and (2) being outside their comfort zone for several months, feelings become explicit by the end of the course, which helps the much-awaited transformation. Transformation in the staff also begins; being tired and disillusioned, they can let go of the motivation for educational power, the prescriptive approach (Hoggan & Kloubert, 2020), that made them invasive in the first place (Michelson, 2019). In their case, at the closing of the course, not only feelings but also cognitive elements play a role in becoming placid: "I did all I could 'til now" (LR2).

Using RRI methodology, staff and students became co-researchers during this case study research. All researchers had to face distrust, opposing opinions and criticism, as well as failures that these implied for each party, but finally conflict strengthened the relationship. Putting aside one's own assumptions and internalising those of the research partners was initially as difficult and frustrating as Bohm (2013) suggests: it triggered a defence mechanism in all the co-researchers.

At the first focus group discussion, speaking from "power position", the staff's role almost cost the atmosphere of partnership and trust that the group started with. Feedback generated frustration and conflict, endangering the evolving dialogue as well as the results of the research itself. At the same time, it opened up conflicts about distrust, expectations, and all the tension points mentioned above, which had always been hovering around us unspoken or unaddressed, generating a creative tension (Senge, 1990) and raising questions we were all curious to explore by continuing the process together.

At the second focus group discussion, participants expressed their learning and views in a "non-violent", non-confrontational way. This enabled a double-loop learning experience for all of us in the bigger group as well. It helped the co-researchers obtain a trust-based relationship and engage in dialogue, gaining meaningful input for curriculum improvement.

At the third focus group discussion, the research group came to the same conclusions and formulated the suggestions that lead researchers had debated at the preceding member-checking discussion. On the one hand, this validated the findings and reflected the theoretical saturation of the research (Bloor & Wood, 2006). On the other hand, the group recognised that a shared set of meanings emerged in the verbal links that co-researchers, regardless of whether student or staff, created together. At this point, there were no longer "incompetent" or "irresponsible" students, no "unfair" or "sadistic" staff. Things were as they were, trustfully accepted. This shared consciousness felt valuable, promising room for greater engagement and beneficial change within the course.

Reaching trust and psychological safety within the research group, which could not have been realised within the course, we concluded further learnings: beyond the will and skill with respect to dialogue, a shared vision, a common goal among participants is also necessary to achieve transformative learning. Going through the "reflective journey" together, on an intrapersonal level, all participants are more likely to show their cognitive and affective struggles openly and transparently. On an interpersonal level, participants become more responsive and engage more proactively in the dialogue process. As these attitudes and behaviours become norms, they reduce the alienation among participants and enable not only staff-student dialogue but the transformative learning of each participant as well.

Conclusions

The research aimed to discover the barriers that educators unconsciously raise in students of the organisation development master's course at Corvinus University of Budapest that hinder their learning processes within an experiential and transformative learning course setting. The research group constructed of co-researchers, in line with the concept of RRI, worked with case study methodology, applying various qualitative data acquiring and analysing methods. The article hoped to present a case utilisable for management educators working with experiential pedagogical approaches in higher education.

Researchers identified the lack of emotional security and the lack of common vision and understanding as main obstacles to students' transformative learning through the experiential learning process. Educators realised that they fail by developing false assumptions about students' achievement goals, maturity, and motivation. They aimed only at mastery-goal-oriented students who corresponded to their ideology of learning. Practising a prescriptive approach to transformative learning, some students felt invaded, which impeded their learning. A possible direction for improvement is a change towards a process-oriented transformative learning approach. To create a common vision and understanding for the experiential learning process, the authors emphasise the role of trust. This trust was shown to be taken for granted by both students and the staff; however, the research showed that it has to be and can be built up through the continuous and conscious practice of dialogue.

The one-semester span of the research and the embeddedness of the research group might limit the results of the research. With a longer, repetitive research project and the involvement of unbiased external researchers, findings

could be broadened further. Limitations of the research are also inherent in the qualitative case study methodology. Thus, the authors did not attempt to provide objective or generalisable conclusions and guidelines based on the case in this article.

The present research focused on individual learning. Further research appears promising in the field of group dynamics in similar learning settings to uncover how students' different achievement goals or different paces of learning impact each other including what the role of team members and educators is in fostering the whole team's transformative learning. Another direction is the exploration of different dialogic practices across academic courses: how is the construction of a common vision and understanding best achieved and what roles do educators have in this.

The authors of this article strove to paint an honest and vivid picture of student-teacher understanding and collaboration, or the lack thereof, in university education—a picture or pattern that might be familiar or similar to the experiences of other higher education professionals. This happened with the hope that learnings from the case will be beneficial for the improvement of other courses with experiential and transformative learning designs. For, the authors firmly believe that experiential learning, hands-on practical professional experience that can initiate deep-rooted learning has to become an integral part of higher education. To provide a safe playground for students to practise coping with the VUCA environment, however, as educators, we have to learn to get in touch and keep in touch with our students, their emotions, and motivations.

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MIKLÓS KOZMA

EDUCATING FUTURE BUSINESS LEADERS THROUGH VALUES OF RESPONSIBLE RESEARCH AND INNOVATION – EXPLORING THE POTENTIAL OF SENSITISING STUDENTS IN THE LEADING BUSINESS SCHOOL OF A CONVERGING ECONOMY

A JÖVŐ ÜZLETI VEZETŐINEK KÉPZÉSE A FELSŐOKTATÁSBAN A FELELŐS KUTATÁS ÉS INNOVÁCIÓ ÉRTÉKEI MENTÉN – A HALLGATÓK ÉRZÉKENYÍTÉSI LEHETŐSÉGEI EGY FELZÁRKÓZÓ GAZDASÁGÚ ORSZÁG VEZETŐ EGYETEMÉN

The purpose of the research project was to explore the potential for applying the Responsible Research and Innovation (RRI) approach in a leading business school. It was the authors' intention to discern the key issues in how their business undergraduate students see their current and future roles as contributors to addressing major challenges in society. The authors' findings revealed what students starting their university education already know about the societal issues addressed by the RRI initiative, and also in terms of where the greatest room for improvement exists for professors of business courses. The comparison of the results from action research between bachelor students and MBA students revealed preliminary indications of potential regional patterns (Central-Eastern Europe) to be further identified. The professional implications for business school faculty include encouragement to refine the business concept introduced to students so as to become more inclusive and responsive.

Keywords: **responsible research and innovation, university education, societal issues, Central-Eastern Europe, business school, responsible, inclusive, responsive**

A kutatás célja a felelősségteljes kutatás és innováció (RRI: responsible research and innovation) megközelítés alkalmazási lehetőségeinek feltárása volt egy vezető egyetem üzleti képzésében. Az volt a szerzők szándéka, hogy azonosítsák azokat a kulcskérdéseket, amelyek szerint üzleti alapszakos hallgatóik jelenlegi és jövőbeli szerepüket látják közreműködőként a társadalom főbb kihívásainak kezelésében. Eredményeik feltárták, hogy az egyetemi tanulmányaikat kezdő hallgatók mit tudnak már az RRI-kezdeményezés által érintett társadalmi kérdésekről, és azt is, hogy az üzleti kurzusok oktatói számára hol van a legnagyobb lehetőség ennek további finomítására. Az alapszakos hallgatók és az MBA-hallgatók közötti akciókutatási eredményeik összehasonlítása feltárta a lehetséges regionális minták (Közép-Kelet-Európa) előzetes elemeit, amelyeket későbbi kutatások által tovább finomítandók. Az egyetemi üzleti képzésben oktatók számára javaslatként fogalmazták meg a hallgatókkal megismertetett üzlet fogalom finomítását, a befogadóbb és adaptívabb értelmezések elsajátítása érdekében.

Kulcsszavak: **felelős kutatás és innováció, egyetemi oktatás, társadalmi kérdések, Kelet-Közép-Európa, gazdasági felsőoktatás, felelős, befogadó, adaptív**

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Students in business schools, especially first year students, tend to approach the concept of business, and the role of corporate decision makers through various stereotypes. Educators have responsibility to guide them towards more nuanced approaches. This includes what their current and potential future role in business may be, and steering them away from overly narrow definitions of professional scope, or from apathetic interpretations of the impact they can make. The ultimate challenge for professors in business schools is finding ways to connect higher education and solutions for the pressing issues of society, and turn student interest and activity towards the constructive roles they may play in shaping our shared future.

The question arises of how our students, as future decision makers, see science and innovation as relevant tools for achieving both strategic and mundane objectives in their professional lives. Educators share the responsibility for guiding students towards the careful and elaborate application of theoretical concepts and analytical frameworks so that they will be able to make lasting, purposeful decisions. Business students may develop into corporate decision makers, exerting influence over budgets larger than entire economies. In light of the stereotypes with which they tend to start their undergraduate studies, higher education aims to provide a transformative experience for students in terms of establishing the conceptual and strategic frameworks for sustainable solutions in business and beyond.

The purpose of the research project explained in this paper was to explore the potential for applying the Responsible Research and Innovation (RRI) approach in a leading business school. More specifically, our aim was to identify the common basis for the further elaboration of student understanding of their responsibility regarding the key RRI-related values. Building on a robust basis of shared understanding is necessary in order to clarify the potential of our work as educators. It was also our intention to discern the key issues in how our business undergraduate students see their current and future roles as contributors to addressing major challenges in society. Where can major areas of further improvement be identified and what are the potential reasons for their relative weakness?

The focus of our efforts was explicit in-class discussions about RRI-related values with first year undergraduate business students in Hungary's leading business school. The findings were contrasted with results from comparable discussions with first year MBA students in the same school. These discussions were arranged to be in the very first class of their studies at the university. Finally, the educator's reflections were also revealed in terms of the impact that applying the RRI approach had in helping to refresh his own education objectives and methodology. While there is existing information related to the application of RRI principles and tools in higher education internationally, we aimed to potentially explore how the local context (in a convergent economy from a former communist region) may add distinctive features to some of the key RRI-related activities and their potential impact in the courses selected (c.f. Czakó, 1992; Wimmer & Matolay, 2017); hence our choice of context sensitive methods. We also aimed to inform future scholarly and education efforts related to the scope of our work through our open methodological approach.

Responsible Research and Innovation in Education

The European Commission identified and described the major challenges society faces today, and considered the ways that science can play a role in meeting those challenges. Research and innovation have had a major impact on how our lives have developed, especially over the last couple of centuries, and their role is expected to increase further in importance due to constant technological progress. The exploitation of natural resources has intensified, although the productivity of production operations has also been improving. Consumer options have proliferated exponentially, and access to information has reached a level unprecedented in human history.

The so-called "Grand Challenges" defined by the European Commission include issues related to demographic change, (un)sustainable agriculture, (in)efficient energy production, intended green transportation, required climate action, inclusive societies to be developed, as well as protecting the freedom and security of citizens (Klaassen et al., 2014). It is understood that Responsible Research and Innovation endeavours incorporate these considerations into their objectives and their measures of success. As a consequence, the interpretation of the role of research and innovation has reached further than immediate operational goals and satisfying the most influential stakeholders. Funding from the European Union was set to address these challenges under the Horizon 2020 programme.

Responsible Research and Innovation is an approach to the way science is supposed to meet the above challenges and shape our future in a constructive manner. RRI brings the issues related to society and their relationship with science and innovation to more general attention, in order to stimulate the comprehensive and detailed discussion of potential solutions to the Grand Challenges (Klaassen et al., 2014). These discussions are supposed to involve a wide range of stakeholders. The underlying assumption is that due to the complexity of today's scientific environment, the direct involvement of those supposed to benefit from scientific results is recommended for two important reasons. First, stakeholders may provide insights and information that allow for the more refined scoping of research and innovation projects. Secondly, the genuine impact of science may only be realised through the effective dissemination and practical implementation of results in the wider network of society.

In the following sections we provide a brief overview of the education-related experience of working with RRI objectives and tools, as reflected in the international academic literature.

Context oriented, more effective business education

One of the key intentions of applying RRI values in education to bring science closer to society. A key platform for this is higher education, where future researchers and business leaders develop their understanding of the role they can play in addressing primary societal challenges (Apotheker, 2019; Toarniczky & Szilas, 2015). This integration of societal issues in higher education raises the opportunity for citizens to actively contribute to designing research endeavours, and participating in the "co-production of knowledge" (Almeida & Quintanilha, 2017; Bela et al., 2016). The complex considerations of involving students in the science-society dialogue offer plenty of touchpoints with various stakeholders within and outside universities, but the process can be typically structured in three stages: care, know, do (Okada et al., 2019). As the structure suggests, the ultimate validation of educators' related efforts is whether student progress in awareness and understanding of societal issues can be followed up by an active stage. Students can effectuate changes in their environment in this public engagement stage: allowing stakeholders to make more informed decisions, and thus support sustainable social and business prosperity (Okada & Sherborne, 2018).

The intended benefits of infusing RRI values and methods in university education are not limited to having a direct effect on the immediate environment, it is the effectiveness of education itself that is to be improved. Infusing the curriculum with actual research experiences can instil more creativity in courses (Munakata & Vaidya, 2013), across the life and social sciences. The adventure of finding the relevance of scientific results in their own learning excites students and fosters a deeper sense of personalised education and learning. Combined with enhanced pedagogical tools that involve, among other things, the corroboration of expert opinions, e-learning materials developed for different cognitive styles (Hercegfi et al., 2009), or role play exercises (Kazai Ónodi, 2016), students learn to accept reasons to disagree, and take responsibility for developing their own conclusions (Green, 2014). Empowering students in "real world" engagements adds significantly to their skills development as much as their understanding of the effect they can have on their society, beyond immediate implications (Bourne et al., 2018). Improvements in student engagement, creativity, critical thinking and conscious self-awareness provide the foundation for higher education of lasting value.

Ethics and sustainable development in research

Reaching out to communities in applying academic knowledge is an important consideration of the RRI approach in higher education, however, instilling ethics into designing and conducting research is arguably of equal significance. Social workers and civil society representatives can indeed provide insights into the design stage of research, and further, their role is much appreciated in stewarding the entire process of knowledge creation (Cannon & Buttell, 2015). They are particularly influential and contribute valuably when evidence is to be generated for research projects that will have social impact. Ultimately, students involved in such a stakeholder-designed and stewarded research process become socially sensitised and ethically responsible research consumers, much beyond the period of their active studies (Wong, 2017; c.f. Zsolnai, 2006). In the last stage of their university studies, students typically work on their thesis project, a preliminary scientific undertaking ideally connected to issues important to the student from a value point of view. Mentors (with a civil background or otherwise), and thesis supervisors exert major influence on this transformational experience of students, both in terms of encouraging best practices to be applied, and being a partner in the dialogue inherently involved in any ethically reflective academic endeavour (Ripley et al., 2012).

Sustainability is another pivotal consideration of RRI-focused higher education practices. Whereas a number of businesses have arguably fostered unsustainable operations for a long time, their role in sustainable development is gradually increasing on the agenda of academic research projects (Balázs & Gáspár, 2010; Harangozo et al., 2018; Lehoux et al., 2018). Innovations that support this transformation of the role of businesses are to be explored and elaborated upon, however, the way related academic work is organised still needs new research approaches for implementation. Among other features, university research for sustainable development should be problem- and action-oriented, span across disciplines, industry sectors, and national borders, and should utilise local knowledge and focus on local relevance (Waas et al., 2010). From an organisational point of view, a diverse institutional set-up, committed leadership and potential alliances with bridging organisations are recommended for the university in order to effectively facilitate sustainable development at regional level (Sedlacek, 2013).

Measuring the impact of RRI: transformational learning experiences

Discussion about the values of RRI and the potential benefits of its applications in higher education is valuable in itself, but measuring the actual impact of RRI-related activities is an expectation that no school management with practical responsibility can overlook. The complexity of RRI-related ambitions requires a number of potential indicators. These encompass qualitative and quantitative measurement options with data to be collected through observation, action research, or more traditional surveys and interviews. Based on an expert-based literature review, the most commonly used assessment criteria related to the impactful university application of RRI values are cognitive engagement, questioning and reframing, as well as fostering dialogue among participants (Heras & Ruiz-Mallén, 2017). There is, however an apparent lack of context-based indicators, and the great number of potential criteria to be considered calls for additional hierarchical ordering. In light of the above challenges, the prioritisation of extent indicators could benefit from involving experts in each specific market, and the implications of the

resulting bespoke measurement schemes are to be tested across different regions (Monsonís-Payá et al., 2017).

Surveys show that university professors who have had the opportunity to familiarise themselves with the RRI framework tend to accept and appreciate its values and potential benefits (Laherto et al., 2018). However, many of them fail to recognise their own responsibility in the process of RRI-inspired education that leads to transformational learning for the students and all stakeholders involved. Their hesitance in understanding and assuming their own responsibility is partly explained by the intensity of the process. Further, early results have confirmed that student awareness and knowledge of the RRI-values can be effectively improved, while challenges requiring more effort and experience have resulted in more limited success yet: taking impactful action, integrating RRI values in processes and stakeholder personal beliefs. All in all, examples show that RRI as a framework has proven to be appropriate for the disorienting dilemma that kickstarts the transformational learning process, but continued external facilitation may be required for stakeholders to sustain their commitment (Toarniczky et al., 2019). Meanwhile, there is an ongoing debate about whether RRI should be introduced as a normative set of values for students, or whether their own meaning-making is to be supported in order for them to identify personal values that reflect societal aspects of research and innovation (de Vocht et al., 2017). For professors and civil stakeholders alike, achieving transformational learning in higher education does not cease to be a challenge to be met in the foreseeable future.

Research objectives and methodology

The purpose of our research was to explore aspects of RRI's potential relevance and impact when applied in business school education. First, we explored a potential common basis of student understanding of key RRI-related values and societal challenges. It was necessary to identify a robust basis of shared understanding to clarify the potential of the related work of educators. We also distinguished areas where business students had significant potential for refining their approach. How could they understand the role they can play in addressing major societal challenges? We also looked for reasons that potential context-driven patterns might be found through our qualitative inquiry.

Research propositions

Our key purpose was addressed through four propositions that focused on more specific aspects of our interest, as explained below.

Proposition #1: First year business administration students find RRI-related values clearly relevant to their understanding of contemporary business.

We selected first year bachelor students attending their very first business class in the business school as the most appropriate subjects of analysis. How have they arrived at university from secondary school, what do they initially think about the reasons for studying at a business school and what are their future career expectations? These questions were set to form valid starting points to frame the efforts of university professors. How and why they may already understand the relevance of RRI-related values in their interpretation of what business means, and what a business career per se may involve, was expected to provide valuable indications about where consequent coursework should focus more attention. Connecting the efforts of university professors to the Grand Challenges of society was our interpretation of what responsive education can become. There could be potential benefits from such a transformation in school for both students before and after graduation, as well as for the professors willing to grasp their responsibility in making an impact.

Proposition #2: First year business administration students find RRI-related values clearly relevant to their future professional life.

The second proposition addressed the same question with a different focus. How do students see themselves in their future professional roles, and how might they see the relevance of RRI-related values to their own future career? This is understood to potentially differ from how they find those values relevant to the general world of business. The underlying consideration was that a more personal reflection when examining the relevance of those values may stimulate different perspectives for students. We had reason to believe that different social norms or potential stereotypes may influence their arguments in a variety of ways. They might associate themselves more easily with positive values than with the way they may deem the relevance of those values for the business world in general, from a more distanced point of view.

Both Proposition #1 and Proposition #2 were also addressed in a different empirical setting: the very first class of full-time MBA students in their fundamental business course. We used this as a reference group for contextualising our research. The very diverse backgrounds of MBA students, both in terms of their employment experience and cultural norms, allows for reflection. How do they see the concept of business differently than bachelor students? How do they see their own responsibility differently in their future career, after graduation? Do values of RRI play a more important role in their approach or vice-versa? While the MBA students in the group received their bachelor degree from different universities, their understanding of the key issues may still provide insights into how university education, together with early career experiences, may shape the relevance and potential impact of RRI values in their thinking.

Proposition #3: RRI-related values provide a basis for refreshing traditional teaching approaches in higher education.

Students were our primary focus in this research; however, the role of professors is, and certainly will be, pivotal for any changes made in business education, and so our last proposition focuses on implications for the educator. Traditional approaches to higher education are focused on the course material to be presented and the learning of its content to be evaluated. More contemporary ap-

proaches focus on the experiential learning of students, and problem-based learning. In this context, introducing the RRI-related issues and values to the classroom was expected to influence the educator's interpretation of their own role as a contributor to solving wider societal issues. A key point in raising this perspective is whether and how focusing on the impact beyond direct university stakeholders may be considered important for the professors. This scope of education exceeds the traditional interpretation of how and why teaching objectives were constructed, and what kind of learning outcomes are expected in university courses.

Methodology

We selected an action research format for our exploratory research. The professor leading the research conducted the RRI-related exercises in a selection of the courses on different occasions. Observations were made about the course experience, in the format of both personal reflections and feedback collected from the students. The quality and general level of coursework elaboration submitted was examined to provide additional insights for the research. The professor was actively involved in teaching while doing the research, and thus the action research format. While the scholarly objectivity of the observations could not be guaranteed in the selected research approach, one of the purposes of the research was the continuous, mutual learning of the RRI-approach by both the students and the professor, beyond the scholarly objectives of potential generalisation in the future.

The exercises in Proposition #1 and Proposition #2 were made in a double-class of bachelor students, then a double-class of MBA students. The professor reflected on personal experiences from all the above research examinations regarding Proposition #3. The examinations were preceded by the professor's consultation with the RRI research team at the university, and guidance received regarding the interpretation of the approach and how it could be applied to existing courses. Preliminary results were also reflected with the involvement of the team, and presented at a scientific conference. Finally, a more detailed literature review supported the structural analysis of findings.

The first student group subjected to the analysis related to Proposition #1 and Proposition #2 were first year bachelor students in the university's English language business programme. They arrived at the university straight from secondary school, and thus their average age of 18-19 years. The total Business Economics class size was 22 students, who were Hungarian nationals with very few exceptions. Their family background, however was more diverse; they had typically travelled extensively in their younger years, and some of them had even spent a period abroad. They typically planned a career in business, mostly with multinational corporations, either in Hungary and abroad, and a few of them planned to start their own business at some stage in their future careers. They were in an advanced group of Business Economics, and presumably had above average motivation and ambitions.

The MBA students in the group involved in the research were enrolled in the full-time MBA programme (four semesters) of the school. It was a relatively large group of 35 students, studying Business Economics in the first semester. The course was compulsory, and so there was no pre-selection or self-selection of the students as would normally be the case for advanced or elective courses. In terms of nationality, the group was very diverse, most of them arriving in Hungary from the Middle-East and Africa, but also from South America, Eastern Europe and the Far East. All enrolled students had at least three years of work experience since receiving their undergraduate degree. They had very diverse backgrounds in terms of the profession and industry they had been involved in, ranging from investment banking to legal advisory or mechanical engineering.

The professor leading the research had at the time of the research over 20 years of higher education experience, with extensive professional experience in financial and strategic advisory at multinational firms. His focus on how theoretical concepts can be applied in diverse business fields had been consistently pursued in all the courses selected for the current research project. His research areas included international business and human resource management, as well as public-private partnerships. With this scholarly background he had experience in how an extended interpretation of business can include social and other public policy considerations, hence the openness towards the RRI-framework. He was involved in the corporate relationship committee of the university, allowing for a refined awareness and understanding of the expectations of future employers towards the graduates of the business school. At the stage of his professional development when the RRI team approached him, he was looking for inspiration and new approaches to teaching in an effort to refine and refresh his existing skills and toolkit.

Findings and discussion

The following section summarises what we have learned from the cases examined. First, our findings from the open discussion of RRI-related values with first year bachelor students are revealed, structured by Proposition #1 and Proposition #2. This is contrasted by our findings from a similar exercise with first year MBA students. Finally, the educator's reflections are reviewed from the aspects defined by Proposition #3. Findings are reflected upon and potential room for improvement identified, in light of current empirical findings in the context of teaching experience reflected in literature.

RRI-related values as subjects of discussion for first year bachelor students

Students of the introductory Business Economics course were subjected to an enquiry in the very first business class they had in their undergraduate university studies. They received two questions to be discussed in small groups in the class, and their conclusions were openly conferred among all students participating in the debate. Both

questions addressed their approach to six RRI-related values, each of which was previously introduced and defined by the RRI research team of the business school. The six values stemmed, with some adjustments, from the six components of the RRI framework, as defined by the European Commission (Klaassen et al., 2014): sustainability, social justice, inclusive society, relevance of science, open access to information, and ethics. Students did not receive a preliminary explanation of the given concepts, but relied upon their extent knowledge and hunches. They had the opportunity, however to discuss their ideas in smaller groups before they referred their proposed answers to the class (Table 1.).

Table 1.

Overview of findings at BA-level

BA-level class	Awareness level of business relevane	Personal commitment	Strengths	Weaknesses
Sustainability	Medium	High	Protecting nature	Social or economic aspects
Social justice, gender equality	Medium	Medium	Gender equality	Other social considerations
Inclusion, social engagement	*Low*	Medium	Customers' rights	Other stakeholders
Relevance of science	Medium	Medium	Validity of information, innovation and learning	Clarity on links to applications
Open access	Medium	High	Customers' access to information	Other stakeholders
Ethics	Medium	*Low*	Regulation vs conscience	Trust

Source: own compilation

first question students received, as reflected by Proposition #1, was whether and how they saw the relevance of any of the six RRI-related values to their current understanding of contemporary business. For the purpose of this research project, we proposed that "first year business administration students find clear relevance of RRI-related values to their understanding of contemporary business". We aimed to explore whether and how this statement would turn out to be true or need to be refined, in light of our empirical findings. As a follow-up exercise in the same class, students were asked the second question, as reflected by Proposition #2, querying the relevance of the same values in their envisioned future professional life. Here we proposed that "first year business administration students find clear relevance of RRI-related values to their future professional life." Our findings, as explained by each value below, were enlightening in many aspects.

Highly acknowledged values

First year undergraduate business administration students who participated in the selected class appeared to be quite knowledgeable about the issue of *sustainability* in some aspects, especially regarding the excessive exploitation of the natural environment. Intriguingly, however they were clearly unaware of the social and economic aspects of sustainability. As far as their personal involvement was concerned in taking action related to sustainability in their future professional career, students appeared somewhat more ambitious. The centre of their attention, similar to considering sustainable business in general, was focused on environmental sustainability. Apart from sustainability, students valued *open access* at an above-average level. Their initial approach to the value of open access was focused on the interpretation that direct access to valid and more detailed information was what the concept actually meant for them. For businesses, the issue is most relevant in relation to customers, from a range of aspects. As future decision makers themselves, students voiced their claims in a very assertive manner. They demanded access to more information on all aspects of transactions that would allow them to make better decisions. Putting pressure on those who have the necessary information is a measure they would resort to in the future in an effort to become more successful themselves.

Moderately acknowledged values

The issue of *social justice* generated, somewhat unexpectedly, the fiercest debate in the class. The discussion quickly became focused on the potential equality issues related to women's employment. Agreement was finally reached on the increasing importance of the topic, acknowledging the positive role of diversity in business innovation and learning about others in an increasingly globalising employment context. Their personal involvement in issues regarding social justice in their future professional careers was also primarily focused on gender considerations. They understood this as a timely question, feeling the expectation of customers, stakeholders and employees related to gender equality. In the end, the class did not reach consensus on whether and when positive discrimination should be promoted in business, and in turn, in their future professional careers. In terms of the *relevance of science*, students claimed that companies are under constant pressure from the environment, due to technological progress or external shocks of different kinds. This is the fundamental reason why scientific results play a key role in the sustainable success of businesses. They need novel solutions, and need them quickly. Recent "fake news" scandals in social media strongly attracted the interest of students,

and made them think about ways that real and fake information could be filtered. Students saw opportunity for their own careers in life-long learning; the relevance of science in education was clear for them. They wanted to stay competitive throughout their careers, and be able to adapt to changes. Science would remain relevant for them, as it would help whenever they faced novel challenges without help from experience.

Less acknowledged values

With regards *inclusion and social engagement*, students had very little knowledge. They did not know which members of society should be involved in the decision-making of businesses. Following the discussion of their initial ideas in small groups, they concluded that customers are certainly a key stakeholder group whom it would make sense to involve in corporate decision making. They knew little about other stakeholders who should be involved in decision making, or engaged by the company in any other way. Students quickly claimed that the potential key benefit of inclusion or social engagement for their own future professional careers was inducing more support from stakeholders. Employees were mentioned as a next step in their thinking, the future selves, who could be subjected to inclusion in an effort to gain more commitment from them. They could imagine themselves as more loyal employees to their future company if they were involved in decisions. In the discussion about *ethics*, business was preliminarily understood as profit generation for students in their very first class of their undergraduate studies. Ethics, in turn, is seen as a compromise in business efforts, as not all available business options meet ethical standards. Students emphasised the conscience of individuals when assessing the ethical implications of various options. They understood that regulations were necessary to support ethical decision-making due to the human frailties prevalent across businesses. In a fascinating turn, as much as students appeared to understand how and why ethical considerations are key in general business decisions, they stated their position differently when asked about their envisioned professional career. They appeared keen to take responsibility in business, and potentially neglect wider social considerations in the future.

RRI-related values for MBA students

A similar exercise was arranged with first year MBA students, in their very first Business Economics class, at the start of the programme. The format of the exercise was the same: they received two questions and worked on their responses in smaller groups, then conferred with the full class audience about the strength and potential refinement of their proposed answers. Students did not receive a preliminary explanation of the given concepts, they relied upon their extent knowledge and related work experience. The first question was whether and how they saw the relevance of any of the six RRI-related values to their current understanding of contemporary business. The second question was focused on the potential relevance of the same values in their envisioned future professional life. The results of this exercise show interesting patterns in comparison with the results from the similar exercise with first year bachelor students (Table 2.).

Highly acknowledged values

Sustainability focuses on environmental sustainability in the eyes of first year MBA students. They were keenly aware of global environmental issues, and agreed that related considerations were and would be integrated in business decisions in the foreseeable future. MBA students appeared determined that they would have sustainability-related issues on their agenda as corporate managers in their future professional careers, one way or another. *Social justice* as a value to be potentially considered in business was interpreted as primarily an issue related to equal career opportunities for women. Given the diverse background of students, most arriving to the programme from developing countries, they saw this issue as a forward-looking concept that should be integrated in business considerations across the world. Their personal commitment to gender equality was in some cases more advanced. While opinions varied, they all accepted the fundamental value of equal opportunities and that positive discrimination may be necessary for a more gender-bal-

Table 2.

Overview of findings at BA-level

MBA-level class	Awareness level of business relevane	Personal commitment	Strengths	Weaknesses
Sustainability	High	Very high	Protecting nature	Social or economic aspects
Social justice, gender equality	High	Medium	Gender equality	Other social considerations
Inclusion, social engagement	*Low*	Medium	Customers' rights	Other stakeholders
Relevance of science	High	Medium	Technological inventions	Social sciences
Open access	Medium	*Low*	Customers' access to information	Other stakeholders
Ethics	*Low*	Medium	Social antrepreneurship, refugees	Integration into traditional business

Source: own compilation

anced workforce, especially in management positions. MBA students had a clear position on how *science could be relevant* in business. They were positive regarding the need for continuous innovation in business, especially due to technological advancement. Science, per se, was mainly interpreted as technological inventions and their business applications. Their professional careers would be related to applying scientific results, they agreed, as research and development was a critical aspect of business and management, and it would be even more so in the future.

Less acknowledged values

In terms of *social engagement and inclusion*, MBA students felt there was little relevance in considering the interests of any external stakeholders except customers. They thought through the potential issues of management decisions without customer involvement, and also the benefits of more participatory decision making. However, the idea of involving additional stakeholders in strategic decisions, including product development or production management, was novel for them and they had little to add to the discussion. They followed a similar line of thought regarding their personal commitment to the values of inclusion and social engagement. The discussion of *open access* as a value in business took a specific direction in the class. Access to an extended range of business information was understood to be an ideal too far from the realities of developing countries with striking levels of corruption. Fighting against corruption appeared to be an issue beyond their control, which was reflected by the fact that their personal career aspirations with open access considerations were focused elsewhere. Connecting open access considerations to democratic rights and ideals did not arise in the class discussions. *Ethics* was understood as a separate concept of business. Its relevance in our daily lives is prominently clear, however, how business is or should be related to solving problems of ethical significance was less evident to MBA students. Further, it emerged in the open discussion that ethical problems in society could be a source of business opportunity for profit making (e.g. providing solutions to refugee housing), rather than ethical considerations to be involved in traditional businesses. By contrast, students envisioned personal involvement in ethical business considerations in the future as more elaborate. They felt motivated to do businesses that make a change in society; and social entrepreneurship attracted quite a few of them.

Comparison of BA and MBA student reflections

Sustainability appears to be a highly acknowledged value for both BA and MBA level students, at the beginning of their studies at the university. The personal commitment of MBA students is even stronger, potentially reflecting their work experience, and/or their different cultural background. However, both groups focused their reflections on sustainability in terms of the impact on the natural environment, and did not think much about the wider implications of the concept.

All other RRI values received less enthusiastic support by the students, in either the BA or by the MBA group. Social justice, mainly interpreted as gender equality, was acknowledged more strongly by the MBA students, probably due to their personal involvement in business organisations and how they may have been confronted by gender issues in management positions. Science also appeared more relevant for the MBA students, particularly in terms of technical inventions, which is potentially explained by the responsibility they had had in their jobs regarding adopting innovative solutions. The technical focus of MBA students and their apparent insensitivity to social science could, at least in part, be due to the relatively large proportion of students with an engineering background in the class.

The cultural background of MBA students, mostly originating from emerging economies, potentially explains how the value of open access drove their attention to discussion about corruption in business and society. Their lacklustre approach to their personal involvement in promoting open access as a value is probably also related to their work experience in their own country. In comparison, the mostly Hungarian BA students approached open access more positively, especially in relation to their future careers.

Educator's reflections on teaching practice refreshment

The way the RRI-related methodology affected the professor coordinating the exploratory research was not our primary interest, but it gradually emerged as another focus of the examination. Preliminary insights into related reflections were inspiring, hence the inclusion of Proposition #3 in the project: "RRI-related values provide a basis for refreshing traditional teaching approaches in higher education". While the priorities of education have not changed, and were not even expected to change as a result of research, our agenda expanded to explore what and how could be refreshed in the existing emphases of teaching. Possibilities included both content-related and methodological innovations, either directly from the RRI toolkit or indirectly through the sparking new ideas that would inevitably emerge. Learning outcomes included aspects of skills development even before the current research, but understanding more of the RRI initiative allowed for the foci of such activities to potential be refreshed. While the professor involved in the research had applied a "less is more" approach in the content of teaching for many years, the decision about what to include in the more limited content of classes provided room for potential refinement.

As a result of the exploratory action research, three aspects of innovation opportunities were identified regarding renewal of the professor's teaching practice in the future. First, the central idea of RRI that there are a limited number of major challenges in contemporary societies that research and innovation should address has become more explicit in the professor's approach to teaching. There has long been a gradual increase in focus on sustainability (especially environmental), social justice (promoting di-

versity), inclusion (participatory decision making), and ethics (conscious stakeholder approach) in progressive business practices, and thus a related emphasis in higher education is gaining strength. Open access has also been recently proliferating, especially related to innovative business models such as sharing economy applications. These changes have been spreading without the conscious approach highlighted by the RRI framework. Science education, starting with considerations of how science can and should be relevant in our lives, however, would not emerge organically in a market-focused business education approach: the rise of this focal point was more overtly connected to the RRI initiative. Nevertheless, all six values (or policy keys) of RRI have become explicit subjects of open discussion in the class room, allowing for free interpretation by the students, or for that matter, by the professor. This is a clear outcome of the action research project.

The second implication of teaching practice is an increased focus on adding more context to the theoretical and conceptual knowledge learned in the course. There can be multiple aspects of context, including more information about actual customers, shareholders, regulatory bodies, employees, or civil communities, all embedded in the general environment of businesses. Most importantly, however, the context of knowledge means obtaining more information about the students themselves, where they come from, and how they approach fundamental business issues when starting their journey of learning at the university. While this has always been a subject of consideration for professors, RRI's explicit focus on bringing change to the lives of members of society calls for more conscious and detailed reflections on student values and their congruence with any deliberate attempt at making an impact. The interactive teaching methods embedded in the RRI toolkit provide ample ground for debates and discussions around those values and ambitions. Professors are able to better understand what issues matter to students the most, and how and why they are willing to learn about some aspects rather than others.

The third and perhaps most important teaching-related outcome of the action research is the inspiration for developing a more responsive format of education. Creating awareness and some level of knowledge about major social challenges is a first step, and it is not necessarily missing in higher education even without the RRI framework being introduced. Providing analytical tools, and even some good practices to guide students towards progressing solutions toward mitigating the problems, is a higher level of outcome, still usually part of the curriculum in one way or another. Reaching out to communities and local businesses, and establishing direct contact between them and the students is an even more ambitious aim, and only some courses in leading universities would get to that level. Allowing students the experience to explore what they may not know about social challenges in a local and global context, encouraging them to act on that knowledge, and building impact measures into the learning outcome structure of various courses, appears to be global best practice that only selected schools aspire to achieve. RRI provides a framework for setting a school's ambitions high in terms of outreach and making an impact, with the maximum level of engagement by the students. The key learning outcome for the professor in the current research was understanding how and why connecting business education to tackling societal problems was a very natural approach that leading business courses would adopt in coming years.

Conclusions and further perspectives

Our findings are inspiring in terms of what students starting their university education already know about the societal issues addressed by the RRI initiative, and also in terms of where the greatest room for improvement exists for professors of business courses. Indeed, as Proposition #1 claimed, first year business administration students did find the RRI-related values clearly relevant to their understanding of contemporary business, however, the connections they understood were certainly limited in scope, providing ample challenge for their professors of business to build up their awareness and knowledge in other aspects. Our investigation regarding Proposition #2 explored a similar pattern, focused on how students find RRI-values relevant to their future professional lives. Students start their higher education studies with a robust knowledge of environmental problems, consumer rights, gender equality, and to an extent how science can help in generating knowledge with a level of validity and reliability. Their awareness of the Grand Challenges of society and the connections with RRI-related values and policy keys is naturally very limited beyond that scope.

The comparison of our results from action research between bachelor students and MBA students revealed preliminary indications of potential regional patterns (Central-Eastern Europe) to be further identified, however, the comparison can only be limited, as the MBA students came mostly from developing countries, while Hungarian students were enrolled in the university's English language programme, and so their socialisation was connected to globally accessible knowledge via the internet and personal travels. With that in mind, tentative propositions can be drafted for further research in the future. Student awareness of sustainability beyond issues related to the natural environment is strikingly limited, potentially connected to the socialisation of their parents and grandparents in a political system where social issues were addressed by the central government with little role for companies and civil organisations to play. While students showed a decent general awareness of them, gender issues were not felt severely by first year female students, potentially because of the general requirement in socialist countries that women were expected to work, rather than staying at home, as in a wide range of other cultures. The overt concerns of students regarding consumer rights is an interesting insight, showing a potentially strong pattern regarding the increasing focus on market mechanisms in a converging economy over the

last thirty years and more, supported by access to information on parallel global consumer trends.

Proposition #3 aimed to explore the professor's perspective of the potential outcomes of the current research. The findings are in line with the general claim of the proposition that the RRI framework would provide a source of refreshing ideas and inspiration for teaching in the business school. One of the more specific outcomes was that the Grand Challenges of society and their relevance to science education has become more explicit in the teaching practice of the professor. The role of context also increased in both the content of the selected courses and the general pedagogical approach: more attention was paid to the values of the students involved and their journey of learning, to be developed together with the professors. Finally, the action research drew attention to the importance of the responsiveness of education, focusing student attention on the actual change they can make in their own environment, beyond the scope of improvements in general awareness and knowledge. Overall, the research clearly added new dimensions to the professor's teaching approach for the future.

The professional implications for business school faculty include encouragement to refine the business concept introduced to students so as to become more inclusive and responsive. It should be inclusive in the sense that more actual stakeholders of the university's local or wider environment be called into cooperation, creating a general approach to the "co-creation of knowledge". It should be responsive with regard to the conscious awareness of key societal challenges and steering student efforts towards tackling those challenges in a range of potential avenues. Teaching faculty are, and have always been, free to include outreach programmes in courses, and they should feel more tempted to do so in the future. There are various opportunities, including promoting social entrepreneurship as a career opportunity for students, as well as proposing RRI-related topics for thesis writing, which is the ultimate integrative learning opportunity for business school students. Professors may initiate an upgrade of their educational credo and toolkit accordingly, with or without support from school management.

There are potentially wide-ranging implications for university management. One primary development goal could be to develop a more responsive educational approach in the business programmes. Faculty will be invited to work not only on building the awareness and understanding of RRI-related opportunities and values by students, but also on driving their attention to the possibility of outreach elements to be included in the curriculum. Alternative approaches to outreach can be phased into the student journey, and how exactly it is built in the programme. The ultimate achievement is clear, however, if students make societal impact during their university years, not only after graduation. Institutional support for colleagues willing to become involved in the "RRI-revolution" in the business school is to be provided, with champions of the case called for, in an effort to facilitate cooperation between colleagues. Last but not least, the commitment shown by university management to include RRI values in the school's mission is potentially a key driver in how universities can stay relevant in an ever-changing social-economic landscape, both locally and globally.

The limitations of the current research stem from its exploratory nature. Addressing RRI-values in education has not been fully operationalised for systematic research, which limits the generalisability of research outcomes. The more focused objectives of the research, in fact, were less ambitious. As part of a general awakening of the teaching faculty in the focal business school, the professor leading the project understood action research as an opportunity to explore the development potential of applying the RRI-framework; this explains the open approach to research. With the potential clearly identified and confirmed, follow-up research will focus on particular aspects of the learning opportunities depicted in the current study. Coordinating the involvement of more professors and courses in the school, and potentially beyond, is clearly the professional responsibility of open minded professors in the coming years.

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FELHÍVÁS PUBLIKÁCIÓK BENYÚJTÁSÁRA A VEZETÉSTUDOMÁNY CÍMŰ FOLYÓIRAT *„TUDOMÁNYMETRIA – TÉNYEK ÉS TRENDEK A TÁRSADALOMTUDOMÁNYOK TERÜLETÉN”* CÍMŰ KÜLÖNSZÁMÁBA

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A lapszám tervezett elméleti-módszertani keretének, tartalmának leírása:

A nemzetközi versenyképesség napjaink egyre integráltabb és nemzetközi kapcsolatokon alapuló politikai berendezkedésében elsődleges prioritássá vált az országok számára. Macilwain (2010) munkájában megállapította, hogy a tudományhoz, technológiához és innovációhoz kötődő tevékenységeknek direkt hatásuk van a társadalmi és gazdasági jólétre, valamint a fenntartható fejlődést is elősegítik.

Számos nemzetközi folyamat határozza meg a nemzetközi tudományos közösség sikerképletét és prioritásait. Mivel az információs társadalom technológiai fejlődése és adatbázisai lehetőséget biztosítanak az adatgyűjtésre, az átalakuló tudományos szakpolitikák legújabb és legjelentősebb változása, hogy egyre inkább a tudományos kiválóságon alapulnak. A tudományos kiválóság fogalmára eddig nem született egységes definíció, minden állam saját értékeinek és érdekeinek figyelembevételével határozza azt meg. A nemzetközi egyetemi rangsorok megjelenésével a kutatói kiválóság különböző formái kerültek előtérbe. A legtöbb régió esetében jelentős tudományos teljesítménybeli növekedés látható az utóbbi években, mely közegben a középeurópai országoknak is lépést szükséges tartaniuk. A pályázati modellek értékelési kritériumai nagyban meghatározzák mind a szerzők egyéni szintjét, mind a kutatóműhelyek intézményi szintjét a kutatott témák, a publikációs teljesítmények, valamint a kialakult kutatói együttműködések, hálózatok tudományos teljesítménye megítélésében is. A tematikus lapszám célja feltárni ezeket a nemzetközi kontextusba illeszkedő, de elsősorban a hazánkat és a régiónkat érintő folyamatokat.

A tudománypolitika és tudományszervezés napjaink egyik kiemelt társadalomtudományi témája mind tudományos, mind szakmai tekintetben. Érdemes azt kiemelnünk, hogy a tudománymetria – éppen a dinamikusan változó tudománypolitikai környezet miatt –, Magyarországon is egyre inkább előtérbe kerülő kutatási terület. Multi- és transzdiszciplináris elemei következtében a társadalomtudományok különböző tudományágait szólítja meg, egyaránt kapcsolódik a gazdaságtudományokhoz, állam- és jogtudományokhoz, valamint a szociológiához is. A tervezett lapszámba empirikus kutatáson alapuló és review jellegű tanulmányokat is várunk. A lapszám célja, hogy a Magyar Tudományos Akadémia és a magyar tudományos közösség egészét szolgálva a jelenlegi helyzet kritikai elemzésén túlmutatóan tudományszervezési és tudománypolitikai kérdésekre adandó válaszokhoz kínáljon tudományos igényű megalapozást.

Felhasznált irodalom:

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