

Article

Social Innovation as a Driver for New Educational Practices: Modernising, Repairing and Transforming the Education System

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Abstract: Based on the results of the EU funded Social Innovation-Driving Force of Social Change (SI-DRIVE) project the major challenges and needs of education and lifelong learning worldwide are revealed, focusing on solutions via new educational practices delivered by social innovations and embedding civil society. Against this background, a more learner-oriented approach instead of institutional improvements is presented. Based on the results of SI-DRIVE's global mapping of more than 200 innovative education initiatives and 18 in-depth case studies, the article spotlights the relevant settings and success factors of social innovations in education, leading to a system related typology of social innovation. New ways of repairing, modernising and transforming education as well as separated approaches are illustrated showing the underdeveloped, unexploited and unrecognised potential of this kind of innovation. For setting up a more innovation friendly environment, it is particularly important to realise a paradigm shift towards a learner perspective and rationality. More leeway and new governance structures for integrating and fostering social innovations and unfolding the potential of all societal sectors for enhancing education are necessary. This especially includes a more active and new role of universities in enabling, exchanging, moderating and researching social innovation.

Keywords: social innovation; education; sustainable transformation; lifelong learning; innovation ecosystem

1. Introduction and State of the Art

In this article, we focus on social innovation as a new pathway for educational innovations. Empirical basis is a quantitative sample of 211 international social innovation initiatives and 18 in-depth case studies (chosen from the quantitative sample), placed in 14 countries from six different global regions: Northern Europe (Finland, Sweden, Lithuania), Western Europe (Germany, Austria), Eastern Europe (Bulgaria, Croatia, Montenegro, Romania), Russia, Latin America (Argentina, Bolivia, Chile) and North Africa (Egypt). These innovative initiatives aiming at change on different levels of education and lifelong learning are part of a larger sample of 1005 social innovation cases of the EU funded Social Innovation-Driving Force of Social Change (SI-DRIVE) project (please see the acknowledgement at the end of this paper) across different policy fields (including education and lifelong learning, on which we focus in this article). Here, it has to be mentioned that adding the notion of 'lifelong learning' next to 'education' shall not imply that lifelong learning is a concept outside of education. It shall rather highlight the fact that lifelong learning is still not a dominant part of institutionalised educational practices around the world. A perspective on lifelong learning, or more precisely a perspective on learning before and after formal education (e.g., Vocational Education

and Training (VET)), is therefore an important starting point for socially innovative initiatives in education [1] (pp. 60–61). However, actors from all sectors are aware of the important role of lifelong learning which is, for instance, represented by the Erasmus funded ‘Lifelong Learning Platform’ which currently encloses 42 member-organisations from different backgrounds and connected to a network of more than 50,000 others—linked to formal as well as informal education (<http://llplatform.eu>).

Based on a wide-ranging and *not normative* understanding of social innovation [2] light is shed on the broad variety of manifestations in practice and their approaches with the aim of *answering the questions of how social innovation in education can contribute to realizing educational change and which framework conditions are needed*. Whereas other perspectives on social innovation in education and lifelong learning are sometimes limited to either bottom-up or top-down initiated approaches (cf. [3]) a more open perspective helps to understand and combine the variety of both, bottom-up and top-down approaches of educational change as well as the variety of concepts, the manifold pathways and contextual factors. Looking on innovation in education and lifelong learning through a social innovation lens does also provide the benefit of taking not only a micro- or meso-perspective but, moreover, also a birds-eye view, hence the macro-perspective. Looking on educational change as a phenomenon related to the emergence of social innovation does therefore also lead to an understanding of education’s role in tackling needs, demands and challenges beyond existing (established) pathways and in a broader context. Based on the definition of social innovation by Howaldt and Schwarz [2] (pp. 89–90) operationalised by the SI-DRIVE project (e.g., [4]) we will therefore understand social innovation in education as *new social practices* [4] (p. 3). ‘New’ in this context might not always be completely new in each manifestation, being incremental rather than disruptive. This refers also to a basic idea transferred to another context, being an indicator for successful diffusion of an innovative solution.

Although innovation research has a long tradition in focusing on technological innovation [5], especially since the works of scientists with a stronger focus on technology (e.g., W. R. MacLaurin [6], as Godin [7] highlights), the concept of social innovation has received more and more attention in a broader context all over the world across the last decade [8]. At the European Union’s policy-making level, for instance, social innovation is already recognised as key for tackling “societal challenges,” “societal demands” and “social needs” [9] in the 21st century and the Commissioner of Research and Innovation recently stated “The EU will put more money in social innovation not because it’s trendy but because we feel social innovation is the future” [10]. Another major strategy for coping with challenges on different levels and since 2015 most prominently represented by the United Nations’ Sustainable Development Goals (SDG) [11], are policies towards more sustainable practices across a large variety of themes—amongst others: quality education (SDG 4). Realising a shift towards sustainable societies in the end is closely linked to innovative answers and new approaches to innovation [12]. This is where the concept and potential of social innovation as the establishment and diffusion of new practices is coming into play again, especially as it provides the potential for transformative social change (e.g., [13]); for instance, concerning sustainable consumption [14].

1.1. Transformative Social Change, Social Innovation and Sustainability

Transformative social change is demanding more than just top-down policy agendas and programs, of course. Even if the context of science, technology and innovation policy (STI) is changing towards a stronger focus on transition and even if policy-makers and science put a stronger emphasis on transformation [15] the willingness of people to change habitualised practices and mind-sets is also required. Successful transformation, therefore, needs successful social innovation, hence the diffusion of new practices via imitation [16,17]. This is where knowledge and, therefore, education reveal their relevance, again. Beyond basic knowledge on global trends and basic education in general, specific education for sustainable development can provide the necessary skills and knowledge for realising more sustainability in general [18]. In schools, for instance, such a shift in educational strategies can “enable students to change their behaviour in favour of sustainable development” [19]. Skills and

knowledge, which can foster a societal transformation towards more sustainability, have to be conveyed in lifelong learning. This has to be done not only in schools (primary and secondary education) but also in higher education (e.g., [20,21]) and adult education (e.g., in the framework of vocational education and training (VET) [22]), even if the concept of adult education might get out of focus in the discourse framed by SDG4 [23]. Furthermore, there should also be a focus on early childhood (e.g., [24–26]) where education has a particularly significant effect on learners' biographies (e.g., [27]). Hence, for unleashing the full potential of skilful and educated societies towards comprehensive sustainability an understanding of education and learning as a lifelong task (e.g., [28]) for people in heterogeneous societies and education systems is needed. For accomplishing the goal of not only promoting but also providing "lifelong learning opportunities for all" [11], formal education systems need to change towards a more holistic understanding of education, its aims and tasks. Education for sustainable development has already found its way to global policies before its further prosecution in SDG 4 (target 4.7 [29]), for instance, with the United Nations Decade of Education for Sustainable Development (2005–2014) [30]. Since then it can be also considered as social innovation in education [31], which already diffused and institutionalised globally, supported by policy makers. From this perspective, social innovation and sustainable development [32] are closely connected to education.

1.2. Global Challenges, Specific Needs and Demands beyond Education for Sustainable Development

Of course, the aim of realising education for sustainability is a pivotal theme in current discourse. However, it is not the only challenge, need or demand that has to be taken into account when taking a global perspective on education and the potential of social innovation for educational change. For enhancing the performance of students and the respective frameworks of formal education systems, tackling other hurdles is also important. The social innovation perspective taken in this article is helping to understand bottom-up as well as top-down activities aiming at other large scale challenges or demands and needs on the meso- or micro-level—sometimes recurring across national systems, sometimes individual and specific for a context. One major theme reflected by social innovation initiatives in education and lifelong learning found in practice is tackling the (recurring) need of reducing disadvantages for learners linked to social inequalities across different criteria (clustered in the policy field "reduction of educational disadvantages") [1,33]. As recent studies of the Programme for International Student Assessment (PISA) [34] highlight, socio-economic criteria are found to be a major framework condition for the capabilities of learners and can, therefore, be a major hurdle towards their performance. The aims collected for the SDGs are also focussing on the reduction of social disadvantages, for instance, related to gender or disabilities (task 4.5) [29]. SDG 4 is generally putting the provision of access to education services on the agenda pointing at common challenges across national systems: for instance, access to "quality early childhood development" (SDG 4.2), "affordable quality technical, vocational and tertiary education" (SDG 4.3) [28] and others. Additionally, studies focussing on single specific disciplines highlight the importance of tackling inequalities influencing, for instance, reading literacy [35]. In the practice of social innovation initiatives, themes related to the reduction of disadvantages were found as the most seen issue tackled in the field of education and lifelong learning [1,33]. They were also found as a cross-cutting theme (clustered as: "gender, equality and diversity" [36]), emphasising their (recurring) relevance for the aims of social innovation in education and lifelong learning [1,33] and beyond [36]. Examples for tackling issues on the micro- or meso-level can, furthermore, be found in the more specific findings of international studies. For analyses conducted in the framework of Progress in International Reading Literacy Study (PIRLS), Hußmann et al. [37], for instance, emphasised that reading literacy can also be fostered outside of formal education institutions (e.g., in families). The study named examples for good practice [38] of socially innovative initiatives adding the provision of formal education with services outside of the system, taken from a larger collection of best practice examples by The European Literacy Policy Network (ELINET) [39] and are located in Italy and the UK. Beyond a focus on tackling necessities, social innovation in practice is also building on potential related to global trends. A major global trend

influencing the discourse on education (e.g., [40,41]) and exemplifying this relationship, can be found in digital transformation. A recent digitally enabled social innovation in education can be found in Massive Open Online Courses (MOOC), for instance in higher education (e.g., [42]) or for education for sustainable development [43]. MOOCs are often even considered as a disruptive innovation with, therefore, high potential for replacing former practices of learning, especially in higher education (e.g., [44–46]). MOOCs exemplify the potential of new practices in education and lifelong learning enabled by digital (hence technological) innovations. In general, social innovation in education and lifelong learning and beyond can benefit from new opportunities provided by technology. It can, for instance, also provide the opportunity for more appealing (e.g., playful, via gamification) or effective learning environments while fostering digital literacy at the same time as such new practices and learning contexts would not be possible without using adequate digital devices for learning-by-doing, tailored to the intended learning effects. On another note, the use of digital technology is also giving leeway for the (further) diffusion of innovative practices like open access. Going one step further than open access scientific journals or open access knowledge repositories like Wikipedia, open educational resources (e.g., [47]) are an example of innovative practices representing new ways of digitally enabled knowledge distribution. Because of their openness, they can hence also mean access for broader populations than before, tackling the challenge of lacking access to education.

1.3. Pathways of Social Innovation in Education and Lifelong Learning

The examples of trends and necessities presented above focus on the establishment of different or completely new practices in education. This focus on changes in education beyond existing paths and approaches is linked to the establishment of social innovation building on more holistic and bottom-up perspectives, integrating all relevant stakeholders. Hence, this is implicitly or explicitly pointing at social innovation and related initiatives. However, the concept of social innovation is not widely used as an innovation strategy and self-description by innovative initiatives in education so far [1]. Thus, the potential of tools and strategies (e.g., co-creation) or politically provided leeway (i.e., via policies supporting social innovation) related to the concept is not used to a sufficient extent. This aspect is particularly important as formal education is often linked to path-dependencies and reluctance towards change. Especially radical or disruptive concepts, calling established practices into question, might therefore be confronted with a higher level of resistance. This could, for instance, be related to the reluctance of teachers to accept new practices (e.g., ICT-related [48]) due to specific reasons and motivations as long as these practices are not institutionalised (e.g., in official guidelines).

When formal systems do not tend to react or remain closed to change towards innovative solutions for existing and future challenges, demands or needs, gaps are emerging which are sometimes taken up by other actors. Such gaps for providing innovative services do not always have to be big and widely seen system failures. Sometimes, they can also be smaller niches, demanding new ideas and approaches. At both levels, initiatives from different backgrounds—from civil society and science to public sector and economy—with different approaches and aims are coming into play. In the EU funded international project SI-DRIVE, more than 200 of such innovative initiatives in education and lifelong learning have been mapped and analysed in an explorative approach [1,34,36]. The sample shows a variety of involved actors and networks from all sectors of society, forming an ecosystem for social innovation in education and lifelong learning [1,33]. These initiatives often recognise the challenges, demands and specific needs related to education and lifelong learning in their specific environment and beyond. Due to the variety of challenges, demands and needs, they are addressing different levels with different perspectives. These different approaches are the basis for a typology of social innovation initiatives in education and lifelong learning presented in chapter 3.

1.4. The Role of Collaboration and Networks for Social Innovation in Education and Lifelong Learning

While the recognised necessity of establishing new practices is explaining the emergence of social innovation in education and lifelong learning, it cannot explain the success and failure of

initiatives to the full extent. Moreover, it is particularly important to take into account the framework of actor constellations and their influence. Kolleck et al. [49] highlight the importance of networks and especially local networks with actors not coming from the formal systems for the successful institutionalisation of innovations in education [19,49]. The connection to local networks can hence explain how social innovation in education can successfully be implemented. Going back to the aforementioned level of challenges and policy agendas where discourse is shaped not only by politics and by policies but by influential actors with a particularly strong voice—like, for instance, foundations [50]—it becomes clear that actors across different levels and sectors are shaping the framework for social innovation in education. Therefore, it appears to be essential for the success of social innovation in education that all actors influencing the discourse on education and its practice on all levels combine their forces and agree on common aims. Sliwka et al. [51] found that, amongst other common characteristics, particularly successful education systems in the 2015 PISA studies are characterised by *alignment* of societal subsystems and shared common goals towards societal development and policies. In such an environment, education is part of a holistic approach. From a social innovation perspective, a high level of alignment could be translated as a supportive “ecosystem” (e.g., [52–54]) in which social innovation benefits from support by actors from different societal sectors. Without common goals, such beneficial interaction across sectors is hardly possible. In social innovation studies these *ecosystems* are often thematised in relation to the concept of a “quadruple helix of knowledge production” [55] by Carayannis and Campbell. Such a helix features a combination of “different knowledge and innovation paradigms” [55] found in the sectors “academia/universities,” “industry/business,” “state/government” and “media-based and culture-based public” [55] (often referred to as “civil society” (e.g., [56]) to successfully enable innovation and the production of new knowledge. Taking on the concept of social innovation and the idea of an ecosystem could help initiatives to benefit from support given by political institutions (e.g., the European Commission) due to a recognised need for new concepts to innovation (e.g., the United Nations with their SDG-perspective) and, especially, to specific cross-sectoral societal challenges and local demands (e.g., educational activities for improving employability of disadvantaged groups). Without a strong network, innovative education initiatives are likely to fail institutional support and hence the implementation or, at least, the required toleration by formal institutions. Even if such initiatives aim to reach higher levels of change (i.e., systemic change, for example, change of paradigms) they might be stuck on a lower level of limited change in a limited context and with limited outreach. Against the background of different institutional frameworks and varying responsibilities across different educational systems around the world, such social innovation networks and ecosystems can address both, international cooperation across different systems as well as local or regional cooperation. Whilst the first approach could improve exchange of transferable experiences with different backgrounds, the second approach could improve context-specific solutions for framework-conditions challenging social innovation in education. Established or new scientific networks could address research on social innovation in education, strengthening knowledge on successful pathways, drivers and barriers.

2. Theoretical and Empirical Basis, Methodological Design

The data used for this article were generated in the course of the SI-DRIVE project, carried out from 2014 to 2017. In this project a broad approach towards theorising and empirically collecting data on social innovation within the European Union and beyond was realised. Main aims were a further development of the social innovation concept and gaining more understanding of its manifestations in practice as well as empirically based policy recommendations. When theoretical groundwork for defining a robust basis for research within the project started with a literature review [4] knowledge on social innovation was still fragmented and a variety of different approaches to its concept were (and still are) predominant. Against this background, SI-DRIVE was aiming at enhancing understanding of social innovation by taking into account its variety of understanding and approaches in practice instead of trying to delimit its openness. It furthermore aimed at accessing the variety of approaches

and manifestations in practice by realising an explorative study of cases within a mapping of social innovation initiatives worldwide and additional in-depth analyses across thematic fields.

2.1. Theoretical Approach

In order to choose an adequate approach towards social innovation enclosing the variety of manifestations and understanding in practice and the variety of understanding in scientific discourse, ranging from, for instance, normative to sociological approaches (e.g., [57]), SI-DRIVE selected a relatively open working definition:

“Social innovation is a new combination of social practices in certain areas of action or social contexts with the goal of better satisfying or answering social needs and problems than is possible on the basis of existing practices.” [4] (p.3).

Pursuant to this understanding of social innovation, major theoretical building blocks were determined. They are related not only to social innovation studies but also to perspectives beyond the related discourse. Hence, for realising a more comprehensive and robust approach towards understanding social innovation in theory and practice the theoretical framework and its underlying literature review [4] also took findings from social theory, development theory and innovation and management studies into account. All of these elements and findings were then enriching the building blocks, namely:

- Social innovation studies (enclosing concepts and discourses like these on social entrepreneurship, social economy, local and regional development, design thinking and the history of social innovation).
- Innovation studies (enclosing innovation systems, transition research, science and technology studies (STS), business innovation).
- Social theory (enclosing the observation objects of social change, practice theory and development theories).

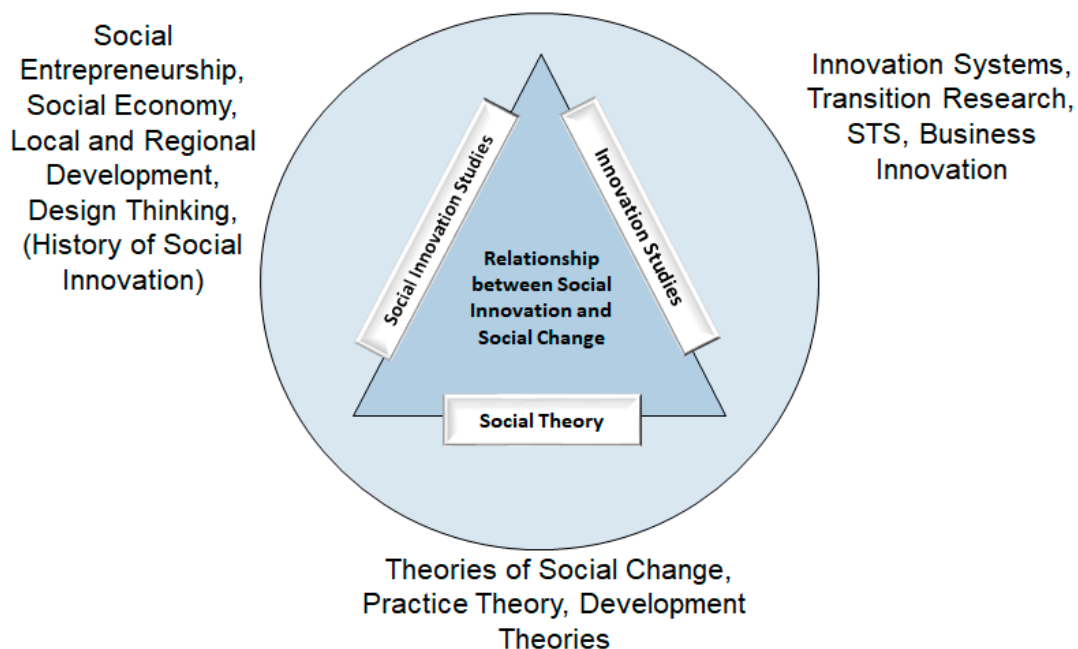


Figure 1. Overview of the three theoretical building blocks of SI-DRIVE [58].

Figure 1 visualises these three elements, which were all arranged around the question of how the relationship between social innovation and social change could be understood. This explicit and central focus on understanding the relationship between social innovation and social change reflects

the aim of understanding social innovation's role in societal progress. The approach was fundamental for achieving practical relevance. Concerning the focus on social innovation in education and lifelong learning, it was a guiding question for finding potential mechanisms of (social) change in educational systems; be it formal or informal.

For better understanding *mechanisms of social change* related to social innovation a set of mechanisms was compiled based on the approach of Wilterdink [59], namely: "learning," "variation," "selection," "conflict," "competition," "cooperation," "tension and adaptation," "diffusion of (technological innovation)" and "planning and institutionalisation of change" [16]. The perspective on these elements was guiding the quantitative as well as the qualitative analyses of social innovation cases throughout the project amongst other dimensions collected in the *key dimensions* presented in Figure 2.

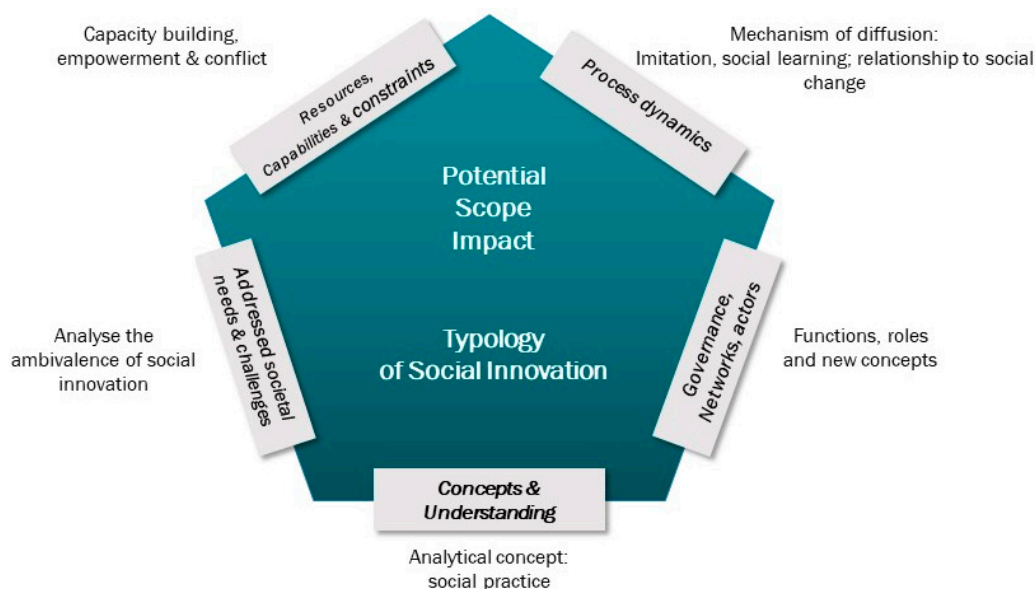


Figure 2. Key dimensions of social innovation [60].

In addition to the *process dynamics* enclosing the mechanisms related to social change and general *understanding* of social innovation within a framework of social practice theory, particular emphasis was put on the *resources, capabilities and constraints* relevant to social innovation initiatives. Furthermore, the analyses took a perspective on *governance, networks and actors* into account. This decision was made in order to count in the high relevance of a sufficient embeddedness in a supportive environment for each initiative and, hence, also a sufficient integration in a network, hence an ecosystem. As, for instance, Kolleck et al. [19,49] could already demonstrate, the role of networks is particularly strong for the successful diffusion and implementation of innovation in education. In this article, the ecosystem perspective going beyond pure networking is hence highlighted and discussed as a crucial element for the success of social innovation. The remaining dimension of observation completing the five key dimensions is the perspective on *societal needs and challenges* connected to the Bureau of European Policy Advisors' (BEPA) classification of different societal levels with different specific "needs" and "demands" as well as greater global or, at least, supranational "challenges" [9], by now also reflected by the SDGs. This dimension with its different levels was taken into account as it is explaining motivations and missions of social innovation initiatives in specific practice fields like *reduction of educational disadvantages* in the policy field *education and lifelong learning*. The classifications of policy fields and practice fields are explained in the following section.

2.2. Research Approach

Pursuant to the aim of further developing theory and understanding of social innovation SI-DRIVE's overall research approach was designed as an iterative process, constantly feeding theory with empirical findings and vice-versa as shown in Figure 3 (a detailed description of the methodology could be found in Kaletka/Schröder 2017 [61]). The whole process of iteration was also added with implications from policy-makers and methodological improvements based on the learnings. The iteration was based on combining quantitative (phase 1: global mapping with a semi-standardised survey) and qualitative methods (phase 2: in-depth case studies selected from phase 1). Each empirical phase was therefore informing the recent state of the theoretical, methodological and policy framework.

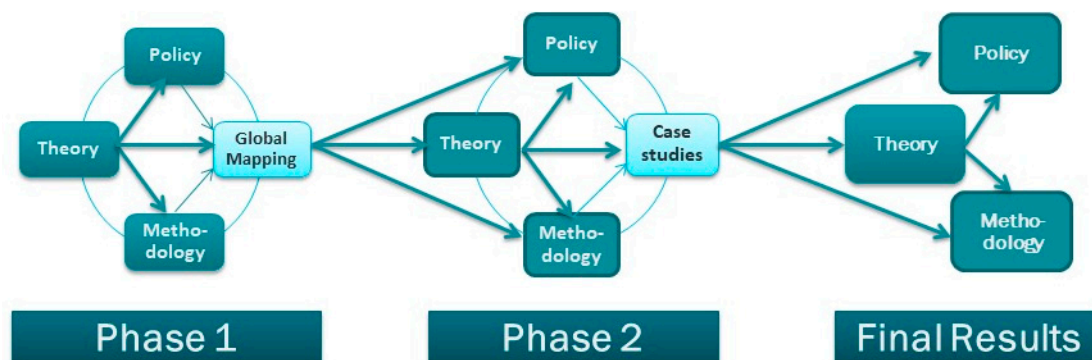


Figure 3. Cyclical Iteration Improving Theory, Methodology and Policy [36].

The research design was featuring a mixed-methods approach (e.g., [62]) with the aim of triangulating quantitative and qualitative methods and data for better understanding contexts, strategies and backgrounds and avoiding blind spots due to the limits of concentrating on just one methodological paradigm (e.g., [63,64]). As Heesen et al. put it straight to the point, “the idea behind methodological triangulation is that the convergence of multiple methods upon a single conclusion better supports that conclusion than just one of those methods arriving at the conclusion.” [64] (p. 2). For the research-practice in SI-DRIVE, the methodological triangulation has been realized by conducting both, quantitative and qualitative analyses. Their results were providing the basis for a triangulated analysis in each policy field in a final step (for education and lifelong learning, its detailed results are available in the respective final report [1]). Starting with the development of a sound theoretical framework based on literature reviews [4] and ongoing conceptual development (e.g., [16]) for accessing the field a mapping was realised in a next step collecting 1,005 cases of social innovation initiatives all over the world (as already mentioned: 211 of them in the policy field education and lifelong learning). Experts for the respective world regions collected, described and analysed these cases after conducting research on the state of the art in each respective policy field and for different world regions in order to take into account the context-specificities of social innovation in practice (e.g., for education: [65]). The quantitative analysis of the collected cases [36] provided the basis and orientation for further theorising and for building a framework for the qualitative in-depth analyses in a next step. In this phase, 18 cases from 14 countries were analysed for the policy field education and lifelong learning taking into account the theoretical framework and the quantitative empirical basis. These case studies were featuring an analytical framework oriented towards the building blocks and the key dimensions as well as the mechanisms of social change (these mechanisms were explicitly analyzed per practice field (cf. below)) as an underlying foundation. In particular, the following foci were taken in addition to a case-description: (1) Actors, partnerships, alliances, networks; (2) Innovative solution (What is the solution?); (3) Gaining momentum (What were the drivers and barriers?); (4) Complementary innovation (where there any other innovations necessary? Esp.: technological innovation); (5) Impact, diffusion and imitation (How much impact was realized? How did it happen?); (6) Role of policy (How were policies and policy-makers influencing the

case?); (7) Connectivity to the practice field (What is the connection of the case to the assigned practice field?). At the end of the project's course a final report was published [60] discussing several approaches towards typologies for social innovation based on the findings and lessons learned from the empirical analysis of cases in practice. These approaches provide an important basis for the typology of social innovation in education and lifelong learning discussed later in this article.

The whole process explained above was furthermore complemented by policy roundtables discussing the results of the different phases with experts from different backgrounds. Policy recommendations were published directly addressing policy makers in general [66] and in the respective policy fields (European Policy Briefs: www.si-drive.eu/?p=3009).

2.3. Operationalisation of the Theoretical Frame and the Main Aims for the Fieldwork and the Analyses

For achieving the aim of better understanding social innovation in practice and for feeding empirical findings back into theory development, SI-DRIVE elaborated two classifications for looking at social innovation in practice. The overarching structure giving *first* orientation are *policy fields*, which address the macro level of thematic areas:

- Education and Lifelong Learning
- Employment
- Environment and Climate Change
- Energy Supply
- Transport and Mobility
- Health and Social Care
- Poverty Reduction and Sustainable Development

These fields derived from the recent and future related main European challenges and were oriented towards the demands of policy makers to achieve new evidence and practical relevance. It has to be mentioned that this classification of policy fields relevant to social innovation was designed providing the necessary framework to structure the access to the widely unknown basic population of various manifestations in practice. Further structure to the aspired sample was given by the *second* classification into *practice fields*. As with the other policy fields, for *education and lifelong learning* practice fields were derived from an extensive study of the state of the art [65] in education and lifelong learning and the first empirical results [36]. This classification is representing the meso-level where socially innovative initiatives (micro-level) in education and lifelong learning are realising similar activities. Table 1 shows these practice fields and the number of cases collected for each.

Table 1. Practice Fields of Education and Lifelong Learning [1].

Practice Field	Number of Initiatives in Total
Reduction of educational disadvantages	44
New learning arrangements, interactive education	41
Entrepreneurship education and promotion	18
Alternative forms of educational activities and training (towards consult, mentor)	17
New strategies and structures for lifelong learning	17
Occupational orientation, early pupils career planning	15
New digital and virtual learning environments	13
Quality improvements, setting of new educational standards	13
Collaboration of different actors (local, regional, national and international)	11
Pupils support	10
Transition management	7
Digital inclusion	3
Other	2

Similar to the policy fields these practice fields are not necessarily representing the only possible classification. They are an instrument for clustering cases of social innovation found in practice within

an explorative study. Especially as the creative pathways of social innovation can barely be foreseen new practice fields might emerge anytime, challenging earlier classifications. However, what is shown above can still provide orientation and has to be seen as a first clustering of social innovation in education and lifelong learning.

2.4. Empirical Basis

As already introduced above the full sample of social innovation initiatives collected for the mapping of SI-DRIVE contains 1,005 cases. Within this sample, 211 cases were assigned to the policy field education and lifelong learning. However, due to the holistic approach of the initiatives many of the cases [36] were addressing more than only one theme or more than only one field. Some initiatives in other policy fields are therefore also focussing on topics related to formal education or the provision of lifelong learning opportunities. Links to this policy field were, for instance, especially found in ‘employment’, ‘poverty reduction and sustainable development’ and ‘environment’ [1]. From the 211 cases collected for education and lifelong learning 18 cases were subject to the in-depth case analyses [33]. The case selection was based on their thematic scope. Hence, most of them (in total 15) are related to the two most often found practice fields ‘reduction of educational disadvantages’ and ‘new learning arrangements, interactive education’ based in thirteen nation states in Europe (Finland, Sweden, Lithuania, Germany, Austria, Bulgaria, Croatia, Montenegro, Romania, Russia) and beyond (Bolivia, Chile, Argentina, Egypt) [1]. In a next step triangulated analyses were taking the quantitative as well as the qualitative results into account [1]. The results from both conducted with an exclusive focus on cases in education and lifelong learning provide the empirical basis for this article.

3. Results

The policy field education and lifelong learning is characterised by different national education systems, differing sometimes across the regions of a country and divided in separated regional or area related responsibilities. While the formal (primary, secondary and tertiary) education systems are mainly centralised, lifelong learning opportunities like early childhood education (which is still predominantly provided by private actors in a trend of change [67]) and VET (which is mainly provided by local municipalities and/or industry sector related—internal and external—training providers) for adults are mainly decentralised. The context of social innovations in education and lifelong learning is characterised by the dominance of these (formal) education systems, affecting tangential societal function systems (such as politics, law and economy), different target groups and subject areas (disadvantaged groups, family, employment, rural areas, etc.) and substantive concepts of reference (e.g., self-actualisation, individual learner personality) [65].

The reviewed SI-DRIVE cases clearly stress that new social practices in education and lifelong learning are developed in an *incremental* way mostly *with relation to the formal education systems, structures, frameworks and policies, serving local demands and using leeway on the regional/local level*. The main motivation, triggers and drivers are (local) *social demands and (general) societal challenges as well as individuals/groups/networks* (not to forget *charismatic leadership*). About half of the initiatives are intending *systemic change*. Figure 4 is showing the distribution of cases. The chosen classification of societal levels addressed (social demand, societal challenge, systemic change) is going back to the overarching categories suggested by BEPA [9] (p. 36–40). The two levels of societal challenges and social demands were furthermore selected as possible motivations and triggers for starting a socially innovative initiative amongst others. Experts of the SI-DRIVE consortium also added further options, based on their experiences from practice and/or earlier research.

Brand new practices appear as well as ‘copied’ or modified innovative solutions (see Innovative Character in Figure 4). Although almost all initiatives are scaling, there is only *limited transfer*. Transfer (mostly done on a local, national level) and scaling is done mainly within the initiatives and by the project partners. A remarkable possibility improving impact, diffusion and transfer much more is

that nearly half of the initiatives are embedded in a variety of networks, social movements, umbrella organisations or policy programmes.

Context of SI in Education and LLL

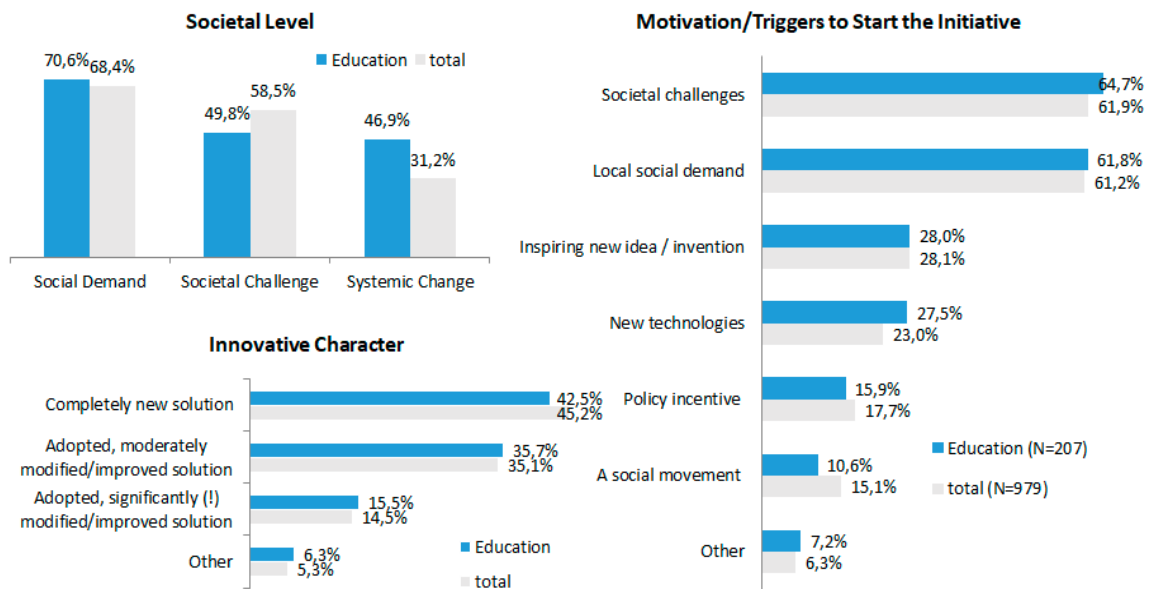


Figure 4. Context of Social Innovation Initiatives (quantitative mapping by the SI-DRIVE experts).

There is a high connectedness to other policy fields (esp. to Employment and Poverty Reduction and Sustainable Development) and high interactions/interrelations with formal systems (system immanent and external as well as hybrid solutions). This is leading to different strands of development: for example, system initiated social innovations, which act outside the formal system; social innovations initiated and remaining in the system; innovations generated outside of the system (partly integrated and institutionalised within the education system or still staying outside of it).

These results led to the development of a typology of social innovation in relation to the formal (education) system (see Figure 5) [68].

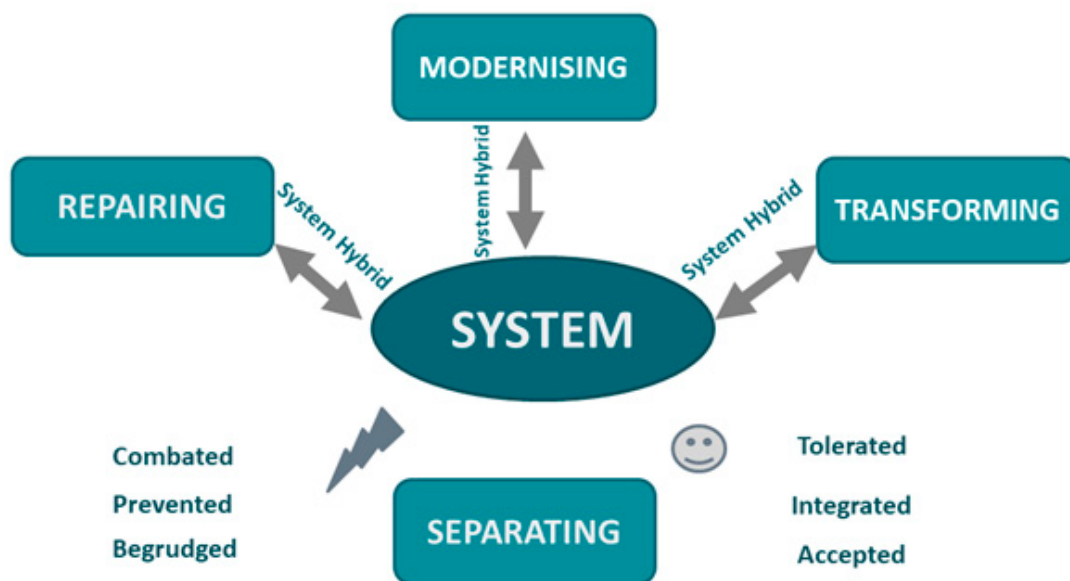


Figure 5. Typology of Social Innovation in Education and Lifelong Learning [68].

The four (ideal-)types are anchored in the cases analysed for SI-DRIVE. All of them can basically be found in practice: The type of *repairing* can be exemplified by the case Storytelling Grandmothers from Argentina, an initiative “fostering insufficient reading abilities of boys and girls with the help of senior citizen volunteers” [60] (p. 118). This initiative is hence ‘repairing’ failure rooted in a lack of achieving sufficient reading abilities by the formal system. *Modernising* in practice was, for instance, found with the case Hessencampus from Germany. This initiative is modernising education by “setting up new overarching structures for lifelong learning across adult and vocational schools, training institutions and different public responsibilities to manage existing institutions from a learner’s perspective” [60] (p. 118). The initiative Educate Me is providing an example for innovations transforming education. In this case, a holistic approach on improving literacy and self-activation of pupils is comprising a transformation process of the whole school structure, including school management, administration, counsellors and teachers [33] (p. 38). The fourth type found in practice is *separating*. A good example for this type is provided by the case of the Outdoor Association in Sweden. The initiative is providing alternative nature and team-based learning opportunities separated from the approaches of formal education. While repairing, modernising and transforming are more or less intensive interactions with the formal system, the fourth type of separating is characterised by initiatives outside of the system (cf.: [68]).

Actors of the formal education system could be drivers—or barriers, if not taking up the roles listed below—of these different types of social innovations [1] (p. 58):

- As *initiator*, relevant development partner, offering and benefiting from an experimental sphere without any risk.
- As an *integrator* fostering scaling and institutionalisation.
 - Within the system by initiating or taking over and integrating social innovations.
 - Outside the system (in relation to specific needs and areas of the system, improving it from outside, mainly because of benefits from external resources (volunteers, donations, etc.)).
- As a *supporter* or ‘*tolerator*’ of stand-alone initiatives (with more or less acceptance and minor or no support of system institutions).

To overcome social demands and societal challenges cross-sector alignment, collaboration and networking are crucial by actively involving public, economic and civil society partners (including active user/beneficiary involvement)—finally leading to a social innovation ecosystem. Civil society (Non-Governmental Organizations /Non-profit Organizations), public bodies and private companies are the main type of partner organisations (see Figure 6) found in the data. Academia (and universities) as the fourth sector and element of the quadruple helix have an underdeveloped role in the social innovation ecosystems so far, esp. if compared with their role in technological innovations. Universities and research institution could take over a leading role for unfolding the potential of social innovations for education and lifelong learning by research, exchange of good practice, knowledge provision and exchange, evaluation, new ideas, process moderation, advocacy for social innovation, technological development supporting learning possibilities and access and others.

There are many successful social innovation initiatives that set-up or assembled a high number of actors from different sectors. For instance, the initiative Exchange Education for Habitation (<http://www.tbfw-marxloh.org>) developed a new interactive ‘service’ or barter model involving various stakeholders across sectors (see Figure 7). On the one hand, this new solution improves education (private lessons, coaching, tutoring, daily life support) and living conditions of children, on the other hand it changes the quarter by renovating abandoned houses, providing affordable living spaces to students, eliminating and upgrading of vacant houses or apartments; not at least improving the living conditions in the local area.

A major type of support by partners is financial support. There is a mix of funding sources but funding is by far the main challenge as well as a lack of personnel and missing political or institutional

support (at local, national or European level). On the other hand, granting leeway for experimentation has been singled out as a boost for social innovation initiatives. Technology is complementary to social innovations, facilitating innovation processes, either by becoming part of a solution or by assisting in the communication and knowledge sharing processes of the actors involved.

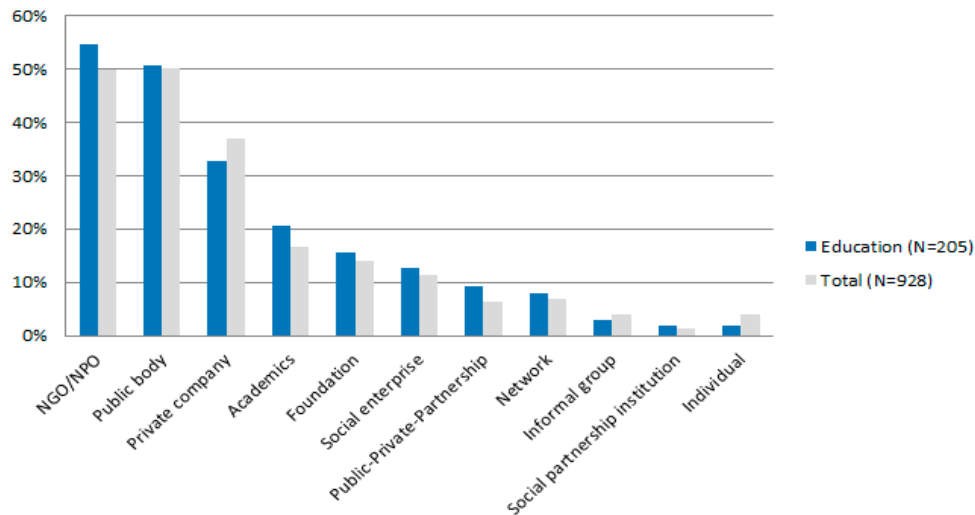


Figure 6. Partner Constellations in Social Innovation Initiatives.

Barriers for the development of social innovations stem from three different sources, namely political actors, society in general and barriers that derive from inside social innovation initiatives. The most cited barriers from policy site have been related to the lack of financial support, the bureaucratic/silo-thinking nature of ministries, missing continuity of policies and strategies as well as a lack of institutional support (for instance the provision of access to schools). Such barriers can be associated with an overall lack of awareness and acceptance of the concept and potentials of social innovations on the side of policy. Without political support institutionalised in policies, ambitious initiatives aiming at more than just filling gaps in provision (‘repairing’) might not be able to realize a modernisation or a transformation of practices in the respective formal system of reference.

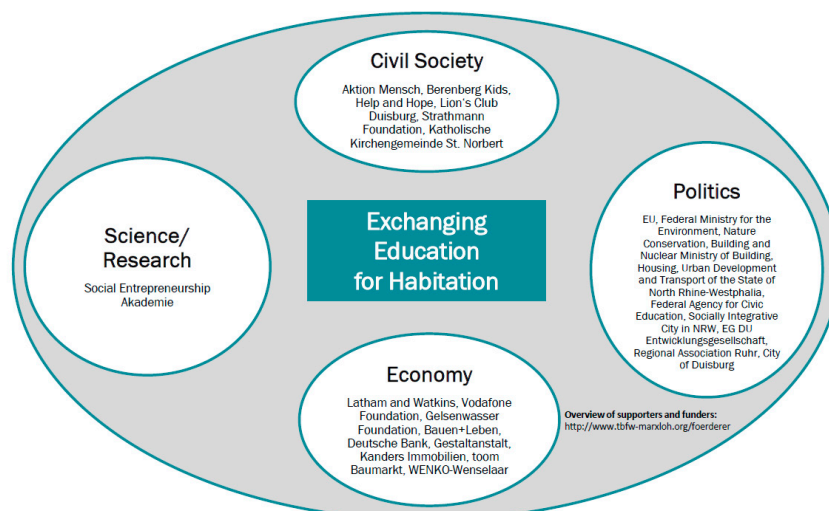


Figure 7. Social Innovation Ecosystem. (Tausche Bildung für Wohnen e.V./Exchanging Education for Habitation).

Drivers and motivators, ambitions and goals as well as barriers and enablers are very closely related to each other. In some cases, *barriers can even become drivers*, for example, when society’s

attention is drawn to existing problems. It seems that society's frustration about current systems and institutions as well as the dissatisfaction with (education) "market" failures can act as an important driver for social innovation (even if this is not always the case). Government can act as an enabler through funding, sponsoring and facilitating initiatives outside the system but being dependent on financial support from government and the given governmental structures can act as a barrier as well.

All in all, social innovations in education and lifelong learning reveal an ongoing *paradigm shift* from the institutional to the learners' perspective leading to a *holistic approach*: from top-down to bottom-up as well as from teacher to learner-centred approaches, based on a comprehensive understanding of learning and offering milieu specific solutions. In fact, the holistic approach adopted by social innovators can be considered the legitimation for social innovators as they work distinct from the formal system even if they do not belong to the type of 'separating'.

The mechanisms of social change (see chapter 2) analysed in the in-depth case studies of SI-DRIVE reveal that *conflict and tension* can be considered the starting points driving social innovations in education and lifelong learning, often closely related to the formal system, its gaps and failure (see Figure 8). This tension can lead to *cooperation*—which is considered a success factor—not only influencing *variation* and *selection* but further highly relevant for *diffusion* (across regions) and *institutionalisation*, hence the realisation of system modernisation or even transformation. *Competition* among social innovation initiatives is not of an issue; instead, there is a kind of 'competition' with the formal system concerning the best way of improving education. Moreover, *learning* is a highly important factor for all actors involved in the social innovation process (as it leads to empowerment) and happens more or less as a side effect. It is also essential for diffusion as it is often based on knowledge gained in the process of innovation. Moreover, learning from different stages and from different actors leads to new potential for additional or further innovations.

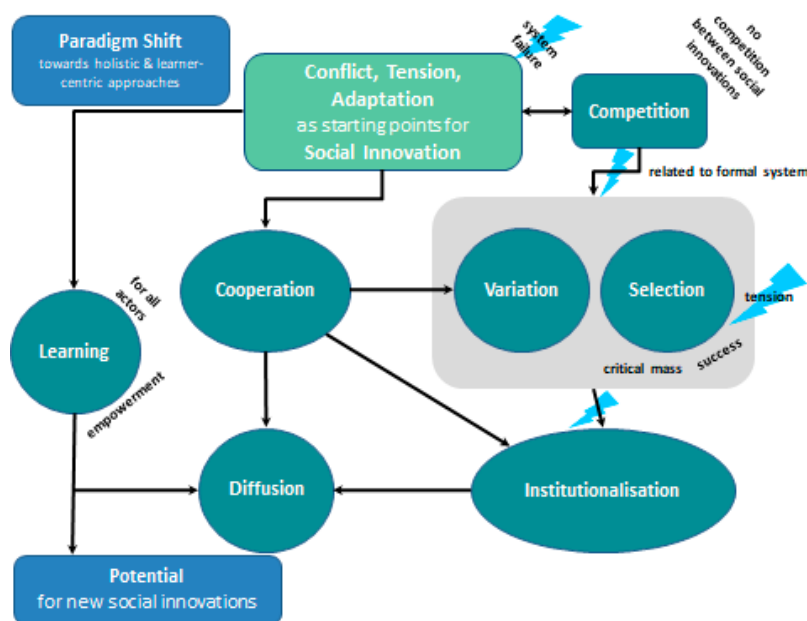


Figure 8. Mechanisms of social change in Education and Lifelong Learning.

In line with the SI-DRIVE key dimensions and corresponding research foci [4] the following summary can be drawn for the policy field education and lifelong learning:

- There is no clear understanding or orientation on social innovation and related concepts (esp. in European countries). However, there are a lot of innovations that could be seen as new social practices and innovation processes, which fulfil the criteria of the SI-DRIVE definition and the five key dimensions.

- Social innovations are clearly directed towards societal challenges and social needs. The ambivalence of innovations is reflected in the complicated and harmful innovation processes that bring together the different rationalities and cultures of the involved (educational) institutions and other actors outside the formal education system. Mainly, the strict (legal) borders and the different responsibilities within the education systems hinder the innovation process and can be seen as the main barriers for new practices evolving from outside the system.
- Process dynamics are often dominated by governance, networks and actors reflecting triple or quadruple helix constellations (policy/public institutions, economy and companies, science and consultancy, civil society/non-governmental organisations). Civil society and citizen involvement and empowerment are (indirectly) given within the social innovation processes.
- The main challenge (esp. for grassroots initiatives) is getting leeway and acceptability by the formal education system (including clarifying the responsibilities going beyond the given formal structures).
- Resources, capabilities and constraints are often related to the formal education system and its institutions. As such, the funding of social innovations is especially a problem for grassroots initiatives. Drivers (mainly societal challenges and social demands, individuals, groups or networks) and barriers (mainly related to funding and formal system restrictions) are manifold and sometimes interrelated.
- Social change depends to a high degree on governance activities. Social innovations initiated beyond centralised mechanisms, a new correspondence of national (laws, regulation and systems) and regional-local applications could be a research focus for further empirical and theoretical analysis.
- Initiatives aiming at change in the provision of formal education or beyond can realise a change of practices either by repairing system failures and filling gaps, by modernising the formal system or even by completely transforming social practices. While most of them are somehow related to the system as the main reference point, some can even find pathways separated to formal education.

4. Discussion

The results of the SI-DRIVE project concerning education and lifelong learning reveal the potential social innovation could have for innovating this policy field and its systems. However, to unfold and foster the potential a new innovation paradigm and strategy is needed requiring new framework conditions, setting the learners' perspective instead of institutional and system rationalities in focus.

4.1. A New Open Innovation Strategy is Needed

For better accessing the whole capacity of all possible innovators, innovations in education and lifelong learning should not be done only within the system and by system players (ministries, schools and universities). Path dependencies, the institutional view and rationality are limiting the innovation potential. Social innovation concepts and strategies could enlarge innovation capacities in this policy field to a high intense. New ideas for modernising, repairing and transforming the education system and lifelong learning are necessary as well as complementary and interrelated innovations. Here, the core idea of open innovation [69] is coming into play. That is the opening of the innovation process for the environment of the system in order to benefit from additional innovation potential.

The main advantage of a holistic open innovation strategy would be the possibility to integrate all relevant stakeholders, collaboration across the system internal silos and societal sectors (science, public, economic and civil society). By a holistic approach (also including the beneficiaries, the learner's perspective) a quicker, short-termed adjustment of the education systems (early childhood, primary, secondary and tertiary education, initial and continuous VET) to the needed skills of the learners, the companies are possible (see the greening VET module of Greening Technical-Vocational Education and Training (GT-VET) [70]).

The results of SI-DRIVE show the increasing importance and new potential of social innovation for solving societal challenges and local demands within and beyond the education system aiming for more sustainable societies or more pathways for disadvantaged groups. However, because of the missing awareness there is a need for extending visibility of social innovation and its underlying concept to unlock the potential for innovations in education and lifelong learning. Although there is a growing number of social innovations, many initiatives do not label themselves as social innovation and they are mainly unaware of its concept [33]. Hence, they also cannot contribute to strengthening the discourse on social innovation in education, giving it more weight for perspectives on educational change. Compared with other regions (e.g., Latin America [71,72]) and other policy fields (e.g., Poverty Reduction and Sustainable Development, Environment and Climate Change [73,74]) the visibility, awareness, recognition and acceptance of the social innovation concept and related initiatives have to be fostered. This would lead to unlocking the quantitative (in terms of numbers of initiatives, diffusion and imitation) and qualitative (in terms of success and impact) potential of innovations in education and lifelong learning. An increasing number of social innovation initiatives in education might also foster discursive influence of actors aiming at new solutions not provided by the formal system so far. Similar to the influence of foundations in Germany, as described by Kolleck [50], initiatives might then access better chances for a diffusion of their concepts and understanding of how to develop education. Unlocking the potential of social innovation would increase the possibility of civil society, companies, research institutions and cross-sector policy for more and better solutions for societal challenges and (local) social demands (bottom up initiatives as experts for solutions to local social demands). Education and lifelong learning as a key challenge of modern (knowledge) societies could possibly widen its innovative capacity by social innovations, done by (e.g., didactical, digital) improvements of the existing systems, its gaps and failures, teaching quality and teacher qualification, the inclusion and empowerment of educationally disadvantaged groups, fostering equal opportunities and a better match between economic demands and up-to-date qualifications.

However, to initiate, develop, implement and ensure sustainability of successful solutions new framework conditions for experimentation within and without the education system have to be established.

4.2. New Framework Conditions are Needed—Unfolding the Potential of Social Innovation

The examples and case studies of SI-DRIVE show that the formal education system is a pervasive and not deniable reference point. Therefore, most social innovations in education and lifelong learning face a strong dependency on the formal system. The development of new practices is mostly done within the given formal structures. Despite projects within the context of the formal education system—created and initiated, funded and (partly) conducted by responsible public institutions—innovations going beyond or changing given formalities, structures and procedures are mainly restricted to given (legal) leeway or the necessity to change formal and legal structures (incl. law).

Against this backdrop, it becomes evident that social innovations in education and lifelong learning are still *incremental* and in different ways and intensity always related to the (formal) education system and policy. Social innovations staying outside and with no direct relation to the formal education system (type: *separating*) exist but remain uncommon. The relation to the formal education system is also evident because social innovations are often *identifying and solving the deficits and limitations of the education system* [75]. A lack of official solutions or programmes for the problem at hand is the main starting point. For instance, overcoming educational disadvantages by social innovations is partly shaped by the very slow-going innovations in the established institutions of education with their still apparent socially selective character. Knowledge about the impacts and recommended routes of reform—from, for example, studies like those of PISA and the Programme for the International Assessment of Adult Competencies (PIAAC), labour economics and also education sciences with an increasingly comparative focus—is widely spread. However, the institutionally dense

education systems with their interlocked regional, national and federal state-level responsibilities have strong path dependencies and vested interests that encourage compensatory rather than transformative social innovations—although the difference is not always well defined.

Again, social innovations (in their great variety) generate *creative tension* demanding innovating, further development and social change. This works in both directions: System changes can lead to more leeway for social innovations coming from outside the system and social innovations can push the system to necessary improvements. However, this tension leads to a kind of *competition between the public sector and civil society*. Initiatives, which are not accepted, supported or tolerated by the system (see typology in chapter 3), may face failure more often, becoming victims of circumstances, of power relations or of selection based on competition between institutions of the formal education sector and social innovation initiatives. While competition can also mean *creative tension*, displacement by structurally more powerful players (i.e.: public sector/formal education) is counterproductive for the development of education. Looking at the potential of alignment, described in chapter one, common aims for education across different sectors (here: public sector and civil society) can enable the development of education, in contrast.

As already described tackling system gaps is key for motivation and an initial driver for social innovations in education and lifelong learning. While the challenges are often produced by the formal system or the system players who do not know or are not allowed to solve the problems, social innovation initiatives use their *leeway given by the formal system or regulations*. On the other hand, almost half of the initiatives in education and lifelong learning mapped in SI-DRIVE seek to achieve systemic change (see Figure 4 “Societal Level”). This comprises initiatives, which try to promote a change in general values in society and those who want to change a system, such as the education system of a country. Initiatives with such ambitions are likely confronted with more ambivalent opinions, with a higher level of resistance or support. For example, the quantitative mapping results of SI-DRIVE show initiatives, which develop better governance of schools by extending the school functions and teachers’ capacity (e.g., “Educate Me” [34] (p. 38–40)) or try to overcome the separation of different educational phases and institutions (e.g., “Talent Scout” [33] (p. 22–27)). Coming back to the typology of social innovation in education presented before, more leeway for initiatives might also enable a shift in the distribution of initiatives representing the types of *repairing* or *separating*. With more leeway, initiatives sticking unintentionally to these lower levels of impact might be able to unfold more impact on the development of educational systems. They might get enabled to *modernise* or even *transform* practices.

“Such initiatives questioning and challenging the current state of play often find themselves in situations where partners of the initiative may have conflictual goals and where also external support will be accepted or declined also because of the assumed interests of the external party and the potential threat the initiative poses for them” [36] (p. 53).

When social innovations and their initiators can *overcome the described barriers*, often thanks to their resources, their endeavour is leading more often to sustainability, institutionalisation and (in some way) social change. Nevertheless, because most of the grassroots initiatives are located somewhat outside the education system (see interrelation challenges with the formal system), their knowledge is often not directly transferred to schools, universities and other educational system organisations and professionals aside from informal paths and connections.

Therefore, the described dependency of social innovations on the formal system including the silo thinking of public institutions is necessitating a new role of public policy actors within a social innovation ecosystem:

1. The cross-cutting perspective and the holistic approach of the solutions (paradigm shift) and the combination of similar initiatives in practice fields is enabling joint solutions, imitation and innovation streams.
2. New governance and social innovation friendly environments are essential (from leeway to cooperation with and integration in formal systems), with tailored support at different stages

of the social innovation process, effective scaling mechanisms and mechanisms leading to social change.

Social innovation in education and lifelong learning is often linked to other policy fields, reflecting the cross-sectoral approach and holistic solutions from a learners' perspective. For instance, the research reports of SI-DRIVE reveal that solutions for employment are combined with an upgrade of employability and skills, environmentally friendly behaviour is based on respective educational courses [1,33,36]. Figure 9 shows these connections between policy fields addressed by mapped social innovation initiatives. The percentage values display the proportion of namings of the respective other policy fields as subordinate policy fields for the initiatives.

This shows that by using their leeway social innovations are promoting and stimulating a *paradigm shift* from an institutional and teacher-centred approach towards a learner-perspective: individuality of the learner, support self-actualisation, extend personal competencies and enable individual improvement [76,77]. Thus, leading to a more comprehensive holistic approach tackling several societal issues and social demands simultaneously by offering a sector (e.g., employability, labour market, skills matches, etc.) overarching solution. Beneath the integration of all the relevant stakeholders of different sectors, user involvement can form the basis for such holistic solutions. To achieve social change and improvement of education and lifelong learning there has to be more leeway for addressing and repairing system gaps, flexible and tailored education, changing and improving system institutions and frameworks in order to make the formal system more receptive for social (and technological) innovations.

Becoming more flexible and deviating from silo thinking within bureaucratic structures is a relevant precondition to allow (social) innovation to flourish. This currently represents a main challenge for policy. As social innovation initiatives often use creative and non-traditional approaches to solve specific local issues—issues that are not necessarily working in the educational sphere only but have intersection with other policy areas (e.g., employment)—it becomes important that *administrative capacities* for support of social innovations are strengthened on national, local and regional levels.

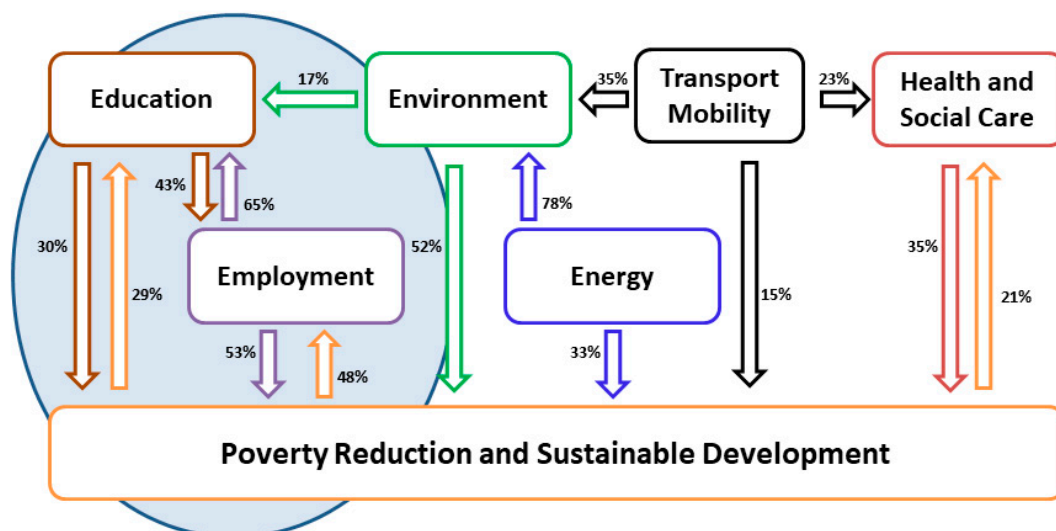


Figure 9. Connectedness of Initiatives in Education and Lifelong Learning to other Policy Fields [1] (p. 24).

The holistic approach also includes new modes of cooperation and collaboration, leading to *networking and new governance* structures. For instance, networking on the operative level is often done by local *governance* (instead of pure top-down *government*) structures including all the relevant (and willing) stakeholders for solving concrete local demands. Overarching sectoral or (inter)national networking is focusing on concept development, knowledge exchange, learning and lobbying.

Aiming at enriching the top-down administration with a bottom-up perspective, social innovations need a development of given structures *from fragmentation*—with separate rationalities and target-orientations, different public responsibilities—to *overarching and connected governance structures*. As the case of HESSENCAMPUS [77] exemplifies, new governance structures can improve collaboration beyond, across and within the silos and foster a focus on the learners' demands instead of an institutional perspective.

5. Conclusions: Future Policy and Research Implications

The results of SI-DRIVE so far - presented here in a condensed form - are a starting point for further empirical research on the possibilities of social innovation to improve and support the education and lifelong learning bottom-up and beside existing pathways. From a policy side one approach could be the European mission-oriented research and innovation strategy [78], focussing on the main educational challenges such as described in the practice fields of SI-DRIVE (see Table 1, chapter 2) and by SDG 4 (Quality Education) social innovation in education and lifelong learning can make a difference in “ensuring inclusive and equitable quality education and promote lifelong learning opportunities for all” [11]. In line with Mazzucato's mission approach [78] social innovations could help to activate innovations across educational areas, societal sectors, actors and disciplines, ensuring bottom-up experimentation and system-wide innovation, guaranteeing openness and collaboration as critical factors for education as one of the key innovation pillars.

Mission oriented social innovations could be based on the main challenges listed in the practice fields based on the global mapping of SI-DRIVE (see chapter 2): for example, reduction of educational disadvantages, establishing new (didactical, digital and virtual) learning arrangements and developing new strategies and structures for lifelong learning. These practice fields could be bottom-up fed future innovation missions *modernising, repairing and transforming* the education system in complementary, interrelated innovation strategies.

With such a mission of improving education quality and lifelong learning participation in a collaborative way across educational areas, responsibilities and silos, including stakeholders from all the societal sectors concerned (public, private, civic and science) and allowing bottom-up initiatives and experimentation, social innovation will, in our opinion, “orchestrate the rich diversity of talent and expertise that today lies mostly fragmented or untapped” [78] (p.5).

“Missions connect all relevant actors through new forms of partnership for co-design and co-creation by focussing on targets that require multiple sectors and actors to solve. Thus mission-oriented innovation has the possibility of leading to system-wide transformation” [78] (p. 15).

Following this, we need new European and national innovation strategies and activities to overcome path dependencies and fragmentation, putting the learner perspective in focus, as a reference point, thereby ensuring a cross-sectoral and holistic approach:

- To increase awareness, visibility, acceptance and implementation of social innovation and its underlying concept to improve the quantitative and qualitative potential of social innovation for education and lifelong learning.
- To reduce the dependency of social innovations on the formal system and the silo thinking of public institutions necessitating a new role of public policy actors within a social innovation ecosystem.
- To secure the cross-cutting perspective and the holistic approach of solutions within a set of similar initiatives in practice fields as an approach for joint solutions, imitation and innovation streams.
- To establish new governance and social innovation friendly environments—from leeway to cooperation with and integration in formal systems—with tailored support at different stages of the social innovation process, effective scaling mechanisms and mechanisms leading to social change.

“Moving on from the fragmentation of education and lifelong learning (with separate rationalities and target-orientation, different public responsibilities) to overarching and connected governance structures (ecosystem of relevant actors and stakeholders from policy, economy, civil society and science) between centralised and decentralised public government, market and civil society driven structures will be beneficial. This means a common management of resources (infrastructure, staff, etc.), competences and learning offers and programmes to secure and improve effectiveness for the learners and the regional-local area and to increase efficiency by a common use of resources. This also includes an extended role of universities and consultancies (knowledge provision and exchange, evaluation, new ideas, process moderation, advocacy for social innovation, technological development support learning possibilities and access and others).” [79] (p. 4). In respect to social innovation in education and lifelong learning, this indicates a need for more research on this topic. Whereas SI-DRIVE laid a fundament, further analyses with additional foci should help to achieve better understanding of educational social innovation in practice. An important building block for such research could be found in the network perspective taken in this special issue. More in-depth knowledge on the role of networks and eco-systems could provide practitioners across all sectors with the background they need for developing successful strategies.

In line with lifelong learning as a European strategy aiming at improving the EU’s competitiveness in the middle to long-term (Lisbon-Strategy, EU 2020 Strategy), social innovation in education and lifelong learning can help to address technological, social, economic and demographic changes and challenges in a holistic way. Focussing on new social practices, mainly at the regional-local level, lifelong learning is also an opportunity for every individual who wishes to manage actively and in a self-reliant way, the constant change in work and society. However, as social innovation reveals, this cannot be reduced to a purely individual responsibility; rather new governance structures could facilitate new solutions helping the individual learner in the achievement of new goals and his/her particular demands in an appropriate way.

Combining social innovation with the lifelong learning strategy the individual personality of learners and the learning process—not just learning phases or punctual activities—have to be the starting and reference point for every learning environment. On the one hand, this leads to the already described holistic approach with a comprehensive understanding of learning—taking into account all areas and forms of learning and competences—and the learner’s personality, environment and biographical (learning) history. On the other hand, this comprises a paradigm shift from an institutional perspective to a strict learners and learning process perspective, enforcing new overall and comprehensive structural principles within the education system and beyond. Reconstruction and partly new construction of traditional structures of education are necessary, building up a lifelong learning system instead of innovating only within the borders of (formal and separated) educational institutions and areas, arranging lifelong learning possibilities in a more flexible way, especially at the local level [76]. However, both approaches (reconstruction and new construction) might be needed as successful innovation should be connected to the respective cultural contexts by tying on traditions and established practices in order to avoid reluctance or even refusal by stakeholders. They need to be “anchored” [80]. That also means successful strategies for establishing social innovation in education might not be fully transferable to other contexts or regions without also considering the cultural or regional context. Reconstruction might therefore be more effective for realizing educational change than disruption.

In line with the mission orientation of Mazzucato [78] the social innovation approach could build-up new capabilities and expertise for public administrations, enriched curricula, new management forms, changing routines and processes as well as dynamic capacity building for management and organisation (see [78] (p. 19)).

However, not only system players but also social innovators have to change their mind-set. Focusing mainly on repairing, improving and transforming *primary, secondary and tertiary education* leads to the fact that *lifelong learning* (beyond the formal education areas) is recently not covered

often by social innovation initiatives and not part of the mind-set of most innovators. Therefore, the attractiveness and relevance of social innovations for this important field has to be improved; nonetheless because the leeway for solutions in this mostly not formally regulated educational area is much higher.

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