

## COMPLEXITY OF STUDENT-LED RESEARCH

**The Complexity of Student-led Research: from Terminology to Practice in a Case Study  
of Three Countries**

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**Abstract**

Preparing young people to meet emerging contemporary challenges has become a global imperative. Over two decades there has been a call for students' active participation in the life of school and society, and an important feature of this call is student-led research (SLR). However, this pedagogical and empowering call with many potential benefits is not unproblematic. There are far-reaching differences between various conceptions and use of student-led research in secondary schools both within and between different countries, reflecting a contrast between skill development and voice. This contrast, however, has not been previously scrutinised and discussed. We review student-led research in England, Ireland, and Russia showing that its development has been initiated and carried out in different countries with very different goals and focuses. Our study is in the form of a case study of the three countries covering a wide range of discussions related to SLR. By looking critically at how SLR is conceived and supported in various contexts we evaluate facilitators and barriers which ultimately offers a better understanding of how ideologies and political decisions influence students and teachers, and how educational policies and educational values are transferred into practice.

*Keywords:* child-led research, student-led research, inquiry-based learning, participatory research, children's rights

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### **Introduction**

Students' involvement in research can be differentiated along a continuum from 'manipulation', 'tokenism' and 'decoration' to 'child-initiated' and 'directed' (Hart, 1992; Mayne et al., 2018). Arguably, these approaches are reflected in various conceptions of childhood and the place of children and young people in society. A range of terms have referred to research in which children and young people have an important input and are not merely following adult directions. Different terminology extends further than a mere preference about words and reflects important differences in both conceptualisation and practice. These terms include student-directed research, student-led research, student inquiry, self-regulated learning, inquiry-based learning, and discovery-based learning. The terms are used in a variety of global contexts while discussions about their theoretical distinctions are limited. Our working definition of student-led research (SLR) is a scientific inquiry conceived, planned, conducted and assessed by students with support from professional researchers and/or teachers (Bacon & Matthews, 2014; Dobber et al., 2017).

A rationale for SLR in secondary schools and colleges often is that students gain transferrable skills. It has been recognized in international studies that students' involvement in research can facilitate the development of autonomy, critical thinking and problem-solving skills (Lundy et al., 2011), and can enhance well-being through empowerment and active citizenship (Graham et al., 2017). Studies also suggest that in relation to development and learning, SLR is an important way to nurture communication, collaboration, creativity and deep thinking (Barron & Darling-Hammond, 2010). Importantly, research requires a capacity for critical, discursive and independent thinking, as well as analytical thinking about data in forming opinions and coming to conclusions (Kerawalla & Messer, 2019). Additionally, research on some topics can help build citizenship, recognition of human rights and the involvement of students in decision-making (Fleming, 2015). Thus, there are well-

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documented benefits of student research for learning, critical reflection, and civic engagement. A future benefit may be the authentic production of student projects as an educational response to the recent developments in artificial intelligence, such as ChatbotGPT.

Another rationale for SLR can be traced back to the 1989 United Nations *Convention on the Rights of the Child* (UNCRC) that provided an alternative motivation for childhood research practices by emphasizing a participatory, rights-focused perspective (Mayne et al., 2018). This first legally binding treaty addressed children's rights as an issue of justice (Twum-Danso, 2009), and spread the understanding that children are 'experts' of their own lives who have the right to participate in everything that has impact on their lives. Consequently, Articles 12 and 13 of the UNCRC (UN, 1989) brought about policy changes across countries that directed the focus of active engagement to the heart of education provision. In 2006, the UN stressed the importance for researchers to recognise children's rights more broadly and make research more participatory (UN Committee on the Rights of the Child, 2006). The concluding observations from the UNCRC Committee encouraged State Parties and multilateral organisations to engage children in knowledge production. Importantly, it put forward the conception of children and young people as competent social actors, as change agents and right-holders. This understanding has opened an opportunity for children's participation in research with the findings used for decision-making. Subsequently, over the past two decades, there has been active promotion of children's and young people's positioning as co-researchers of their own lives (Cooper & Kellett, 2016).

There are two key framings of SLR that correspond to these rationales – inquiry-based learning and rights-focused research. The term 'inquiry-based learning' is often used in situations where the issues of support, scaffolding, and facilitation are forefronted (Hmelo-Silver et al., 2007; Marshall & Horton, 2011; Pedaste et al., 2012) and are part of the

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curriculum that is designed to achieve educational objectives such as advancing thinking and transferrable skills. The relevant literature mostly focuses on exploring how research-based activities can improve students' educational outcomes through skill development (Chu, 2017). At the same time, there is a different tradition that reflects a rights-focused approach to research underpinned by discussions around such concepts as child empowerment, autonomy, participation, and voice (Kellett, 2011; Franks, 2011; Graham et al., 2017) that can be traced back to the UNCRC. This literature emphasises the value of children and young people leading their own projects without placing emphasis on their educational outcomes. We refer to this form of SLR as 'rights-focused research'.

For our critical discussion of these topics, we conducted an exploratory cross-case analysis of national policies on and practices of SLR with a focus on both inquiry-based learning and rights-focused research in three countries: England, Ireland and Russia. The countries were chosen to provide a contrast between education systems that are significantly different but have a number of similarities in terms of their traditions. England provides an example of a country where there has been a history of students being able to carry out research projects as part of their post-16 education, also there has been an acceptance of the importance of student voice, and there has been an active promotion of rights-focused research. In Ireland there has been in the last decade the promotion of inquiry-based learning and the acknowledgement that students should have a more prominent voice in the education system. In Russia, there has been a desire to use research projects to improve students' skills, but there are few opportunities for students to take initiative and to be in charge of their projects. Consequently, these three countries provide contrasts in the aims for and support of SLR; the review of their similarities and differences provides the basis for a wider ranging exploration of the influences on SLR in education and the basis for recommendations about its use. The cross-case analysis is based on authors' expert knowledge of the three contexts

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with a focus on secondary school students (11-16 age range). Although SLR has been and is undertaken by younger children it is not usually a feature of their school curriculum (Lundy et al., 2011), and this limits the comparisons that can be made across different countries.

The next three sections describe SLR in each country, with a consideration of what is the predominant form of SLR, the relation between policy and practice, and has the UNCRRC call for rights-focused research resulted in it becoming part of the curriculum? This is followed by a discussion that considers the implications of our case studies and makes recommendations about the use of SLR.

### **SLR in England**

The UK has a tradition of promoting SLR across primary, secondary and higher education. This is evidenced in a variety of initiatives, curriculum development and policies designed to provide greater opportunities for student engagement in research.

Many UK educationalists support the idea of inquiry-based learning (IBL) and there has been interest in using technology to enhance this approach (Kerawalla, 2015). The emphasis on student identification of key interests, research themes and research questions are central to these views. Mellender & Svardh (2018) describe how IBL has its roots in constructivist learning theories, requiring active engagement. In this way knowledge is recognised as being constructed through problem solving and discussion. inquiry-based learning is thus closely related to the development of deep thinking (Watkins, 2012) underpinned by well-established theories of learning and pedagogy established through the works of Dewey, Piaget and Vygotsky. However, the English assessment system largely involves unseen examinations that focus on subject knowledge and this limits the extent of IBL.

A different approach concerns research that involves rights-focused research that does not necessarily have an educational objective. The starting point was the 1989 UNSRC which

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initiated policy changes involving of consultation and participation. An important subsequent event occurred in 2004 with Professor Mary Kellett, establishing the Children's Research Centre (CRC) which was the first university-based centre in the world to train and support children and young people to undertake their own independent research. The CRC engages with diverse groups in schools and community settings, to provide age-tailored research training and then support them to undertake original research of their choosing. Kellett's approach has been applied across several university centres in the UK.

Kellett's pioneering work on agency focused on children's and young people's right to a research voice and how this can be meaningfully facilitated. Kellett challenged established conceptualisations of children and young people's competency and highlighted the societal impact of knowledge generated from their insider perspectives. Her work embraces contemporary shifts in the status of children in society as represented by the UNCRC, which addresses children's entitlement to be informed, consulted and involved in all decisions that affect them. It also has established that children can benefit from undertaking their own research, including increased confidence and motivation, as well as generating new knowledge for themselves and others (Cooper & Kellett, 2016; Kerawalla & Messer, 2019).

In contrast to research 'about' or 'on' children, the CRC draws upon the principles of participation and acknowledges the limitations of applying adult, researcher logic to the experiences of others (Cooper and Kellett, 2016). The research agendas children and young people prioritise, the research questions they pose and the ways in which they collect data are fundamentally different from adults (young researchers often gravitate towards projects with practical implications choosing to focus on what affects them on a personal level and on a daily basis, for instance, health challenges in childhood (Kellet, 2014), or children's use of

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public transport (Carroll et al., 2019)). In this way, SLR research generates nuanced data which provide valuable insights into understanding childhood.

Kellett and Ward (2008) noted how there is an important link to political literacy and the notion of advocates and protagonists in students' rights-focused research. This emerges from two conceptual arenas of power and emancipation. Power relates to whose interests the research serves, who owns the research and for whom the research is conducted.

Emancipation challenges the legitimacy of research which does not involve groups (in this case, children) who are marginalised. Hence, as Fielding (2004) argues the interests of children are well served when they set their own agendas. Consequently, discussions about this approach are underpinned with many claims, from opportunities for personal and social growth, learning and development, to enhancing basic human rights and democracy.

Despite a host of developments which now value children's contributions, SLR often falls short of making a difference to power relations (Bucknall, 2014; Cooper, 2017).

Children are regularly consulted and have opportunities to engage in SLR, but many report frustration when research fails to make any difference or improve lives (Bucknall, 2014).

Adults often intervene on final decisions and the representation of children's views in research papers continue to be translated and often censored (Cooper, 2017). One cannot therefore assume that SLR results in voice and empowerment.

Rousell and Cutter-Mackenzie-Knowles (2019) acknowledge that on occasions SLR has moved in this direction yet needs to extend beyond simply listening to what children say, and begin to position them as independent researchers who directly influence the methodology, analysis and outcomes of research. Furthermore, they argue that this is essentially a question of children's political agency as much as a question of voice, as exemplified by children becoming politically active through a number of social movements.



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A body of research also demonstrates how many participatory, voice based and SLR school initiatives can be potentially disempowering to some groups, especially where schools have implicit contracts that pupils speak ‘responsibly, intelligently and usefully’ (Bragg, 2001, p. 73). Potentially this closes doors to pupils without the language or presentation skills prized by the school and can reinforce divisive practices. Cooper and Kellett (2016) state how the risk here is that SLR, voice and participatory work becomes inextricably linked with privilege. Participatory initiatives in schools can also be oppressively censorial if areas such as teaching and learning become forbidden areas of enquiry (Fielding, 2001) and only comfortable, ‘safe’ issues are encouraged (Lodge, 2005) where teachers’ roles are never questioned (Devine, 2002). This raises questions for practitioners and policy makers, for example, whether or not the ways to promote SLR are appropriate for all children and take account of children’s diversity.

Thus, the evolution of rights-focussed research within the UK has been strongly influenced by a growing body of academic debate spanning the new sociology of childhood (Prout 2019), children’s rights (Alderson, 2016) and childhood studies (Woodhead and Montgomery, 2002). Additionally, it is firmly linked to a number of child centred research methodologies including the mosaic approach (Clark & Moss, 2001). However, this form of research has not been incorporated into the curriculum.

In contrast, inquiry-based research continues to be a feature of curriculum assessment in English secondary schools, and many students carry-out their own independent research. Subjects, including, biology, physics, psychology and geography, require students to design, carry-out and evaluate their own research projects. This usually involves an *extended project* qualification for post 16 education; students carry-out an independent piece of research on a subject-related topic of interest to them. The extended project is recognised as contributing key support for enhanced learning and critical analysis (Stoten, 2014) and is now a significant

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benchmark for university entry. For many practitioners however, there are challenges, as research training and support is not a mandatory requirement for secondary teacher education (Walkington & Rushton, 2019). There also have been concerns about unauthorised parental support.

Summary. Rights-focused research does not feature in the English curriculum, but there are several University rights-focused centres which promote this form of SLR. In the curriculum a subject-based extended research project involving inquiry-based learning is the main form of SLR.

### **SLR in Ireland**

In Ireland, SLR has been conceptualised and studied from a number of academic perspectives: childhood studies (e.g. Forde et al., 2018, Zeiher & Devine, 2007) with an attention given to power inequalities and representation of children's voice; social policy research (e.g. Byrne et al., 2009) with a focus on democratisation of knowledge making and social exclusion/inclusion; and educational research (Bacon & Matthews, 2014) that looks in particular at pedagogical practice and curriculum change. Arguably, though these perspectives have different foci, there is at least one aspect that connects them – students' agency.

From the educational perspective, the concept of SLR can be understood in terms of inquiry-based learning practices defined as the ways in which learners actively engage with the social and physical environment (Bacon & Matthews 2014, p. 352). Such an understanding represents the process in which both students and teachers traverse the process of inquiry, and in the process of reflective analysis and assessment.

There is increasing interest in this approach in Irish educational policy and practice. Secondary school curriculum has seen significant changes in relation to pedagogical approaches with guidelines referring to inquiry-based methods and self-directed learning.

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Drawing on the policy intention to build a “knowledge-intensive society and economy” (Department of Education and Skills, 2016, p.?), the national education policy clearly aims to increase the importance of inquiry-based learning, as linked to the ‘21st century skills’ paradigm, and to an extent these are realised in practice.

Post-primary level includes Junior Cycle (three years programme for ages 12 to 15), Transition Year (optional or mandatory for students depending on the school’s policy) and Senior Cycle (two years programme, ages 15 to 18) – each has seen dramatic changes and should be considered as separate but connected.

The new Junior Cycle subject specification takes an inquiry-based approach. This aims to “provide students with learning opportunities that strike a balance between subject-specific knowledge and a wider range of skills and thinking abilities” (ibid, p. 51). The Transition Year is an interesting example of how SLR has been enhanced. The main values are in providing opportunities for students to be creative and innovate to develop skills through a curriculum centred around experiential and project-based learning. This involves reflective journals, courses on how to conduct research, also in partnership with third level institutions. The project-based learning should have research elements and can be of three types: (1) research projects involving research and presentation skills; (2) design brief projects involving creating or responding to a specific design brief; and (3) action projects involving some initial research and a response/action. Arguably, these opportunities to pursue the students’ own interests in project work can be empowering, giving more autonomy, and equipping students with the knowledge and skills to conduct research without placing emphasis on high-stakes examinations. At Senior Cycle, a curriculum framework of key skills has been developed (NCCA, 2009). This was influenced by Lisbon strategy and the OECD DeSeCo (Organisation for Economic Co-operation and Development, Defining and Selecting Key Competencies) where initiative, problem-solving, accessing information,

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selecting information, and information processing, are seen as key, and should be developed through self-regulated active learning.

Thus, project-based learning is widely adopted in which learning is organized around projects on specific themes or questions. This usually takes a single subject orientation (environmental, literacy, science, culture of a studied language etc.), or can be interdisciplinary. Additionally, the inquiry-based learning approach engages a student in asking a question or identifying a researchable problem; investigating possible solutions; gathering evidence, analysing, summarising findings, presenting findings; and reflecting on the process (Bacon & Matthews, 2014).

SLR is regarded as important and it is promoted in a number of ways and is assessed. For instance, the State Examination taken at the end of school education (leading to Leaving Certificate) encompasses Project, Reflection and Practice Coursework in a number of subjects. Furthermore, a revised policy for assessment has given an increased emphasis on formative assessment and summative assessment for certification purposes.

However, importantly, the Senior level remains highly performance-oriented and a 'product-driven' educational system steered by knowledge outcomes and academic performance. Despite the current initiatives, this has the potential to "further subvert any pedagogical and wider rights-focused and democratic-citizenship motivations" (Fleming, 2015, p. 237) and leaves little time for meaningful independent SLR.

A common issue with SLR is that it strongly diverges from classroom culture, and is often outside the teachers' experiences (Donnelly et al., 2014). Organising SLR is a complex process. Teachers require experience to develop facilitation skills and fit research practices into a thematic teaching unit. There is the need for the teacher to create the environment for the inquiry, to model critical thinking, to focus the discussions, and to encourage deep

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consideration of the research topic (Dunlop et al., 2015). Consequently, this approach makes many demands on teachers and students.

Furthermore, looking at SLR through the lenses of childhood studies and social policy research allows us to understand that a significant obstacle to SLR is the complex power dynamics of the classroom imbedded in traditional expectations, beliefs, and values (Donnelly et al., 2014). The hierarchical structures, contexts and relationships in settings can become ‘thinners’ of students’ agency. Teachers’ attitudes may be also affected by the hierarchical nature of many schools, the perceived pressure of curriculum delivery, the assessment of students, and school evaluation, driven by performance-oriented scripts. Further, teacher may have little awareness of issues concerning power or agency (Forde et al., 2018).

Nevertheless, the agenda to enhance students’ agency is strongly present in the Irish policy documents. The National Strategy on Children and Youth Peoples’ Participation in Decision-Making, 2015-2020 (2015) was informed by national research (Horgan et al., 2015), and guided by Article 12 of the UNCRC and by the EU Charter of Fundamental Rights. Students are increasingly seen as active citizens and ‘human beings rather than human becomings’. The policy document supports children’s voice in decision-making, mainly through student councils.

The policy objectives to develop active citizens with an entitlement and a right to a voice, and readiness for evidence-based decision-making are also to be implemented through subjects and short courses, such as Civic, Social and Political Education (CSPE) at junior level and Politics and Society at senior level, and through local school initiatives, e.g. European Studies. The subject specifications envision a wide range of participatory and inquiry-focused teaching, learning and assessment. These ask for active engagement of learners, in particular in discussion and debate, collecting and analysing data and

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participating in a small research project. As a result, students' feedback and hearing students' voices are becoming a more wide-spread classroom practice.

Summary. The Irish context is constantly evolving in relation to SLR. National policies support and promote SLR of both framings. However, because of the many demands on teachers and learners, it might take a long journey to achieve a successful large-scale SLR practice.

### **SLR in Russia**

The Russian understanding of SLR has been strongly influenced by the ideas of Vygotsky, Leontiev, and Davydov, SLR was initially conceptualized and developed as educational activities which help young people acquire everyday knowledge (Leontovich & Savvichev, 2007). The most widely accepted and cited definition in Russian literature, was formulated by Andreev (1981), as an activity within which children seek to understand the world and develop research skills through posing questions, collecting and analysing data.

In addition, Russian authors recognise two distinct types of SLR. Most notably, Leontovich (2003) distinguishes between learning-oriented research (*uchebnoe issledovanie*) and scientific research (*nauchnoe issledovanie*). He and others state that the main purpose of learning-oriented research is to learn subjectively new things and develop basic research skills, this is linked to Vygotsky's constructivism and corresponds to the English-language term 'inquiry-based learning'. In contrast, 'scientific research of students' is to generate objectively new knowledge and this has a relation to 'SLR' with its emphasis on student agency, but this type of activity cannot be regarded as rights-focused research as the "rights" component is lacking in the Russian theory and practice. Further, the distinction between different types of SLR is rarely made by practitioners (Belova & Belov, 2016). Often all research activities, regardless of their format, are referred to as '*issledovatel'skaya deyatelnost shkolnikov*' (research activities of school children).

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Many authors suggest that students usually can engage in learning-oriented research and that while producing objectively new knowledge is possible and even desirable, it cannot be the main goal as it is too demanding (Belova & Belov, 2016; Cherepanov & Fedotova, 2013; Leontovich, 2003). This related to the traditional Russian view that only a select group of students is able to conduct research with up to 95% of high-schoolers being 'either incapable or unmotivated to participate in this type of activities' (Cherepanov & Fedotova, 2013, p. 40). Contrary to this widespread belief, in a large-scale study involving 1500 schools Pinskaya et al. (2011) found that setting high expectations and promoting SLR is one of the main features of effective schools that serve underprivileged areas and help students develop resilience. Importantly, the researchers highlighted that these effective schools often encouraged students to pick research topics that were important and of relevance to themselves, their families and communities. Even though this shows that SLR can be promoted in students with low academic success and low socio-economic status, the number of such schools remains very small.

The new Russian general education standards (FSES, 2010) aim to encourage a wider spread of SLR as they require all students to leave school with basic research skills (Berseneva, 2016; Tsalikova & Pakhotina, 2017). Before these reforms teachers selected the academically successful and 'gifted' students for research activities because SLR was often viewed as a serious challenge. The recent policy shift, however, has important consequences, practitioner's conception of SLR is being reformulated as inquiry-based learning, as the policy documents explicitly place the emphasis on mandatory skill development rather than on students' independent discoveries.

It can be argued that there are benefits in the inclusion of all students in research activities, but their compulsory nature largely precludes any opportunities for student empowerment (Graham et al., 2017). Further, the concept of empowerment is entirely

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missing from current Russian discussions and the policy shift has been simply introduced top-down without appreciable discussion or any specific provisions for the extension of research activities to all students. This lack of concern with student autonomy and empowerment is evident at all system levels. For example, Lyubzhin (2011) actually goes as far as to argue that teachers should decide research topics by evaluating what is going to provide the greatest intellectual challenge for a student and students' interests should not be regarded as important. In view of this, it is not surprising that 'Step into the Future' (the main competition of SLR projects in Russia) only displays awards about STEM projects since they are valued as the most intellectually challenging (Step into the Future, n.d.).

While discussions over student empowerment are absent, what is currently viewed as the main obstacle to expanding SLR is that teachers have been officially entrusted with the responsibility of organising research without being fully equipped to do so appropriate training. Indeed, it is a challenge for teachers who do not conduct their own research to effectively support student research (Lyubzhin, 2011). Margolis (2014) highlights research preparation as one of the biggest challenges in Russian teacher training which contributes to a widespread lack of understanding among student teachers of how research components of their training are related to teaching practice (Margolis, 2014). Moreover, Aydarova (2014) argues that the new teacher standards actually diminish opportunities for teacher inquiry and critical thought, ultimately promoting the development of 'the teacher as a consumer of information rather than a knowledge producer' (p. 70).

Moreover, Russian teachers are not only expected to organize student research but also to assess it which sometimes acts as a barrier to the meaningful engagement of both students and teachers. Currently, conferences and other types of events organised on a competitive basis are the main form of assessment of student research projects. At the same time, assessment criteria are often unclear (Leontovich, 2006). In addition, there is an issue of



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the type of extrinsic incentives driving teachers to hijack student projects to ensure that their students can be successful. Cherepanov & Fedotova (2013), Galanov (2013), and Lukyanova (2016) outline teachers' preoccupation with 'winning conference prizes', 'establishing good reputation' and 'improving career prospects'. Indeed, it has been widely discussed that incentive-based systems result in teachers having weak and outcome-oriented motivations leading to performativity (Davis and Winch, 2015). Under the current regulations this is exactly what is happening – children and teachers are seeking short-cuts and resorting to cheating (Rumbeshta & Pishchulova, 2009; Tsalikova & Pakhotina, 2017).

Summary. Russian educational policies contain the rhetoric of developing the research skills of all students, however, there is no real framework for creating the conditions necessary for widespread SLR, and teachers have voiced their concerns about achieving the objectives set up for them by the government (Khanolainen, 2019). The important component of student ownership as a motivating force for learning has been ignored and teachers are not provided with appropriate research knowledge or skills to support less able students. As a result, teachers continue to structure activities around student selection and outcome-oriented goals. Consequently, the objectives of raising critical thinking and research skills of all secondary students is unlikely to be achieved.

### **Discussion**

Our cross-case analysis indicates that SLR is a nuanced concept with blurred boundaries, with many different layers of possible interpretations and practical implications. By analysing the nature and main goals of SLR we can distinguish between inquiry-based learning and rights-focused research. The former implies that students participate in research to develop transferable skills by following the leadership of an educator. The latter, entails an emphasis on student autonomy and empowerment that emerges when students set their own research

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agenda. Both forms can be vehicles for developing higher level thinking skills relevant to meeting global challenges.

Our study shows that organizing SLR represents a significant challenge for all three countries. England has strong and active advocates of rights-focused research, the form of SLR that is closest to what the UNCRC envisioned. However, rights-focused research remains outside the English curriculum and does not reach many students because of the limited number of non-school and college organisations that provide support for this type of research. Ireland, on the other hand, is striving towards wider research participation by encouraging inquiry-based pedagogy both in policy and in practice, while rights-focused research appears as a secondary priority. Similarly, Russia has adopted a policy to encourage widespread student research aimed at skill development, but it is unclear whether the policy will be translated into practice. In addition, unlike Ireland and England, in Russian policy there is an absence of interest related to students' empowerment through rights-focused activities.

The idea of listening to and providing opportunities for children and young people to share their views and have a voice challenges a longstanding trajectory of research and policy where their views and experiences usually have been absent (Cooper et al., 2019). The repositioning of the status of those under 18 years, enshrined in the UNCRC (UN 1989), particularly articles 12 and 13 of the convention, mandated policy makers to engage with children and young people through enhanced listening and more effective consultation (Cooper and Kellett, 2017). By engaging with the often-neglected voices of children and young people through research and/or consultation generates insights and deeper understandings of childhood (Sporou, 2011) and practices related to children and young people (Kellet and Cooper, 2017). This research thus builds upon a longstanding trajectory surrounding debates and discussions linked to the rights of the child, voice and agency.

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What was envisioned in the UNCRC, however, is not easily achievable, which explains why it is so rare. Importantly, there is a tension between supporting students to develop the skills to carry out research and allowing them full independence in decision-making. Complete autonomy may not be possible as most forms of research need to fit with conventions of the discipline, but support can diminish self-directedness. However, encouraging more meaningful student participation is possible though it requires a difficult balance between allowing autonomy while providing necessary scaffolding. In this section we reflect on what stands in the way of rights-focussed research and offer a number of recommendations to overcome barriers.

It is apparent that none of the three educational systems we have considered provide a place for rights-focussed research within the curriculum, furthermore, when student project research is positioned in the curriculum students have limited autonomy to choose their research questions. Our analysis indicates that the absence of rights-focussed research reflects a number of common factors. These include the need for the training of practitioners to support this type of research as well as allowing students the space, time and autonomy to develop their own agenda, a combination that is difficult to achieve; especially when there can be considerable challenges to practitioners in supporting student research alongside core curriculum teaching. As we have emphasised about each of the three countries, there is minimal training about research methods for teachers, and there is no training about the skills needed to support rights-focussed research by supporting the wishes of students to investigate topics of their choice. It also is the case that, much of the rights-focussed research that occurs outside of the curriculum is limited to the social sciences which may present a further barrier to its broader cross curricula appeal and acceptance.

Rights-focussed research gives students the possibility of having their views expressed and listened to, based on evidence they have collected in relation to a topic that is

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important to them. It also provides a vehicle for ‘consultation’ so that adults better understand the views and interests of young people. In addition, rights-focussed research appears to provide similar experiences to other forms of SLR, it is motivating and sometimes transforming for students, it helps develop both independent learning and provides a context to develop an in-depth understanding of the strengths and weaknesses of the research process. In view of this we recommend that greater attention is paid by policy makers and educationalists to include rights-focussed research in the curriculum, for example as part of topics such as general studies or citizenship.

Inquiry-based learning is often viewed and discussed as a key component of an effective education system that prepares students for a knowledge economy. Students are encouraged to engage in inquiry activities as this helps them develop critical thinking and research skills necessary for continuing education and succeeding at a university level. Moreover, research and policy related to inquiry-based learning are often centred around measurable outcomes. For example, multiple meta-analyses found that explicit guidance makes inquiry-based learning significantly more effective compared to minimal or no guidance and these effects are equal for both younger and older students (Alfieri et al., 2011; D’Angelo et al., 2014; Lazonder & Harmsen, 2016). However, preoccupation with measurable educational results precludes truly participatory activities and empowerment as in rights-focussed research. As we see across the three contexts presented in the article, high stakes outcome-oriented assessments seem to be a prerequisite of SLR being included in the curriculum, but this limits student’s agency, the more pressure there is to demonstrate a certain outcome the less opportunity there is to invest time into what cannot be measured. The Russian context provided a particularly note-worthy example of how external incentives can limit the wider benefits of SLR as both students and teachers jump to the outcome without learning from the process (Cherepanov & Fedotova, 2013; Galanov, 2013;

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Lukyanova, 2016). At the same time, the Russian context also shows that the encouragement of students to pursue research topics that speak to them, their families and communities is one of the distinctive features of high-performing schools with underprivileged students (Pinskaya et al., 2011). Thus, our next recommendation is to find ways to foster students' and teachers' internal motivation by giving them an opportunity to explore what is of interest to them personally rather than be directed by external assessments.

Seeing that underprivileged students stand to benefit the most from enhanced autonomy, it is worth noting the synergies between SLR and youth participatory action research (YPAR). At its core, YPAR advocates a democratic research process which can action change by involving those the research seeks to understand, often including marginalised communities (Asakura et al., 2020; Foster-Fishman et al., 2010). As Baum et al. (2006) suggest, participatory action research aims to understand and improve conditions by employing collaborative, reflective inquiry whereby the researcher and research participants work together to better understand and improve the situations, circumstances and conditions which they are part of. Within the context of young person-focused research this approach acknowledges the limitations of applying adult, researcher logic to the experiences of young people and utilises a wealth of research tools including multi-modal methods such as picture making, visual methods and storytelling (Cooper, 2017) which not only play to the strengths of young people but afford opportunities for young people to lead within the research process. In view of this link between SLR and YPAR, it is important to acknowledge the relevance of best practices of YPAR for SLR. Therefore, our final recommendation is to encourage children and young people engaged in SLR to reflect on their specific social situation and explore a variety of methods (including multi-model methods) to be able to find those that work best for their unique project and context without simply striving to imitate adult research. Further, it is important that consideration is given not just to the process of

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research, but also the process of disseminating this research so that it can have impact on the wider community.

### **Conclusion**

Rights-focused research enables students to address issues that concern them and provides an evidenced base for change, thereby aligning with the recommendations of UNCRC.

However, this form of SLR is not part of the curriculum in any of the three educational systems we examined, even in subject areas such as citizenship, with there being several possible reasons for this (e.g., lack of teacher training, a focus on assessment, etc.). In contrast, in all three education systems there is support for inquiry-based learning as it is believed to develop higher level abilities needed for the future (creativity, planning, critical thinking, etc.). These abilities and their valid assessment are likely to become even more important with artificial intelligence being able to write coherent text summaries about a subject (e.g., chatbotGPT). Thus, we believe that there are important arguments to give SLR a more prominent place in the curriculum, provide better support for teachers in relation to SLR, and to find a place for rights-focused research within school and college settings.

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