Leading for Deeper Learning: International Perspectives

Journal:	*Journal of Educational Administration*
Manuscript ID	JEA-02-2023-0042.R3
Manuscript Type:	Academic Paper
Keywords:	Leadership, All Through Schools, Comparative Study, Deeper Learning

Leading for Deeper Learning: International Perspectives

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Abstract

Purpose

This article draws upon evidence from a contemporary study of all-through schools (ATS) in three countries. All-through schools combine at least two stages of a child's education in a single establishment. Many admit children aged 3 to 19. Most children join the school at Nursery or Kindergarten level and continue there for their entire education before moving on to further or higher education. All-through schools are also called All-age, in some contexts, because they bring children of all ages together into the same school environment.

Models of ATS vary internationally, hence there is not one definition of an ATS. This article takes a comparative look at ATS in Iceland, Spain and Wales. The purpose of this article is to explore innovative pedagogies in ATS and to explore how far deeper learning occurs because of the integrated and inclusive model of schooling. The study focused on pedagogical practices in ATS and examined how far these innovative practices are considered by teachers to foster deeper learning outcomes.

Design/methodology/approach

The article draws upon a three-year comparative research project that explored pedagogy, leadership, and well-being in ATS. The article investigates pedagogy with a cross-cutting focus on enquiry and deeper learning from the perspective of leaders and teachers. Using focus groups and lesson observations, a qualitative case-study approach was utilised to gather evidence about the teaching and learning processes adopted in ATS. Semi-structured interviews were also conducted with school leaders. The analytical approach adopted was one of constant comparison with the prime aim of eliciting common themes across the data sets. In relation to the pedagogy theme and an exploration of pedagogical

innovation, research questions included a) How far do ATS foster innovative pedagogies? b) What are the leadership conditions that support innovative pedagogies? c) To what extent do innovative pedagogies promote deeper learning?

Findings

Within and across the three education systems under investigation, the study found that all-through schooling engages students in a positive learning environment and provides innovative pedagogical processes associated with deeper learning. The article provides evidence about how deeper learning functions in ATS from different parts of the world and reflects on the way deeper learning is promoted by leaders and teachers, resulting in deeper learning for students. The evidence from this study reinforces that opportunities for pedagogical innovation and deeper learning within ATS occur because of flatter structures, more fluidity between different phases of learning and greater cross-over of teacher expertise. The study also highlights how leadership is a critical factor in creating the conditions for collective professional practices that foster pedagogical innovations to secure deeper learning. Findings suggest that leading for deeper learning is fundamentally concerned with creating the conditions for innovative learning environments that are equitable, inclusive, diverse and cross age ranges.

Originality and Value

Contemporary empirical studies of the deeper learning environments within ATS remain relatively rare; hence this study provides new comparative, contemporary evidence that illuminates the nature of the pedagogical innovation and the leadership practices that support pedagogical innovation in these schools. It also highlights how professional collaboration and cross-phase working are at the heart of innovative pedagogies that support deeper learning. The study outlined in this article provides critical, new insights about pedagogical innovation and deeper learning within ATS settings.

Keywords:
Leadership; deeper learning; all-through schools; pedagogy; innovation; cross-phase teaching.

Introduction

This article draws upon evidence from a contemporary research study to explore deeper learning and pedagogical innovation in all-through schools (ATS) in three countries. ATS most commonly include primary and secondary phases of education with one governing body, and in some cases, it also includes pre-primary education and baccalaureate/vocational training. This form of school organisation gives children and young people the opportunity to complete their basic education and even pursue their pre-university studies in the same institution. Children can start school at the age of 3 and finish their education in the same institution at the age of 18. The essential features of ATS have been outlined as follows:

- Children follow the same educational/pedagogical journey offered by the school, over time.
- Teachers know pupils over a longer period, thus offering young people greater stability and more personalised learning opportunities.
- There are no disruptive transition phases for learners, so the anxiety associated with transition is removed.
- Primary-age pupils have access to state-of-the-art specialist subject facilities used by secondary schools, e.g. science labs, sports halls.
- Primary and secondary specialists work together, and there is teaching across phases, offering opportunities for rich professional learning and growth.
- Secondary pupils can mentor and support primary-age pupils in the same school.
- Links with the community are deeper because children stay in one school, so links with parents, families and carers become very well established.
- Leadership teams tend to reflect a mix of expertise that covers all stages or phases of learning.

  (Harris and Jones, 2022, pp. 231-232)

This article draws upon evidence from an international, comparative research study that focused on leadership, well-being and pedagogy in ATS. In terms of the pedagogy strand of the project, the research questions included a specific focus on pedagogical innovation to explore a) How far do ATS foster innovative pedagogies? b) What are the leadership

conditions that support innovative pedagogies? c) To what extent do the innovative pedagogies promote deeper learning?

Deeper learning is described as 'the higher-order thinking skills, learning dispositions, and collaboration skills needed for students to succeed in 21st-century work and civic life. Deeper learning competencies promote the ability to transfer learning and apply it to new and complex situations in an ever-changing global environment'[1].

One of the aims of the study was to investigate innovative pedagogies and deeper learning in all-through schools (ATS) in three countries (Iceland, Spain, and Wales). All-through schools tend to be premised on a firm belief that learning is deeper when there is continuity of pedagogical experience, pooled professional expertise and the omission of key transition points in schooling (Reynolds *et al.,* 2019).

All-through or All-age schools, as they are sometimes known, offer continuous education in one school, from the early years to senior years, although models of ATS tend to vary in different countries. The basic idea of ATS is that learners enjoy stability in their learning as the school context is familiar and does not change, plus there is a wider range of expertise on hand in the form of a larger staff complement with a wide range of professional expertise (Reynolds *et al*., 2018).

In ATS there are also considerable economies of scale, high degrees of cost-effectiveness, and the provision of specialist equipment and resources (e.g. sports halls, science labs, gyms, drama theatres) that smaller schools would be unable to replicate. ATS also have access to a wide range of professional expertise (across subject and phases) that would not necessarily be available in a traditional primary/elementary or secondary/high school setting.

While the evidence on the quality and range of learning experiences in ATS is not extensive, there is research that underlines how being in the same learning environment throughout schooling and avoiding disruptive transitions to a new school can be beneficial for the emotional well-being of learners and for the continuity of their learning.

[1] https://deeper-learning.org/

(Longaretti, 2020). It could be hypothesised, therefore, that learning might be more effective or deeper in such contexts, but the contemporary evidence on the pedagogical practices in ATS fails to offer firm evidence on this issue.

Consequently, the opportunity arose through a three-year funded research project to explore pedagogy, well-being and leadership in ATS in three countries. Each country has a different model of ATS (Appendix 4) but the intention was not to focus on the variations in structures but rather to interrogate the processes that related to pedagogy, leadership and well-being in ATS. As noted already, ATS are a relatively underexplored area of enquiry within the field of educational research, possibly because they are not the dominant model of schooling. Hence, this comparative project offers a new empirical vantage point and provides some insights into the way innovative pedagogies are generated when teachers cross over subject and professional boundaries to work together. The study also illuminates how deeper learning occurs and is led in these particular school contexts.

In terms of ATS, this form of schooling has been adopted by various countries, and it is expanding. For example, ATS are expanding in Wales (Estyn, 2022) and in the United Kingdom more broadly (Hodgson, 2011; Price, 2020; Reynolds *et al*., 2018; Sutherland *et al*., 2010; Swidenbank, 2008). They are prevalent in Jamaica (Jamaica All-Age Schools Project, 2003; Twemlow *et al*., 2011) and currently, as this article demonstrates, are a feature of education provision in Spain (Andrés, 2018; Diz, 2018; Martínez and Pinya, 2018; Porto and Sánchez, 2018).

The available literature on ATS shows that the leadership of deeper learning, as an empirically tested concept, is missing. Broadly, the evidence focuses far more on the way that pedagogy is strengthened without key transition points, rather than paying attention to forms of deeper learning within ATS (Hernández *et al.,* 2019). Research has tended to focus on the competencies necessary for students in ATS to navigate an individualised learning pathway (Reynolds *et al*., 2018). The idea of deeper learning in ATS has not been a central focus of empirical enquiry.

To frame the study, and the findings that follow, the next section of this article explores the concept of deeper learning and outlines the essential components of this 21st-century approach to teaching and learning.

Deeper Learning

The call for the leadership of deeper learning is a consistent theme and ambition within the contemporary international evidence base (Richardson *et al*., 2021). Those writing about the topic advocate the need for a dramatic change in the nature, content, and process of learning through a form of leadership that focuses on instructional change and innovation. Deeper learning is conceptualised as a set of educational outcomes that equip students to deal with challenges, that include working on problem-solving, content knowledge, critical thinking, communication, and collaboration, learning how to learn, transferring knowledge and skills, the use of digital technology, and supporting students to become life-long learners (Fullan *et al.*, 2017; Mthethwa-Kunene, Rugube and Maphosa, 2022).

Leading for deeper learning entails the facilitation of innovation and the transformation of school conditions that promote a dynamic and successful learning environment for students and teachers. In their work, Darling-Hammond and Darling-Hammond (2022, p. 1) propose that deeper learning is a requirement for all children and young people, arguing that they "need an education that prepares them for our rapidly changing world, enabling them to deeply understand academic content, think critically and solve complex problems, communicate effectively, work collaboratively, and learn how to learn continuously".

Rethinking, reimagining and redesigning learning for the present and future is a central concern across the globe. Fullan *et al.* (2019, p. 65) further endorse that deeper learning helps students "make connections to the world, to think critically, work collaboratively, empathize with others, and, most of all, be ready to confront the huge challenges that the world is leaving their generation". An essential aspect of deeper learning, it is proposed, is the transfer of knowledge that results in the ability to transfer what is learned from one environment to another and help to make connections within and between the academic

environment to the real world (McGregor, 2020; Mthethwa-Kunene, Rugube and Maphosa, 2022).

Zhao (2020, p. 29) explains that such rethinking should focus on the "what, how, and where of learning" and that this should be derived "from the perspectives of the children instead of the curriculum". Fullan *et al.* (2018) refer to deeper learning as the shorthand for describing a quantum shift in the nature, content, and purpose of learning.

Richardson *et al*. (2021, p. 150) argue for a "deeper learning leader" that includes: living the vision; authenticity and agency in learning; trusting teachers as creative professionals; openness to new approaches and tools; over-communicating change; restlessness toward equity; and courage to live outside the norm. Mehta and Fine (2019) conclude that deeper learning happens when learners have opportunities to develop knowledge and skills (mastery), when they are connected to what they are learning (identity) and when they enact their learning by producing something new and unique (creativity).

As noted earlier, it has been posited that ATS could offer a structure that is more conducive to deeper learning, as leaders, teachers, students, families and other stakeholders have a closer relationship throughout all phases of schooling, allowing more involvement in the curriculum and in pedagogy (Price, 2020).

The next section of this article outlines the methodology of a comparative study where the potential for deeper learning within ATS was explored.

Methodology

In 2019, a three-year comparative study[2], commenced with the overarching research themes of Leadership, Well-being and Pedagogy in ATS. In terms of pedagogy, the aim was to explore the nature, delivery, and quality of innovative pedagogical approaches and deeper learning experiences in ATS. A qualitative approach was taken to the enquiry into pedagogy, underpinned by an interpretive paradigm that offered a broad basis for investigation.

Creswell (2007) asserts that an application of interpretivism implies that researchers would like to obtain a deeper understanding of the phenomenon and its complexity in unique contexts. As a comparative study, it was essential to look at ATS in each unique context while simultaneously interpreting the data in ways that highlighted connections and commonalities. Denzin and Lincoln (2000, p. 3) suggest that qualitative research involves an interpretative and naturalistic approach where sense is made of things in their natural setting, attempting to "make sense of things or to interpret phenomena in terms of the meanings people bring to them". Given the challenges and complexities inherent in comparative work, it was decided to utilise a qualitative case-study approach to capture and represent the data.

Country-specific teams worked with the same protocols, questions and data collection instruments and jointly coded data, wherever possible, to strengthen inter-researcher reliability.Following ethical approval, a common case-study template was developed to capture innovative pedagogical approaches in ATS. Three instruments were designed for the collection of data: (1) a template with the focus group questions to guide the conversation between teachers and researchers (Appendix 1); (2) a pre-observation sheet to be completed by teachers before the lesson observation, with information about their lesson plan (Appendix 1); and (3) an observation sheet to collect information about the lesson observed by the research staff, in order to describe activities and make comments of the most outstanding innovative aspects. Qualitative data were collected using a comparative research design, with a sample of teachers in Icelandic, Welsh, and Spanish schools (Appendix 2).

[2] ERASMUS + funded study https://erasmus-plus.ec.europa.eu/

In terms of pedagogy, the researchers were keen to explore the notion of deeper learning by looking specifically for examples of pedagogical innovation, collaboration and new teaching practices in ATS. The data obtained from the focus groups was recorded and transcribed for data reduction and analysis. Atlas.ti was used to analyse the qualitative data generated by the focus groups conducted in each country.

The cross-country teams worked together on the analysis and representation of data, meeting online and in person (whenever possible). Indicative data sets were translated for comparative purposes, allowing the researchers to work as a cross-national team. Inter-researcher reliability was secured through the comparison of datasets and constant interrogation of the data. In addition, semi-structured interviews were held with a cross-section of leaders of ATS (n=13). This data collection focused on how leadership approaches encouraged deeper learning within the different ATS contexts.

Inevitably a comparative qualitative study of this scale and nature has its limitations. Variations in the structure and nature of ATS schools in the study (Appendix 4) meant that country contextual differences were apparent. Across the three settings, there were structural differences because of differences in the model of ATS. Also, with COVID-19, the plans to visit schools, as a research team, to collect the data in each ATS setting was severely disrupted. Hence, online data collection had to be utilised rather than direct face-to-face data collection with participants.

Finally, there were language differences. While all the research team spoke English, interviews and focus groups were conducted in the home language with leaders and teachers. Translation into English took place, but inevitably, some meanings and nuances were literally lost in translation. The research team maintained regular communication and shared data sets to facilitate data reduction, analysis and representation. Some face-to-face interviews and meetings resumed at the end of the project, but COVID-19 dramatically reduced the sample size of participants simply because it was not possible to visit schools as initially intended. The total sample was (n=32) which included teachers and leaders. This sample is summarised by gender, subjects taught and leadership stages in Appendix 3. School names are withheld in order to respect the code of ethics agreed upon within the project, which promised anonymity for the schools and their participants.

Data were analysed in a thematic way using Atlas.ti, and codes were generated deductively using the research questions and inductively from the transcripts, then tested for strength within and across data sets. Each team engaged with their own data initially by following the same basic steps- familiarisation, coding, generating themes, reviewing themes, defining and naming themes and testing/retesting. This process was followed within country data sets and across country data sets.

In the next section of this article, the findings from the study are outlined. Initially, the broader findings are shared to reveal views about the benefits and challenges of teaching in an ATS. This overview is important as it provides the context within which teachers and leaders feel that innovative pedagogies and deeper learning is possible. Subsequently, the discussion moves on to the specific findings relating to pedagogical innovation and leading deeper learning.

Findings

In presenting the findings from this project, we have chosen to let the leaders and teachers speak for themselves by providing indicative quotations that illuminate particular themes that emerged directly from the data analysis. The first overarching theme focuses on the benefits and challenges of ATS.

Benefits and Challenges

When participants were asked to consider the teaching and learning benefits of ATS, according to the data, the majority of participants (from the three countries) agreed on the following:

- professional learning activities (including engaging in dialogue and sharing good practice)
- opportunities for collaboration across the staff team; potential positive impact on pupil experience; coherence and consistency in pedagogical approaches
- a greater understanding of students; a more fluid transfer of information between phases (Infant, Primary and Secondary)
- easier coordination (especially when all processes take place in the same school and there is a closer relationship among teachers)

- a stronger link with families (which encourages the building of trust), and the enrichment of cross-phase teaching

The data also highlight what participants felt to be the biggest challenges of teaching and learning in an ATS. Reflections included meeting the demands of all the stages of education in the same school and meeting a wide variety of learning needs. Leadership of an ATS was also considered to be a challenge because of the sheer size and complexity of the organisation. Maintaining pedagogical quality across the different phases of learning was another challenge identified by participants, as well as the challenge of addressing a very wide range of students' emotional and behavioural needs. Overall, however, participants generally agreed that the ATS context afforded opportunities for forms of professional collaboration that generated and supported pedagogical innovation.

Innovation in Pedagogy

Turning specifically to the findings relating to innovation in pedagogy, the data show that most teachers recognised that innovation in pedagogy was fundamentally linked to the implementation of active, creative, and empowering methodologies in the classroom (i.e. project work, cooperative learning, gamification, flipped classrooms.) and the use of digital tools. Teachers suggested that the main impetus for pedagogical innovation in ATS stemmed from the rich mix of pedagogical expertise that crossed all phases of learning and all subjects within the school. Teachers repeatedly noted that cross-phase collaboration allowed them to create new learning opportunities for children and young people. The use of digital resources was also highlighted as an important dimension of the innovative approaches to pedagogy within ATS that fostered deeper learning.

> *Over the years, I have used a teaching method called storyline. Some years ago, that was an innovative way of teaching for me. After we got the Ipads, I developed a kind of digital storyline where the students work with it using technology instead of paper, pencil and the classroom walls. (Icelandic Teacher 5)*

> *I don't like to hold on to traditionally imposed practices, like being slaves to the textbook or the curriculum, because you have to learn it by heart. We are in a*

digital era and there is a lot to learn, so digital tools help us a lot. In class, I really value autonomy in my work, the desire to investigate, wanting to ask questions, wanting to know. All of this is part of education and of the competencies that pupils should acquire: digital, autonomous learning, discovery, learning to learn... (Spanish Teacher 4)

The constant adaptation and creation of new pedagogical materials was highlighted by teachers. in all countries, as being an essential part of their approach to innovation in pedagogy. In summary the pedagogical strategies used in ATS tended to accommodate a wide range of learning needs:

Strategies cannot be the same for infant and secondary school classes. Obviously, there are things that won't work at one stage and will work at another. It depends on the profile of the students you have. At the same level, there may be a class that is very mature, and things will work for them, and another one that is not like that, and it won't work for them. In fact, it is always a question of trial and error, sometimes it works, and other times it doesn't. (Spanish Teacher 3)

Regarding the improvement and enhancement of pedagogical approaches in ATS, the teachers from the three countries agreed that many of the innovations they put into practice were based on experimentation. So trial and error was readily acknowledged as being part of their pedagogical approach. All the examples of innovative pedagogies provided by the three groups of teachers were generated through professional collaboration, dialogue between colleagues, and adapting various cross-phase teaching and learning strategies.

In the Spanish focus group, the teachers generally felt that using diverse ways to present information is an important component of deeper learning.

A teacher who sits down and reads from the book is not the same as a teacher who has prepared a slide show, a video, or a game... When I was a student, I would have been fascinated to have a teacher in primary or secondary school who had done half the things I do with my students. Resources are highly motivating, and

students appreciate them. When the class has a good aptitude for learning and a culture of effort, the teacher leaves the classroom comforted. (Spanish Teacher 1)

In terms of the development of innovation in pedagogy, a consistent theme in the data was learning from other colleagues. As one Spanish teacher noted:

I pay a lot of attention to what others do. I look at what teachers in other schools do. I have friends who are teaching in other schools and I ask them a lot of questions. How do you do this? How do you do that? (Spanish Teacher 1)

Teachers in the focus groups generally felt that the ATS setting afforded more opportunities for pedagogical collaboration and communication that afforded deeper learning opportunities.

What we see as the strength is the subject expertise, maybe in secondary, and there's a lot of pedagogical expertise in the primary. And it's really good to be able to share strength" (Welsh Teacher 3)

In relation to the professional learning opportunities shared in ATS, one teacher highlighted sharing expertise with colleagues when using digital tools.

This year with CANVA, which has been a revolution in primary school, other teachers have asked me: Hey, how did you do this? So I taught them how to use this tool, I gave them ideas, and I showed them examples of things I have done. This year I have made a lot of Science materials for Year 5, and I have shared them with my colleague at the same level. And that's there for whenever we need to use it in the future. For example, next year, whoever teaches Year 5 will have all the diagrams already available in English and in Spanish, all the activities, the practical exercises, everything. (Spanish Teacher 3)

Teachers from Iceland noted how teaching mindfulness had become part of the school's curriculum for all age groups and described that the teachers supported each other in its implementation by gathering once a week to discuss and try out different methods of teaching mindfulness. This approach was fully supported by the leaders in the schools

who actively support and encourage innovations in pedagogy that support deeper learning.

Focus group participants reinforced how the freedom to reflect and refine their pedagogical practice through actively trialling ideas in the classroom was a critical part of pedagogical innovation and improvement.

> *I feel quite privileged to be working here because I've never felt under pressure to think that this must be absolutely perfect. We've always been free to go off and experiment. (Welsh Teacher 4)*

Overall, the focus group evidence highlighted the centrality of cross-phase teaching and collaborative professional learning in ATS as pivotal to innovative pedagogy and deeper learning. Within the data, there were many examples of staff working together to innovate and change pedagogical practices in order to promote deeper learning. The opportunity for professional collaboration was welcomed by teachers but it was strongly reinforced that such collaboration would not be possible without the support of leaders within the school.

In summary, the data suggested that ATS have specific pedagogical benefits, including an innovative and synergistic approach to teaching and learning that allows for combining the most effective elements of teaching strategies in different educational phases to promote deeper learning. ATS are viewed by teachers to be an important means of stimulating the professional development of staff, to enrich and diversify their pedagogical skillset and to increase their professional competence to create the best learning environments for their pupils.

The data show that teachers in each country felt that improved teaching and learning practices in ATS directly emanated from joint working and planning with others. The sharing of good pedagogical practice and developing consistent standards for teaching, learning and assessment, as well as a common understanding of transition requirements, were viewed as essential components of supporting a deeper approach to learning.

Cross-phase pedagogical practices and clearer expectations as children progress through the key educational stages in an ATS were also considered to be important contributors to deeper learning. Teachers reported increased student performance because of better coherence, continuity and flexibility associated with cross-phase teaching and learning. In summary, there was a general view among the teachers in the study that within ATS, there was an innovative and synergistic approach to teaching and learning that fostered deeper learning for the benefit of all learners.

Leadership for Deeper Learning

Regarding leadership for deeper learning, the data highlight that leaders within ATS have a strategic overview of pedagogy, teaching and learning, progression, well-being, and standards for both primary and secondary phases. It was also noted that ATS leaders have oversight of the curriculum along with professional respect for the expertise of colleagues in specific phases/areas of the school. The data show that the leadership of deeper learning in ATS was underpinned by the proactive facilitation of collaborative working, where leaders created the time and space for teachers to engage in professional dialogue and the sharing of pedagogical expertise. Some writers propose that leading collaborative learning is a strategic path to achieving deeper learning for students (Sharratt and Planche, 2016).

On balance, the evidence reinforced the need for the leadership of deeper learning to embody a strong commitment to reflective and reflexive practices and for leaders to be seen to regularly engage in observations, learning walks, and professional dialogue. Making the time for professional collaboration and connection was highlighted as an essential component of leadership for deeper learning. Respondents emphasised the importance of having pedagogical leaders at all levels to ensure that every child's needs were recognised, supported, and monitored. Recent studies reinforce the centrality of the principal as a pedagogical leader in order to foster leadership for deeper learning (Haglund and Glaés-Coutts, 2023).

In-house research and a commitment to the effective use of pupil data to maintain consistency, ensure progression, and support pupil well-being was also viewed as essential components of creating the conditions for a deeper learning environment. It was

suggested by leaders of ATS that they often have to deal with conflicting demands and different interests that are particular to the ATS school context. The evidence from the research study highlighted a set of dispositions required for the leadership of deeper learning in practice. These are:

- Commitment to the learning of all students at all stages and phases
- Understanding of pedagogical processes
- Support for pedagogical innovation and change
- Investment in enquiry-based professional learning
- Interpersonal skills that encourage mutual professional respect
- A coaching approach to leading pedagogical innovation
- Confidence in teachers and support for innovation
- A distributed leadership approach that recognises and utilises all leadership talent in the school
- Collaborative mindset and a belief in innovative pedagogy

Teachers described leadership for deeper learning in terms of the active encouragement and the provision of practical resources to support children's aspirations in relation to their context. It was suggested that leadership for deeper learning means knowing pupils, knowing families, knowing what opportunities exist locally and further afield, and identifying mechanisms for all pupils to pursue their ambitions. Furthermore it was suggested that leadership for deeper learning in ATS requires a clear focus on the well-being and mental health of all children and young people (Estyn, 2022). The leaders who were interviewed said that they felt directly responsible for ensuring that each child's needs were fully met across the curriculum from the start of their school journey to the moment they left.

Conclusion

In summary, in terms of deeper learning, the findings from this study suggest that in the three international contexts analysed, a common contributory element within ATS was cross-phase teaching and collaborative professional learning. In ATS, teachers are given opportunities for collaboration across phases which affords rich professional exchanges that can result in pedagogical innovation that positively impact upon learners. The sharing

of pedagogical expertise across age ranges and subjects is viewed as an important catalyst for innovation and the breaking down of barriers that can promote deeper learning through the establishment of inclusive professional learning communities. In terms of leadership for deeper learning in ATS, three essential characteristics were highlighted in the study.

Firstly, leading for deeper learning involves generating opportunities for regular collaboration between staff that provides greater continuity and improvement in student learning.

Secondly, leading for deeper learning within an ATS context is premised on more lateral, horizontal structures, which afford more positive transitions between the stages of learning. Pedagogical work within ATS operates primarily in an interdisciplinary way at the intersection between levels/stages, thus providing an opportunity for innovation that meets the emotional, social, and academic needs of children and young people. Leading for deeper learning, therefore, is fundamentally about providing opportunities for connecting ideas, people, and expertise.

Thirdly, leading for deeper learning in ATS requires crossing boundaries and subject fault lines to create new opportunities and different learning environments. This type of leadership, seen within ATS, involves deliberately and purposefully creating safe spaces where professionals can exchange knowledge and share pedagogical experiences in the confidence that any limitations are treated as a learning opportunity rather than a failure. Essentially, leading for learning is brokering and opening-up spaces for teacher enquiry, reflection and research-informed pedagogical innovation and change.

The evidence from this study reinforces that opportunities for pedagogical innovation and deeper learning within ATS occur because of flatter structures and the fluidity between phases of learning. It has also shown that leadership is a critical factor in creating the conditions for collective professional practices that promote pedagogical innovations that secure deeper learning. In their work, Fullan and Langworthy (2014, p. 8) argue that:

> *Leaders have quickly recognised the need to share the leadership of learning so that changes can spread rapidly. These leaders focus on paving the way and creating conditions that pull students' and teachers' initiative and potential*

forward. They cultivate social capital and leadership, not only among other leaders but also among students, teachers, parents and the broader community of stakeholders, making everyone a participant in the new learning.

There is also a growing body of evidence that signals the importance of context-responsive leadership and the need for leaders to adapt their practices to the specific needs of the school, its community, and its students (Fancera, 2022).

Looking at the available evidence on ATS schools, underlines some of the specific contextual challenges that these leaders face. For example, there is the challenge of leading a large, complex school with different phases of learning with competing demands and priorities. As noted in this study, this also affords a breadth of expertise across the different phases that leaders can capitalise upon to generate more innovation and change connected to deeper learning. It could be argued that leading for deeper learning has to be more agile, flexible and responsive to create opportunities for innovative pedagogies that meet various learner needs.

Richardson et al. (2021, p. ix) underline how leaders for deeper learning "create supportive organisations for learning. They do this through allocating resources, staying attuned to the needs of their unique contexts, and building collaborative, empowering structures for students, families and educators". They emphasise that such leaders never lose sight of social justice, diversity and equity concerns in their drive to create a positive and innovative school culture.

As this study has highlighted, leadership for deeper learning is collective, collaborative, and distributed. The opportunities for cross-phase work, collaborative enquiry and sharing pedagogical expertise within ATS provide both a platform and a catalyst for deeper learning to take place. Within ATS, the structural fluidity provides rich opportunities for pedagogical innovation and creativity that benefit both teachers and students. It could be posited that leadership for deeper learning thrives where the structural and cultural conditions of schooling are conducive to supporting collective expertise and professional flexibility across phase and subject boundaries.

While the educational contexts in this study were varied, the common focus on pedagogy and the leadership of deeper learning proved to be a consistent theme across the data sets. Overall, the evidence suggests a great deal of commonality concerning cross-phase learning, collaborative professional engagement and innovative pedagogy for deeper learning in ATS.

Without question, further empirical studies are needed that focus on the leadership of deeper learning, in different contexts, to add to the growing contemporary evidence base (Richardson et al., 2021). It is imperative to fully understand, through more empirical investigation, how certain leadership practices create the conditions for deeper learning to occur. It is also important to examine, in greater depth, the leadership practices in different configurations of schooling and to ask whether these practices make deeper learning more possible.

Funding

This article contains data about the 'All Through School' project, carried out within the European-funded programme Erasmus+ Action KA2 [2019-1-UK01-KA201-061536].

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Appendices

Appendix 1

Focus group questions.

Focus group questions
1. What, in your experience, are the benefits of teaching in your school? What, if any, are the challenges?
2. What do you understand by innovation in pedagogy? Can you give some examples of the innovative pedagogical strategies that you use?
3. What innovative strategies do you think would be appropriate across the same age groups or phases in your school? Can you tell us why?
4. What do you think makes a good lesson? Is this the same across different age groups or phases?
5. How do you coordinate your teaching with colleagues from other age groups or phases working within the same curriculum area?
6. How do you personally refine and enhance your pedagogical approaches?
7. What types of professional learning help you develop your pedagogy most? How is this professional learning shared across the school?
8. Any further comments or observations on pedagogical practices in your school compared to other schools?

Appendix 2

Focus group sample.

Country:	**Focus group**	**Phase**
Wales (W)	FG1 (n = 5)	All taught in the secondary phase
	FG2 (n = 2)	All taught in the secondary phase
Iceland (1)	FG1 (n = 3)	Two taught in the secondary phase and the other taught in the primary phase
	FG 2 (n = 3)	All taught in the secondary phase
Spain (S)	FG1 (n = 6)	Three taught in primary and the other three taught in the secondary phase
Participants	Total (n = 19)	Primary phase teacher (n = 4) Secondary phase teacher (n = 14)

Appendix 3

Total of participants (n =32)

	Teacher number	Sex	Subject
Teachers in Spain	1	Female	Social Sciences
	2	Female	Biology
	3	Male	English
	4	Male	Maths
	5	Female	Language & Literature
	6	Female	Science
School Leaders in Spain	1	Male	All age
	2	Male	Primary
	3	Male	Secondary
	4	Female	All age
Teachers in Wales	1	Female	English
	2	Female	Assistant Head / Geography
	3	Female	English
	4	Male	History / Welsh / English
	5	Female	Sport / Science
	6	Male	Key Stage 2 Leader
	7	Female	Geography
Senior Leaders in Wales	1	Male	All Age
	2	Male	All Age
	3	Female	Secondary
	4	Female	Primary
	5	Female	Primary
Teachers in Iceland	1	Female	Maths
	2	Female	Reading skills

	3	Female	Reading Comprehension
	4	Female	Icelandic/Sociology
	5	Female	English
	6	Female	English
School Leaders in Iceland	1	Female	All Age
	2	Female	Lower Secondary
	3	Female	All Age
	4	Female	Primary

Appendix 4

Contextual Background

This appendix includes details about the three contexts in this study and their adoption of ATS. Starting with Iceland, the Icelandic school system is based on four levels. The first level is preschool, for students aged between one and five. Next is the compulsory school level, intended for students aged between six and 16 and followed by upper secondary school, which is three years and comprises both vocational and academic studies. The final level is then the university level. The Icelandic government has set laws and national curricula for all these school levels. The municipalities are responsible for the operation of preschools and compulsory schools. The number of students in each compulsory school varies, from small schools with only four students, up to the most populous schools with upwards of 7-800 students (Government of Iceland.).

According to the Compulsory School Act, No. 91/2008, the students in compulsory schools are in the age of six to 16. Compulsory education is organised in a single structure system with three age levels; grades one to four, grades five to seven and grades eight to ten. This has been the arrangement since 1974. At that time, the intention of the arrangement was to equalize the difference between students who lived in urban areas and students living in rural areas in order to attend an all-through school (Jónasson, 2008). Compulsory schools in Iceland are 174 and 30 of them are either one- or two-phase schools and two-phase schools are more common than one-phase schools (Icelandic Association of Local Authorities, 2022). In the two-phase schools, students enter the school at the age of six and leave when they are 12 to a one-phase school for children in the age of 13 to 15. In the rural areas of Iceland, there are schools that include kindergarten and can be considered as four-phase schools.

In Spain, different names are used to refer to the ATS, including *centros integrados* (integrated schools), *instituto-escuela* (primary/secondary school) and *centros concertados/privados* (publicly- or privately-funded private schools with various general teaching programmes). In these ATS, compulsory secondary education is provided along with primary education and/or preschool education. Thus, students may enter the school at the age of 3 and not leave until they are 16. Available programmes vary from one

school to another and sometimes include secondary education or vocational training provision until the age of 18.

These Spanish schools are an exception in state education, but not within the private sector, where all the compulsory educational levels have been taught in the same school for many decades. In the public sector, there are some exceptions, such as the education schemes offered by rural grouped schools (known in Spain by the acronym CRA: *Centros Rurales Agrupados*), in which students of different ages can be found in the same classroom. In terms of policy, there is no Spanish regulation of the functioning and organisation of these schools; rather, the autonomous regions have different provisions in relation to this form of schooling. It means that studies about these schools have tended to have a local focus. For example, while there have been some pioneering experiences in public education in Galicia (Diz, 2018; Porto and Sánchez, 2018), Aragón (Andrés, 2018) and Catalonia (Martínez and Pinya, 2018), among other regions, most of them were isolated initiatives, pilot programmes or experiences that were intended to meet some demographic needs, optimise public investment, lower costs and or make the most of school facilities where there were fewer students than before.

These schools tend to be borne out of a need for efficiency rather than an interest in innovative pedagogical processes that seek to foster transitions between educational stages or improve results. In the autonomous region of Aragon, a policy order was recently implemented to regulate the organisational and operational conditions of integrated public schools for early years education through to the second phase. This demonstrates that ATS are currently moving forward in public education in Spain, at least at a regional level.

In Wales, ATS are defined according to the age range of pupils that they provide for. Estyn (2022) stated that this could be either from age 3 or 4 to ages 16 or 19, and most of the all-age schools provide education for pupils aged 3 to 16 years old, therefore including nursery provision. About half also includes a sixth form that extends the age range up to 19 years old. According to the inspectorate in Wales (Estyn, 2022, p. 11), there is no national guidance available for local authorities and school leaders. Consequently, there is no common frame of reference to establish guidelines for leading and teaching in an ATS in Wales.

The first state-maintained (public sector) ATS in Wales was established in 2012. By contrast, in Spain, this form of schooling was for decades the dominant form of schooling in the public sector, whereas currently, it is dominant mainly in the private sector. These contexts, unlike Iceland, share the fact that there is no strong government policy driver to make schools adopt this form of school organisation or in Wales, 'there is no national guidance available for local authorities and school leaders (Estyn, 2022, p. 11). Generally, therefore, there is no common frame of reference to establish guidelines for leading and teaching in an ATS or any specified ATS model.