Variety of Strategies in Primary Education: The Responses of the Four UK Nations to the COVID-19 Crisis

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Abstract: This article analyses the strategies of the four United Kingdom (UK) nations to mitigate the impacts of primary school closures and the shift to remote learning due to the outbreak of the Coronavirus disease (COVID-19) pandemic. A theoretical framework based on a combination of the field literature of strategy and public value was developed to analyze their initiatives. This is a qualitative and exploratory study, and its data was collected from each country's website, research papers, and media news. The findings reveal five key areas of action: remote learning; keeping schools open to assist vulnerable students and key workers' children; access to the Internet and electronic devices to mitigate the digital divide; free meals to disadvantaged learners; and students' assessment. The analysis suggests that the four nations initially adopted a coordinated action and gradually followed three different paths: deliberate strategies, adjustment to the pandemic situation, and development of emergent strategies. The variegate of strategies show the innovative capacity of the countries and the search for public value. Further research is suggested to address the impact of the strategies.

Keywords: *COVID-19, education policy, primary education, public value, emergent strategy.*

Introduction

The United Kingdom (UK) is one of the hardest-hit countries by the Coronavirus disease (COVID-19) in the world, with more than 6.6 million cases and more than 132,000 deaths as of August 28, 2021 (Worldometer, 2021), and its response in many fields has been widely criticized (Anderson et al., 2020; Gurdasani et al., 2020), revealing the complexity to deal with super wicked societal challenges (Bekkers et al., 2011; Bryson et al., 2021; Engler et al., 2020). The government's initiatives to deal with the impact of the outbreak in primary education have been far from compelling for the four UK nations and raised several issues across them. Specialists in different fields, teachers, unions, parents, and the media have brought many issues to the table; from the alleged slow pace of school closures (in March 20, 2020) to the intention to resume their on-site activities, which has been seen by some as a hasty decision (Hall et al., 2020; Helm et al., 2020; Pidd, 2020).

As a world parameter, the data of the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2020) shows that by March 30, 2020, schools had been temporarily shut down in 167 countries and almost 1.450 billion students were at home, one of the highest levels during this outbreak. But still little is known about other steps taken by education agencies and schools, their intentions, operations, and impacts on learners, their families and school staff (Armitage & Nellums, 2020).

The closure of schools not only brings up immediate concerns with the continuity of learning, but also with increasing inequality, as it disproportionally affects children from low-income families, exacerbating food insecurity and decreased academic performance (Cooper et al., 1996; Green, 2020; Lancker & Parolin, 2020), which may impact students' formal employment and remuneration in the long run (Correa Junior et al. 2019). The shift to online learning also raises apprehension regarding the digital divide, since adequate devices and Internet connections are necessary for it, as well as information and communication technology (ICT) skills associated with home schooling (Armitage & Nellums, 2020). For example, 28% of all households in the UK do not have the necessary equipment due to its high cost, and 34% declared a lack of ICT skills as a reason for not having a computer at home (Office for National Statistics,

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2019). There are also concerns about increases in the levels of violence against children at home and impacts on children's health and well-being as a consequence of the severe economic recession (Armitage & Nellums, 2020).

Although school closures can be seen as a strategic government action to help reduce the spread of the virus, one may ask: How did the four United Kingdom nations' strategy in education during the first wave of the COVID-19 pandemic mitigate the impact of school closure on students? Thus, in order to address this research question, this paper compares the strategies adopted by the four UK nations: England, Northern Ireland, Scotland, and Wales. Its aim is to analyse the strategies of UK countries to mitigate the impacts of school closure on children. Education actions will also be analysed together with the general measures adopted by the United Kingdom in areas such as health and economics in order to offer a wider scenario.

Each country will be considered separately on account of their devolved powers over education, health and social services, which means that since the Acts of the late 1990's they can define their own policies or develop coordinated actions (Deacon, 2012). Some reserved powers remain within the UK parliament, such as issues of defence, foreign affairs, immigration, trade policy and the UK constitution (UK Civil Service, n.d.).

Data was collected from the four nations' websites, scientific papers, and online media, and analysed through a qualitative approach based on a framework which combines the strategic management and public value literature (Bryson & George, 2020; Mintzberg & Waters, 1985; Moore, 1995, 2013).

The findings reveal that countries have developed initiatives in five key areas: promoting remote learning; keeping schools open to assist vulnerable students and the children of key workers; providing access to the Internet and electronic devices to mitigate the digital divide; providing free meals to disadvantaged learners; and students' assessment. The analysis suggests that the countries adopted a mixed course of coordinated actions in the beginning and soon followed slightly different paths, making use of deliberate and emergent strategies. It is noteworthy that some strategies were redesigned based on initiatives that were already in place, which we labelled as adjustment, while others were developed from scratch, revealing a variety in education policy strategies.

Following this Introduction, the next section draws from the literature on strategy in the public sector and presents the key elements to help analyse the collected data. The section on methodology describes our data collection approach and establishes our analytical framework, which in turn will be used to analyse the collected data in the subsequent section. Finally, this paper presents its final considerations and brings up some recommendations and limitations.

Literature Review

The term "strategy" has varied meanings rather than a consensual definition (Höglund & Svärdsten, 2018; Mirabeau & Maguire, 2014). Bryson and George (2020) refer to strategy in terms of an alignment between a public organization's aspiration and the capability to deliver it, while Mintzberg and Waters (1985, p. 257) offer a more operational approach, as they refer to strategy as a "pattern in a stream of decisions", which means that a series of decisions are regularly made. They share the idea that a link between an organization's purpose and its main goals should be clearly established to align the strategy to deliver public value (Bryson, 2011; Liff & Andersson, 2021; Moore, 1995, 2013).

Strategy thus encompasses formulating concrete steps that are often presented in an organization's strategic planning. The definition of strategy refers to a set of intended actions that was previously formulated or, in other terms, a deliberate strategy that is either realized, or, when discontinued, unrealized (Bryson & George, 2020; Mintzberg &Waters, 1985).

Strategy discontinuation may be a result of change in organizational goals, resources, or in the external environment, such as the current coronavirus disease pandemic. New strategies emerge when an organization needs to track another path, highlighting the non-static perspective of strategic planning and the importance of creativity, innovation and adaptation (George et al., 2018). Other strategies may emerge in the course of action and gradually take form as decisions are made one at a time.

Deliberate strategies are those realized as intended, while emergent strategies are also realized, but they are not necessarily associated with an initial intention. Strategies range from perfectly deliberate to purely emergent, considered as "the poles of a continuum along which we would expect real-world strategies to fall" (Mintzberg & Waters, 1985, p. 258). An organization in action usually combines previously deliberated strategies and newly emergent practices (Bryson et al. 2018).

Strategies are set up to help public organizations achieve their desirable goals (Bryson, 2011) and effectuate public value, which corresponds to improvements in people's lives in the wake of delivering public services, and comprises one vertex of the strategic triangle proposed by Moore (1995, 2013). The second vertex represents political support, including external actors such as citizens, elected representatives, the media and groups of interest, but also governmental actors in other organizations, such as those responsible for financial resources, similarly to stakeholder analyses (Falqueto, et al. 2020). Lastly, the third vertex is operational capacity, considered as the ability to devise an administratively, financially and operationally feasible plan (Paulo et al., 2017). The performance of a public

organization strategy, or of its program delivery function, effectuates public value, but it also requires operational capacity and external support (Barzelay, 2019).

In another theoretical analysis, Bryson et al. (2017, p. 644) suggest that wicked problems prompt "actors to question their understandings, appreciations, values and commitments as they explore exactly what the problem or challenge might be and what might be done about it". A wicked problem acts as an external factor that puts pressure on public agents either to move away from the *status quo* or to maintain it (De Jong et al., 2017).

Research has also found that if the goals are clear and achievable, and enable a significant contribution, public sector employees tend to be more committed to their attainment (Wright & Pandey, 2011). The creation of public value can be strengthened if measures are taken to promote an interactive process that enables community participation, enhancing collaborative innovation processes, which in turn also strengthen legitimacy, facilitate implementation and reduce fragmentation in wicked problems (Geuijen et al., 2017; Liff & Andersson, 2021; Yang, 2016).

Methodology

This is a qualitative study with an exploratory and comparative approach, as each UK nation's education strategy during the first wave of the COVID-19 pandemic will be analysed in its own context due to their devolved powers. This devolution means that educational policy advice from the Prime Minister and from the UK Department for Education (UK DfE) are only binding on England, although one should expect a certain level of cross-country coordination to achieve common educational policy goals (Deacon, 2012).

This study is based on secondary data from the websites of each nation's Department for Education, education agency or similar organization. The main government website was already searched for policy guidance related to the first wave of the pandemic according to Table 1.

Table 1. UK Nations websites

Country	Main government websites	Education websites
England	https://www.gov.uk/ https://www.gov.uk/coronavirus	https://www.gov.uk/government/organisations/department-for-education
Northern Ireland	https://gov.wales/ https://gov.wales/coronavirus	https://www.education-ni.gov.uk/ https://gov.wales/education-coronavirus
Scotland	https://www.gov.scot/ https://www.gov.scot/coronavirus-covid-19/	https://education.gov.scot/
Wales	https://gov.wales/ https://gov.wales/coronavirus	https://gov.wales/education-coronavirus

The webpages in Table 1 were the initial websites we searched, and other webpages were accessed during the study and will be indicated throughout the article. This article also relies on other recent scientific articles related to the pandemic situation, as well as media news from which updated data was found to promote information triangulation.

Due to the novelty of this pandemic, the search for scientific articles was carried out several times in order to identify new studies as they were published. The search terms were: "COVID-19" and "primary education" and "United Kingdom" or "England" or "Scotland" or "Wales" or "Northern Ireland". The articles were searched on Google Scholar to broaden the results, and on The Lancet to focus on studies in health and impacts on education. This search was not a literature review, as COVID-19 is a recent academic topic and there were few studies about it related to primary education. Furthermore, the same search string was used to search for news on Google to expand the available information.

We focused on data prior to September 2020 to maintain our analysis on the first wave of the pandemic, which is when the second wave started in the UK. The education policy guidelines to deal with the COVID-19 surge and school closures were then analysed and compared considering the strategies and public value delivery framework described in Figure 1. The focus is to analyse whether the emergence of new strategies due to the COVID-19 pandemic, the abandoned ones and others that were continued helped to mitigate the impact of school closure on students.
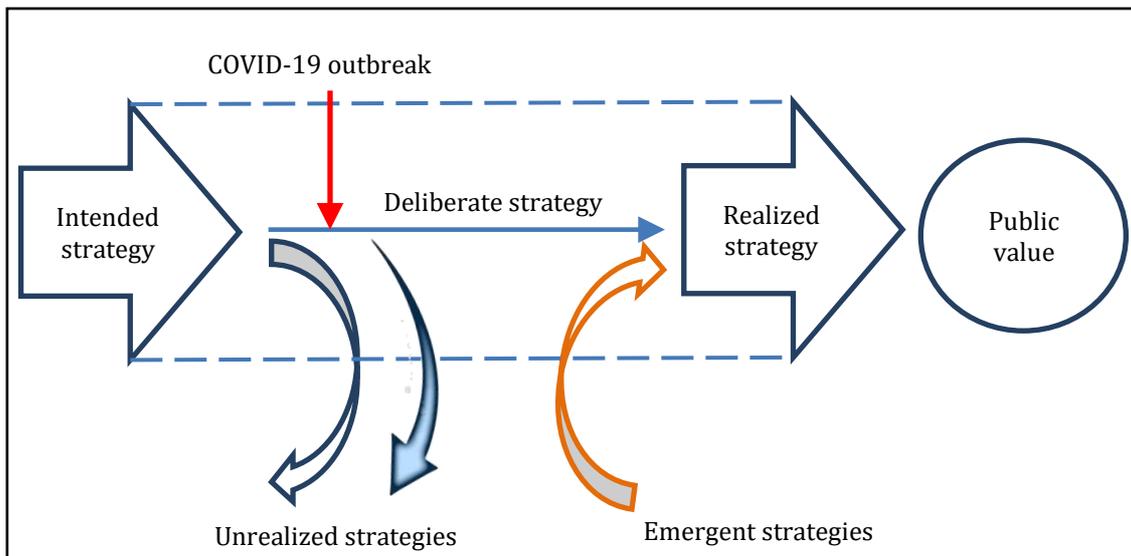
Figure 1. Analytical framework for COVID-19 education strategies

Findings

The first cases and changes in the UK government strategy: from herd immunity to lockdown

The first two cases in the UK were announced on January 31, and the number of total cases and deaths has escalated since then. The UK government was severely criticized for taking too long to take mitigation measures to tackle the COVID-19 outbreak and for failing to learn from the experience of other countries that were in more advanced phases of the spread of the virus. Such measures included closing offices, schools, restaurants, bars, cinemas, and any other initiatives that could cause public gatherings (Anderson et al., 2020; Boseley, 2020; Pidd, 2020).

On March 3, 2020, the UK Department of Health and Social Care (UK DHSC) released its first COVID-19 Policy Paper: "Coronavirus action plan: a guide to what you can expect across the UK" (UK DHSC, 2020a), which contains the government phased strategy to tackle the outbreak which was "to Contain, Delay, and Mitigate any outbreak, using Research to inform policy development." Following this strategy, the government kept schools open, and according to the Prime Minister's speech, "so far the judgment of our advisers has been that closing schools is actually of limited value in slowing the spread of the epidemic" (UK Prime Minister's Office, 2020b). This was a UK-wide coordinated response and jointly produced by the PM and the first ministers of the UK nations (Paun et al., 2020).

This initial strategy of adopting herd immunity has been severely criticized by the media and experts. It is an approach adopted in the absence of a vaccine and by which it is considered that it is better to expose the population to the virus to allow its transmission and thus to increase immunity naturally (Anderson et al., 2020; O´Grady, 2020). That strategy was clearly announced by the UK government's chief scientific advisor in a TV interview: "allow enough of us who are going to get mild illness to become immune" on March 13, 2020 (O´Grady, 2020). Following the Prime Minister's statement (UK Government, 2020f), three days later the UK government released the "COVID-19 guidance for mass gatherings" (UK Cabinet Office, 2020) in which it was "advised that large gatherings should not take place", however the UK government also considered that "the risks of transmitting the disease at mass gatherings are relatively low", thus sending a contradictory message.

At the same time, a simulation of the outbreak from Imperial College London released on the same day (March 16, 2020) led to a change in the government response (Ferguson et al., 2020). A few days later on March 20, when 1,198 new cases were reported and the total death toll reached 158 cases (Our World in Data, 2020), all UK restaurants, pubs, museums, cinemas, gyms, and any other indoor activities were told to shut down, revealing a new lockdown government strategy that put down the previous herd immunity approach (UK DHSC, 2020b).

Emergent strategies in Education: varieties in the four UK nations response

The Prime Minister announced in his March 18, 2020, speech at 10 Downing Street[†] that school closures were to take place after the Friday on-site classes on March 20, thus becoming the first emergent UK government strategy in education. In a coordinated action on the same day, the First Ministers of the other countries also announced school shutdowns (Paun et al., 2020; Adams & Stewart, 2020; UK Prime Minister's Office, 2020b; Walker & Adams, 2020).

[†] The address of the Prime Minister's office where the speeches are delivered.

At that time, the UK and Belarus were the only two European countries that had not yet decided to close their schools, even with education unions' pressure and concerns among parents (Adams et al., 2020; Richardson & Sellgren, 2020). Some days before, on March 14, the largest teachers' Union in the UK demanded the PM to disclose the models they relied on to keep schools open as concerns among teachers and staff were growing, and after Ireland's decision to shut down schools from March 13 (Carroll, 2020; Courtney, 2020).

It is important to highlight that schools were not completely closed. The government strategy was to keep schools open exclusively for vulnerable students and for the children of workers of key areas, such as hospitals, home care, security, pharmacies, supermarkets and delivery services (UK DfE, 2020a).

The shift to remote learning became an official initiative as each country's education agency issued its own policy guidance document, as shown in Table 2. Yet, all around the United Kingdom, schools were put on alert earlier than their closure announcement and were required to both compile lists of students who could access the Internet from home in preparation for their online learning activities, and to prepare printed material (Wilkes, 2020).

The issued policy guidance was meant to help teachers adapt their practice to remote learning and provide content for students. The UK DfE's *Oak National Academy* was especially designated after school closures as a hub for online activities for England's learners, although available to all of the UK's students (Steadman, 2021), revealing an emergent strategy. In addition, the *Bitesize Daily* is a platform that was already available, and had been redesigned by the BBC in partnership with the education agencies of the four countries for the entire UK, but was only announced on the England DfE's website. The other nations also had online systems in operation which had been used to support teachers' activities and became the leading teaching resource in their respective countries after the outbreak. Although each country has its own online platform, their approach was quite the same as a deliberate strategy, i.e. a previously defined action route was moved to the front stage and became the main strategy to deal with remote learning. We define this as a deliberate + adjustment strategy. For instance, in the End of Term Report released in July 2020, the Oak National Academy revealed that over 4.7 million people visited the site, and an average of 220,000 users accessed the Oak website every day, showing that it was a great resource for pupils and parents (Oak National Academy, 2020).

Table 2. Remote education

Country	Remote learning guidance document	Online platforms	Strategy
England	Remote education during COVID-19 (UK DfE, 2020c)	Bitesize Daily	Deliberate + Adjustment
		Oak National Academy	Emergent
Northern Ireland	Guidance to educational settings in Northern Ireland (Education Authority Northern Ireland (, 2020b)	My-School	Deliberate + Adjustment
Scotland	COVID-19: supporting pupils, parents and teachers - learning during term 4 (The Scottish Government, 2020a)	Glow Connect	Deliberate + Adjustment
Wales	Stay Safe. Stay Learning: Continuity of learning policy statement (Welsh Government, 2020b).	A Hwb of activity	Deliberate + Adjustment

The adoption of strategies primarily based on online resources raised issues concerning the access (or the lack thereof) to the Internet and to digital devices such as laptops, tablets or cell phones. For instance, approximately 760,000 students in the UK do not have Internet access from home (Cook, 2020). Other challenges include the number of devices per family, parents' IT and remote schooling skills, programs only designed for specific types of devices, Internet speed and quality, regular access and data limit (Coughlan, 2020; Lyons, 2020). The main strategies to overcome ICT-related challenges are shown in Table 3.

The four countries' educational agencies developed new policies to provide digital equipment and internet access for students. A new £9 million program was developed in Scotland to assist vulnerable families with access to 25,000 laptops, internet connection and training (The Scottish Government, 2020a, b, d). A similar program was launched in England; however, it did not mention training programs (UK DfE, 2020d). The Education Authority of Northern Ireland (EANI) required schools to identify their students' needs and make every effort to lend them equipment, or hand them printed materials (EANI, 2020b). But it was not clear how learners would access the Internet from home if they do not have an Internet plan, and where the equipment lent by the schools would come from. Schools in Wales are also responsible for identifying their students' ICT-needs, while local authorities identify equipment items that may be repurposed to fit the learners' needs (Wales Department for Education and Skills, 2020). No further information regarding its operation was found on the governmental websites. In sum, all nations developed emergent strategies.

Table 3. Provision of Internet access and devices for students

Country	ICT policy guidance document	ICT	Eligibility criteria	Strategy
England	*Get technology support for children and schools during coronavirus* (UK DfE, 2020d)	Equipment, Internet access	Disadvantaged students	Emergent
Northern Ireland	*Coronavirus (COVID-19): Guidance to educational settings in Northern Ireland* (Northern Ireland Department of Education , 2020a)	Equipment (or printed material)	Students without equipment or Internet access	Emergent
Scotland	*Connecting Scotland* (The Scottish Government, 2020a, b, d).	Equipment, Internet access, Training	Vulnerable people	Emergent
Wales	*Stay Safe. Stay Learning* (Welsh Government, 2020b)	Repurposed school devices Internet access	'Digitally excluded' learners	Emergent

The next topic regards the provision of meals to vulnerable students (Table 4). Although it is a common activity in schools, remote learning has led to the need to develop new strategies for providing food. There are several initiatives across the countries to help students: providing (packed or frozen) meals in schools or food parcel delivery; vouchers to be redeemed in pre-selected brand supermarkets; vouchers to be redeemed at the local grocery shops indicated by student families; and bank transfers.

Despite their common features, these main strategies are slightly distinct from each other. The main course of action in England is for schools to use their current catering service to provide meals in schools, send lunch parcels to students who are self-isolating at home or provide voucher to students' families (UK DfE 2020b). In addition, a voucher scheme with additional government funding was developed so that families can redeem them in supermarkets. The Northern Ireland government rated bank transfers as the more efficient procedure and adopted this sole mechanism to ensure families' access to food (Northern Ireland Department of Education, 2020b). However, new requirements were held off due to an increase in the demand and to limited governmental capacity (EANI, 2020a), and many other eligible families missed food aid because they do not have a bank account (Mills, 2020).

The Scotland Government set out four free school meal schemes for eligible families to choose from. However, local charity organizations and the teachers' union demanded the scheme to be changed to cash payments in order to give parents additional options in supermarkets and avoid the risk of stigmatization as families line up in meal hubs to receive food (Mcivor, 2020). The Welsh government provided extra funding for free meals and supported the local authorities' decision about what works best in each community (BBC News, 2020c).

Table 4. Policy guidance documents on free meals

Country	Meal policy	Delivery strategies	Strategy
England	*Free school meals guidance for schools* (UK DfE, 2020b)	Meals in school or food parcels National voucher scheme eGift Card	Emergent
Northern Ireland	*Free School Meals Payment Scheme* (NIDE, 2020a)	Deposit in bank account	Emergent
Scotland	*Free school meals* (The Scottish Government, 2020c)	E-vouchers Frozen meals Daily packed lunch Box of groceries	Emergent
Wales	*Revised guidance for schools in Wales: supporting children eligible for free school meals* (Welsh Government, 2020a)	Voucher Delivery of foods Deposit in bank account	Emergent

The lifting of restrictions was slightly different in each country (Table 5) and all of them are emergent strategies. In his May 16, 2020, speech, the Education Secretary in England announced the reopening of schools from June 1 for some age groups in primary and secondary schools and in smaller classes (UK DfE, 2020e). England was the hardest affected country from the COVID-19 outbreak, and would be the first one to allow pupils back to school. However this strategy has been questioned by every stakeholder one may find, from students, teachers and their unions to the first ministers of the other countries, in addition to a lack of consensus among health specialists (Adams, 2020; Coughlan & Richardson, 2020; Gallagher, 2020; Wealer et al., 2020). Next, the government changed its mind and acknowledged that schools would not have to reopen before they considered themselves prepared to receive pupils (Adams, 2020), constituting an approach that we considered an adjustment from the previous strategy. Thus, full opening started from

September 7 just after the summer holidays, which then made England to be the last country to completely reopen schools.

A phased reopening in Northern Ireland allowed some of the pupils to return to school starting on August 24, 2020, and full attendance began on August 31 (NIDE, 2020b). However, the Teachers' union criticized the government guidance as they did not follow the two-metre social distancing rules in schools or in school transport as recommended by the Department of Health (BBC News, 2020b).

A phased return in Scotland began on August 11, 2020, based on a mixed in-school learning and remote learning, and a week later every school was expected to be back full time. However, the Teachers' union was worried about the government's decision to not apply social distancing measures in schools. They also criticized the guidance for smaller classes when schools could not accommodate many more classes (Brooks, 2020; Carrell, 2020).

Schools in Wales reopened for 3 weeks before the 2020 summer holidays, although some schools located in councils with high transmission rates remained closed. All the schools returned on September 1, 2020 with full capacity and limited social distancing (Morris, 2020a, b).

Table 5. Reopening strategy

Country	Reopening	Strategy
England	Phased reopening from June 1 Full attendance from September 07. (UK DfE, 2020e, UK Prime Minister`s Office, 2020c)	Emergent + adjustment
Northern Ireland	Phased reopening from August 24 Full attendance from August 31. (NIDE, 2020c)	Emergent
Scotland	Phased reopening from August 11 Full attendance from August 18 (The Scottish Government, 2020d).	Emergent
Wales	From June 29 until beginning of summer holidays From September 1 after summer holidays (Welsh Government, 2020b)	Emergent

The final topic addressed in this article is the exams students take in primary school. The national curriculum assessments for Key Stage 1 (at the end of Year 2) and Key Stage 2 (at the end of Year 6) were cancelled for 2019/2020 and 2020/21 academic years (BBC News, 2020a; UK DfE, 2020f). This option means an unrealized strategy, but an emergent strategy should be defined later on to assess these students.

Discussion

The UK nations' education policy strategy mainly followed national policy guidance, particularly regarding the closing of schools and their reopening; however, many of the schools' related issues were directly addressed by each nation's education system. Some of the strategies were coordinated, while others followed different paths, as presented in the Findings section which will be discussed further on.

The initial overall UK approach from the announcement of the first cases (January 31) until the closure of schools (March 20) was the herd immunity strategy. This is a strategy in which the spread of a virus is expected to stop because a high percentage of a population develops immunity against infection which can usually be achieved through vaccination. However, in the case of a whole new virus, and thus in the absence of an associated vaccine, the strategy was to expose the population to the virus, promoting its dissemination and "hoping" for people to develop mild illness, a kind of herd immunity salvation strategy. This kingdom-wide strategy was adopted to keep everything as usual and to allow the previously deliberated strategy to flourish. Thus, in education, schools were maintained open as usual.

The rapid spread of the virus and a sharp increase in death toll not only forged a change in policy in the UK, but also in other European Union countries. Schools all over the United Kingdom were shut down following the closing of businesses in a coordinated emergent strategy among the four nations. This decision also followed pressure from the teachers' union and parents, and concerns about previous scientific advice that the government had relied on. However, schools were kept open for vulnerable children and key workers' children, revealing an important public value in the public education sector and a common emergent strategy in the four nations.

The closure of schools led to the necessity to deal with remote learning, and two main strategies were thus devised: (1) the first of them relates to the existence of online education platforms as a deliberate strategy that has been used as a teaching support tool, and as a result of the COVID-19 surge they were promoted to the front line, i.e they became the main pedagogical resource. As mentioned earlier, this type of initiative we have labelled as a "deliberate + adjustment strategy", and refers to a deliberate strategy that was in operation before the pandemic, but not as the main system or

tool, and received additional attention due to its suitability to the new situation and was therefore ranked higher among the organization tools; (2) the second one is the development of a brand new emergent online education system from scratch to deal with the changing and challenging situation. Both approaches reveal the innovative capacities of the four UK nations bureaucracies and an intention to fulfil public value in the field of education, albeit via remote learning.

The shift from face-to-face education to remote learning has shed light on students' ICT needs, including access to devices and to the Internet, and the four nations relied on the development of emergent strategies to help disadvantaged and vulnerable students. All of the four initiatives aimed to provide hardware (laptops or tablets), while there was only no mention of the provision of internet access in Northern Ireland. The implementation of measures aimed at the needs of disadvantaged and vulnerable people reveals the intention to reduce inequality as a public value, however only one country mentioned training programs for families and students to provide IT skills and reduce the digital divide.

Another subject is the development of new alternatives to deliver school meals, which shows the public sector's operational capacity in designing emergent strategies. However, some issues were identified, pointing to a lack of delivery-capacity that can lead the community to raise issues linked to legitimacy and support (Burns, 2020). For instance, school leaders reported that some families were not been able to register online, and sometimes they needed to spend more money on mobile data just trying to access the voucher, while others only discovered that they couldn't use it at the till (Rovnick, 2020). The Welsh strategy to put the decision on the community' shoulders raised less questioning and may indicate that interactive processes lead to better solutions and increased support (BBC News, 2020c).

Although initial strategies regarding school closures in the four UK countries were mostly coordinated, the lifting of restrictions shows that each government followed their own emergent approach. They made use of their devolved power and decided differently in matters related to the reopening date and its scale, with some of them adopting a phased approach. Finally, in recovering coordinated action, the four nations decided to cancel primary students' assessment, thus representing an unrealized strategy. However, in order to keep public value generation in mind, new approaches to assess these students may demand an emergent strategy.

Conclusion

This article identified a variegate of strategies that the four UK countries have been implementing to mitigate the impact of school closures on students as a result of the first wave of the COVID-19 pandemic. They were grouped into five areas: promoting remote learning; keeping the schools open to assist vulnerable students and the children of key workers; providing access to the Internet and to digital devices to mitigate the digital divide; providing free meals for disadvantaged learners; and students' exams. Each nation's education agency resorted to deliberate strategies, meaning actions that were in progress before the outbreak; adjustment strategies in the deliberated ones; and emergent strategies, which correspond to newly designed and implemented initiatives.

The maintenance of schools to assist two groups of pupils, namely vulnerable students and the children of key workers, significantly differs from the mere closure of school units seen worldwide and represents an effort to generate public value. This initiative helps to both reduce inequality and support many workers who are at the front line of the work to tackle the COVID-19 outbreak. Further case studies may bring new insights regarding the impact of these strategies in terms of literacy, reduction of school inequality, and reduction of violence against children, for instance.

The shift from on-site classes to remote education represents another challenge faced by education agencies. Previously existing online platforms helped this transition, and highlight the importance of a mixed strategy in education programs; while the promotion of these online resources to the main stage reveals an adjustment in a deliberate strategy, with a new emphasis on their relevance. In turn, the development of an entirely new online platform represents an emergent strategy. Furthermore, both initiatives reflect countries' innovative capacities in terms of design and implementation of policies and tools. The relevance of remote learning also raised issues related to Internet access and the availability of adequate equipment among disadvantaged students, highlighting the relevance of emergent strategies to combat the digital divide and inequality, which can also be seen as a public value. The policies of England and Scotland are clear about program funding, eligibility criteria and enrolment. In addition, the Wales initiative is noteworthy for its strategy to repurpose second-hand equipment. On the other hand, little is known about Northern Ireland's approach that relied on schools to make the effort to reduce the digital divide. Further case studies should seek a deeper understanding of how each program has been implemented, as well as assess students, their families, and teachers' abilities and difficulties, not only regarding the use of digital devices, but also the online materials and content.

The four nations' strategies in providing free meals also revealed the adoption of emergent strategies. Although each one had a different approach, they had a direct impact to avoid increasing inequality, especially in times of economic recession. Further studies may address the efficiency of each nation's strategy and include students and their parents or guardian's opinion.

The final aspect analysed in this article is the student's exams. The exams for students in the earlier stages of their education were simply cancelled and postponed to the next year. This is an option in line with the fact that part of classes were online and demanded acquiring new ICT related competences and abilities from students, parents and teachers. Any increase in the education gap due to the pandemic situation may demand the development of new emergent strategies.

Nevertheless, all of the remote learning strategies require parental supervision, especially for primary school pupils, and also an adequate place to study at home. According to a study from ImpactEd (2020), 59% of students reported being able to get help from their family, which means that 41% did not. Routines for learning at home were also a particular challenge, with just over half of pupils (55%) agreeing or strongly agreeing that they had an effective home learning routine. Another important educational issue during the pandemic is how much students are learning under these conditions. A new study released by the UCL Institute of Education (IOE) suggests children spend an average of 2.5 hours each day doing schoolwork at home, but the variability in the amount of schoolwork being done at home is adding to existing regional and socioeconomic inequalities (Green, 2020). The study shows one fifth of students, which is the equivalent of two million children in the UK, did no schoolwork at home, or did less than an hour a day, and 17% studied more than four hours a day, suggesting an escalation of learning inequalities. Additional studies addressing the impact of the gap in students' abilities may assess the challenge faced by distinct actors, as well as its impact on learning and inequality.

If initial strategies in education presented some coordination pattern among countries, particularly in the main issues (e.g., the same date for school closure, schools opened for vulnerable pupils and kids of key workers, etc.), with flexibility in the implementation (i.e. provision of school meals and of computers to students, etc.), the lifting of restrictions revealed quite a different approach with each country following the advice of their own scientific and health staff to define their strategies.

Future studies may address the difficulties of each strategy and its effective impact. Other theories may be combined to allow better understanding of the measures in place. For instance, Porter's value chain analysis can be incorporated to deepen the examination of the public management structure and chain of actions involved in the delivery of public value by each education agency. Case study research, in which interviews with key stakeholders are made (e.g., professors, head teachers, school and government staff, students and their parents) to promote data triangulation and research validation can help deeper understanding of the governmental education strategies.

Recommendations

To keep the focus on public value generation in education, the main recommendations include strategic issues that goes further than school closure as a regular action in a new pandemic situation. The first recommendation is to keep schools open to children of key workers and vulnerable people. This is an important measure that helps maintain essential activities operational, avoiding a shortage of workers as many of them would need to stay at home to assist their children. Vulnerable children are also not only benefited in terms of social policies such as free meals that they would otherwise lack, but also to avoid the increase in the educational gap. If children are to be kept in their homes for their health safety, then it is necessary to design a meal provision system that avoids stigmatization of families.

The four cases also revealed the importance of their previous online systems with availability of educational material. These were initially developed as a support tool for teachers, but soon proved to be more important in a remote class mode. Therefore, it is important to maintain investment in new technologies and also to resort to pre-digital era devices when needed, such as the provision of printed material to economically disadvantaged families or when they are unfamiliar with new technology. The economic condition of students' families also sheds light on the digital divide issue and the relevance of strategies to provide equipment, internet access, and training for parents.

Finally, the reopening of schools in a pandemic situation should take into account local sanitary conditions and thus demand close contact with health agencies to define dates and procedures. Different strategies, such as phased return, may be needed in the same region depending on the evolution of the pandemic.

Limitations

There are some limitations of this article that further research may address. The data and discussion focused on the first wave and thus assessment of the measures and further research on the subsequent waves may shed light on the learning process and the development of new strategies (Kools & George, 2020). Interviews with key actors in government, schools, experts and with students and their families would lead to essential information regarding the implementation of different strategies.

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