The Future of Research in Education

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For The Royal Society & The British Academy

THE RESEARCH BASE

Table of Contents

1. Key Messages 3
2. Executive Summary 4
    2.1 Research Overview 4
    2.2 Key Findings 4
    2.3 Conclusions and Recommendations 5
3. Research Overview 7
    3.1 Research Objectives 7
    3.2 Methodology 7
    3.3 Limitations 9
4. Using Research 11
    4.1 Research within the Workplace 11
    4.2 Accessing Research 13
    4.3 Barriers to Using Research 14
5. Research Skills and Accessibility 17
    5.1 Characteristics of Good Quality Research 17
    5.2 Skills for Accessing and Engaging with Research 18
    5.3 Current Skills in Teaching and Policy 20
    5.4 Making Research Accessible to Users 21
6. Current Issues for Research in Education 24
    6.1 Current Issues in Education 24
    6.2 Use of Research within the Education Sector 26
    6.3 Technology and Education Research 28
7. Future Research Priorities and Recommendations 32
    7.1 Future Research Priorities 32
    7.2 Potential Improvements 37
    7.3 Concluding Thoughts 38
Appendix 1: Discussion Guide 40
Appendix 2: Research Participants 42
Appendix 3: Stakeholder Mapping 43

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1. Key Messages

Research is used by a majority of stakeholders in the education sector, but it is not always designed, disseminated and used in the most accessible and appropriate manner. There is also a lack of trust in research, understanding of where to access information, and a fear of using research to test new practices among teaching practitioners.

Most teachers feel they lack the necessary skills to engage with research effectively, and high workloads are preventing them from further developing their research skills. Policy makers also feel there is an absence of training courses available that would enable them and others in the sector to improve their skills.

Stakeholders feel the use of research within the education sector could be improved; policy makers were criticised for misusing research to support policy-based evidence, instead of developing evidence-based policy. Funding is also seen to have an adverse affect in shaping the research agenda before projects are initiated.

Education research valued by policy makers and teaching practitioners alike includes research that is timely and responsive to current issues within society; relevant to practitioners' needs and the situation on the ground; and that is accessible and easy to understand, but has a solid , reputable evidence base.

There is a sense that opportunities in education research arising from new technologies are yet to be fully realised, although academics and policy makers are becoming more innovative in presenting their research online; teachers are also using technology to access information and share learning.

2. Executive Summary

2.1 Research Overview

This project was commissioned to support the Joint Academies' Educational Research Working Group in gaining an understanding of what key stakeholders believe should be the strategic foci of UK-focused educational researchers over the next 20 years, and whether there are any differences concerning the future of educational research across the Home Nations. Findings from the research are intended to support the development of an agenda to help guide education research in the UK.

The project sought to incorporate the views of a range of stakeholders related to education policy, practice and research. Primary research was gathered through focus groups and interviews with stakeholders in nine cities across the four devolved nations. A total of 104 policy makers, researchers and teachers participated in the research.

2.2 Key Findings

Using Research

- Research is used in the workplace among a majority of policy makers, researchers and teachers, although to a lesser extent in schools and colleges, some of which fail to encourage teaching staff to take an interest in research. Cherry picking of research among policy makers, and a tendency to select sources that support existing priorities, was also noted as a concern.

- While policy makers feel confident in locating relevant information, the majority of teachers do not know where and how to access research. Means of accessing research reported by all the respondent groups include online sources, such as websites, databases, journals, and newsletters, as well as social media platforms. Policy makers also reported using networks to obtain information, including internal research departments, and summaries available from other organisations such as the Joseph Rowntree Foundation.

- Language is the primary barrier to using and understanding education research across all three stakeholder groups (researchers, policy makers and teaching practitioners). Lack of time was also a critical barrier among all the respondent groups, particularly teachers. Other barriers among teachers include lack of funds to access databases and attend conferences, lack of trust in research, and a fear of testing new practices. Among policy makers, research outcomes that contradict the current policy direction may be an additional barrier.

Research Skills and Accessibility

- Good quality research, according to respondents, can be summarised as being relevant to needs and responsive to broader issues within society, is led from the bottom up, is robust and authored by reputable researchers, and can demonstrate clear originality of thought.

- All three respondent groups thought the most critical skill for accessing and engaging with research is criticality. Other key skills for accessing and engaging with research include digital literacy, as well as a basic understanding of statistics and research methods in order to assess the robustness of research. Policy makers also commented on the absence of training courses and CPD opportunities available for

developing research skills.

- While policy makers feel they possess the skills to access and use research, they did not feel these skills are needed when they are able to get support from researchers. Among teachers, the development of more critical thinking skills for engaging with research is likely to be beneficial, but many teachers feel there are significant barriers to fostering more research skills on the job.

- Policy makers, teachers and researchers varied in their views of the best ways in which to make research more accessible to users. Teachers emphasised the creation of a single portal from which to access research, whereas policy makers focused on good presentation skills and digestible summaries. Researchers were concerned with ensuring the research design is accessible, the involvement of practitioners such as teachers, and the dissemination of findings across social media platforms and websites.

Current Issues for Research in Education

- Current issues in education reported by respondents include the quality and performance of schools and teachers, and the inequality of educational outcomes; teacher recruitment and retention; pupil wellbeing, in terms of digital and social media, and how this links to outcomes in education; initiative exhaustion and the lack of evidence for policy and practice; and excessive teacher workloads.

- Respondents mentioned several weaknesses with the current use of research within the education sector, including the cherry picking of research to support a particular political agenda among policy makers. The planning of research is also seen as patchy, with interventions often being driven by a range of interest groups and without a solid evidence base; funding also has a tendency to shape research before projects are initiated.

- All three stakeholder groups agreed that new technologies have helped make research more accessible, although teachers appeared to be less engaged in using technology for research purposes in comparison to policy makers and researchers. Researchers are also becoming more innovative in how they present research online, and how they collect and analyse data. The use of technology within research is not without adverse effects, however, with one researcher expressing concerns that readily available data has led to a constant monitoring of academic performance.

2.3 Conclusions and Recommendations

Future Research Priorities

Areas of consensus among policy makers, researchers and teachers in terms of future research priorities include assessing the impact of social disadvantage on outcomes in education; non-traditional learning models in further education; structural changes within the education system; the impact of government agendas and policies; curriculum design, particularly the impact of exam-based or performance-led models; and work-based learning. Despite consensus in these areas, respondents' views varied in terms of other research priorities for the future. For example, policy makers identified early years education and social mobility as key research priorities, while teachers did not; teachers and researchers also emphasised engaging a wider range of stakeholders in education, such as parents, young people and communities.

Future research priorities related to further education featured more frequently among respondents in comparison to early years, primary and secondary schools. Several respondents mentioned the absence of high quality research in the further education sector, which is seen as significantly under researched in

comparison to the schools sector.

Potential Improvements

Participants' recommendations for ways in which research in education can be improved, or be better utilised, include:

- Building research literacy into teacher education and practice, including developing skills in critical analysis and reflective assessment. This also includes recognising that funding and support will be required to enable time away from the classroom.
- Encouraging hub models of research, where practitioners (schools and further education) work in partnership with researchers or research centres to feed into studies.
- Disseminating the importance of research, and the potential impact it can have on educational outcomes, to schools and the wider school community.
- Promoting a greater understanding of the ways in which research is commissioned, funded and utilised.
- Developing a national development board or network aimed at connecting policy makers, practitioners and education researchers and allowing for the formulation of coherent strategies.
- Incentivising research occurring within or in partnership with schools and local authorities, to make the opportunities attractive to academic researchers.
- Creating a portal or platform where teachers or other practitioners conducting action research can share their studies and findings with their peers; this may be a means of sharing good practice and key findings, and also inspiring other teachers to conduct research.
- Encouraging 'joined up research' across sectors to understand the multi-disciplinary impact of initiatives and/or policies; this may apply, for example, to studies concerning the impact of cuts to support services on schools.
- Developing technology, possibly through an app, to connect classroom teachers and encourage the sharing of research, ideas and good practice. There is also the potential to share recorded lessons online.
- Building research capabilities and skills into CPD requirements and also requirements for progressing in the teaching profession.
- Recognising the fluidity and commonalities between teachers and researchers rather than treating them as distinct categories.

3. Research Overview

3.1 Research Objectives

This project was commissioned to support the Joint Academies' Educational Research Working Group in gaining an understanding of two key areas:

- What the key stakeholders (including education researchers, policy makers and teachers) believe should be the strategic foci of UK-focused educational research over the next 20 years; and
- What differences may be observable across the Home Nations concerning these beliefs on the future of educational research.

The project was designed to support the development of an agenda to help guide educational research in the UK; incorporating the qualitative views of those in policy, practice and research.

3.2 Methodology

Research Framework

A preparatory phase sought to establish the context and the available evidence for the project, to refine the research questions, and to inform the development of the required toolkits. A research framework was developed, identifying the key areas of enquiry required to satisfy the project objectives. These key areas were:

- The research objectives/priorities of teachers, researchers and policy makers in the UK.
- The barriers and opportunities to accessing effective research.
- Perceptions of research quality.
- Perceptions of research skills and available capacity.
- Recommendations for the future direction of educational research in the UK.

The research framework was then used as a basis for the discussion guide, later used in focus groups and interviews. Details of the guide are available in Appendix 1.

Approach

As indicated in the Terms of Reference, the primary means of data collection was through focus groups - this qualitative approach was intended to complement data already collated on this subject. Each focus group was required to include a balanced range of teaching practitioners (covering FE, primary and secondary), education researchers and policy makers; the target was three of each stakeholder type per focus group. It was noted at project inception that while this qualitative approach would preclude any comparative statistical analysis of findings from different groups, analysis would aim to identify broad trends of similarity and difference.

Unforeseen circumstances, including the period of purdah imposed on policy makers as a result of the election, meant that a change in data collection methodology was required during project delivery. A

number of supplementary telephone interviews were carried out, asking research participants the same questions as those asked in the focus groups, at a time of their convenience.

Research Participants

In order to ensure adequate representation from each stakeholder group, a soft target of 108 participants was identified, comprising 36 policy makers, 36 researchers and 36 teaching practitioners. Policy makers comprised individuals working in government or local authorities as well as policy professionals within larger organisations, such as awarding bodies and funding agencies and councils; practitioners included all individuals working within primary, secondary and FE education; and researchers included individuals at all levels, from those undertaking doctoral studies and more established research consultants at tertiary and private institutions. Researchers were those undertaking research specifically in the field of education.

It was also intended that participants represent as much of the United Kingdom as possible; as such, primary research was conducted in nine cities across the four devolved nations. A stakeholder mapping exercise was conducted to identify relevant focus group attendees from each stakeholder group and in each regional area. Please see Appendix 3 for further information on stakeholder mapping.

A total of 104 stakeholders participated in this study; the breakdown of participants by region is noted below.

Country	Region	Policymakers	Researchers	Teachers	
England	North	11	10	7	Manchester, York, Sheffield
	West Midlands	3	4	2	Coventry
	London	4	9	5	London
	South West	2	3	3	Exeter
Wales		5	10	2	Cardiff
Northern Ireland		3	1	1	Belfast
Scotland		4	10	5	Edinburgh, Glasgow
Sub-Totals		***32***	***47***	***25***	
Grand Total		**104**			

Focus Groups

Nine focus groups were held in locations across the United Kingdom: Coventry, Manchester, London, York, Sheffield, Cardiff[1], Glasgow and Edinburgh, with a total of 58 participants. The attendees comprised a mix of the three stakeholder groups to encourage more varied discussion and also to promote engagement between the groups. Focus groups lasted approximately 90 minutes and were conducted using a semi-structured discussion guide. The focus groups were conducted according to the Market Research Society's Code of Conduct[2]; sessions were recorded (with appropriate permissions obtained) for transcription and analysis purposes; upon completion of the transcripts, the names of participants and any identifying information were redacted.

[1] Due to high demand from participants in Cardiff, two focus groups were held.
[2] Full details available here: https://www.mrs.org.uk/standards/code_of_conduct

Interviews

In a number of locations there were challenges in engaging stakeholders due to the research timelines (please see section 3.3 Limitations below). As noted above, in order to supplement information from the focus groups, as well as to offer an opportunity to participate to stakeholders who were unable to attend the groups, telephone interviews were conducted with a further 46 participants from the focus group locations. The protocol for these interviews was designed to be as similar as possible to the focus group discussions. Interviews lasted approximately 30 minutes and were conducted using the semi-structured discussion guide from the focus groups, with minor adjustments to make the language appropriate to a one-to-one setting. Again, interviews were conducted according to the Market Research Society's Code of Conduct and interviews were recorded (with appropriate permissions obtained) for transcription and analysis purposes. Participants remain anonymous in any reporting.

Analysis and Reporting

Analysis of focus group and interview transcriptions was conducted according to the research framework developed at project inception; evidence was analysed with respect to the key research questions, and to determine any significant similarities and differences between the participant groups and regional groups. An analysis matrix was used, setting responses alongside the key objectives of the project, and responses were coded for emerging themes. An initial analysis of findings from each of the interviews and focus groups was then combined in order to identify more global trends.

3.3 Limitations

There are a number of limitations associated with the research methods used for this report, which should be borne in mind when considering the report's recommendations and conclusions.

Key limitations include the following:

- Reliance on wholly qualitative research means that the input from stakeholders is not objectively comparable and quantifiable; we have sought, however, to ensure equal representation, as far as possible, from each group, and have analysed data with reference to broad commonalities and points of difference.

- The preference for focus groups as the primary means of data collection meant that participant numbers were not guaranteed, as attendance numbers are often lower on the day than expected.

- Another limitation of focus groups, in particular with a participant group including extremely busy professionals, is that last minute schedule changes can affect attendance in a way which is unpredictable. For one group, up to 20 participants expressed an interest in attending, but on the day only four attended.

- A number of new locations for focus groups were requested, meaning that the planned six locations for the focus groups was expanded to 12; while this was intended to ensure a broader representation, it doubled the requirement for stakeholder identification and mapping, and, in some of the smaller locations, further complicated recruitment by limiting the pool from which relevant stakeholders could be identified.

- The timing of research, during school half term holidays, exams and 'purdah' for policy makers as a result of the unexpected election, meant that many participants were not available or willing to take part in focus groups.

- Given a lower demand for focus groups than anticipated, supplementary interviews were conducted. Although these provided an opportunity for stakeholders to participate who would have otherwise been

unable, the differences between the research contexts should be borne in mind when interpreting quotations and comments.

- The recruitment method and qualitative approach of the study meant that there is a degree of self-selection within the participant group, and therefore some bias in responses as to the importance of research in education. As the study was not intended to provide a quantitative assessment of the use of research by these stakeholder groups, but rather to explore the ways in which research is used, however, this is not considered to be a significant limitation.

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4. Using Research

4.1 Research within the Workplace

Policy Makers

Policy makers were generally enthusiastic about the value of research in the workplace. Examples of how research is currently being used include research into skills and its application in terms of meeting labour market needs; looking at evidence and research to improve the process of awarding qualification grades; an experimental project looking at STEM in primary schools; overseeing research requests in schools from across the local authority district; and running a research engagement group to increase practitioner engagement. One council employee discussed working with teachers on evidence-based research to help them be clearer about what works and why, and for whom. Another discussed acting as a knowledge broker to point people towards accessible research: *'it needs to be presented and fed to them in certain ways to make it accessible and practical'*.

Two policy makers (at separate focus groups) highlighted the value of Education Endowment Foundation (EEF) projects and their role in workplace research. Having good relationships with local universities and broader networks with academics is also of value to policy makers.

One of the key challenges policy makers face is ensuring that this uptake extends to the teaching profession. Teachers, according to one policy maker from Manchester, are not interested in research, but in practice: *'the point is [that] practice is informed by research'*. It is hard, as a policy maker, to get teachers to take up research, although the Department for Education is increasingly promoting effective research in teaching. Another more pernicious challenge may lie in the potential for policy makers to cherry pick research: one policy maker said, *'we look for evidence and desk-based research to back up arguments we put forward to help influence policy'*.

Researchers

A majority of the participating academics conduct primary research as part of their regular work, although some academics at universities combine this role with lecturing and others rely mainly on secondary research. Other research responsibilities among focus group attendees were wide ranging, including managing research among masters students, editing academic journals, conducting programme evaluations and establishing research partnerships. Several attendees also mentioned working with stakeholders to communicate research findings: *'there's a translation role, to make that knowledge useful and applicable. I'd be a bridge between the two things. I feel you get treated a bit like dial-a-researcher.'* One researcher, working in London, works to produce research digests focusing on recent studies and practice implications for mathematics teachers; another interview participant conducts critiques of government data on education and reviews of policy.

One researcher, working in a well-known education research institution, indicated that their role is increasingly focused on providing services around learning analytics and the identification of high quality research: '*there's lots out there, not pulled together; it's hard to find well-evidenced practice with particular intervention and evaluation studies*'. Two attendees (at separate focus groups) provide key datasets to the sector; another attendee reported conducting evaluations of education initiatives and programmes as part of her work.

Researchers were also sceptical about the extent to which policy makers were making decisions based on evidence and several mentioned policy makers' tendency to cherry pick as a major concern. It was stated by one academic that '*the notion of evidence-based policy tends to be, in my experience, cherry picking of the evidence that supports the policy that is wanted rather than policy that is driven by a good, solid evidence base*'.

Teachers

Several teachers mentioned the use of research for curriculum and strategic planning, and as a means of ensuring best practice in pedagogy. Another teacher noted using research to provide evidence and support for community planning partnerships, as well as identifying skills gaps and opportunities. Developing infographics to engage college partners, college boards and management was also mentioned as an important use of research. As one teacher mentioned, *'it's quite important you get the right message across'*.

Three participants commented on the use of research in developing whole school tools and practices, including CPD; two of the three participants utilise the EEF toolkit for training materials, and also material from The Research-leads Improving Students' Education (RISE) project (from the Huntington School). Another teacher indicated that their school is currently making a shift to evidence-based practice, and is currently working in partnership with two schools set up by the EEF.

Research did not feature in the daily work of several participating teachers, despite the fact that they would wish it to. While one teacher had '*engineered enough space to allow it to be part of my daily work*', a teacher in Scotland highlighted how '*we, as academic staff, are rarely asked or expected to engage directly with education research*'. Another teacher, who had recently completed masters level research, reported an almost total lack of interest from their school: '*it's sad that's all the interest I've had - it's really important the research I did celebrated our students and teachers*'. The teacher felt that there was a '*lack of coordination*' and the need to have '*more clearer policies, procedures around doing research*' in a college setting.

Significant Regional Differences

It was felt by one Welsh policy maker that Wales is particularly behind in terms of research use in the workplace because of the capacity of its higher education institutions: *'they're not sufficiently focused on issues around education - pedagogy in particular'*.

Key Findings

- The majority of policy makers, researchers and teachers report using research in the workplace; while several teachers reported not using research regularly, they would like to in future.
- Teachers are perceived by policy makers as prioritising practice over research, without realising that the two are inherently linked; some teachers also reported that their schools are disinterested in research and fail to encourage teaching staff in this regard.
- Policy makers may choose to be selective about the research they engage with, depending on the extent to which it supports their policy priorities. The cherry picking of evidence among policy makers was also noted as a concern among some researchers.
- The EEF website was mentioned specifically by policy makers and teachers as being of significant value in terms of disseminating and providing access to research.

4.2 Accessing Research

Policy Makers

The majority of policy makers access research online, either directly through journals or indirectly through digests and newsletters. Five policy makers in different focus groups mentioned using education databases, such as EBSCO, e-journals to which their organisation has access, or databases such as the John Hattie meta-analysis. One Welsh policy maker discussed the use of the Professional Learning Passport, a Welsh Government initiative, which can be used to locate and share research.

Policy makers also discussed the importance of networks, with one policy maker from Belfast making use of their professional contacts to access research directly: '*I will be picking up the phone to colleagues at the university to say we're looking at this… where should I go? What do you have? That's universities across the UK. That personal contact is what I value and they direct me.*' The benefits of utilising other organisations' summaries and analyses were also noted: one participant mentioned using charities such as the Joseph Rowntree Foundation (JRF) as a good way of accessing filtered, high quality research; another policy maker mentioned using the EEF website as a source. Twitter was also noted by two policy makers as a helpful source of basic information.

Intra-organisational resources were cited by four policy makers in different focus groups as being the primary means of accessing research, with three of the four participants indicating that their organisation has an internal research capacity: *'we had a research and analysis function…They could do data analysis or literature reviews or consult relevant researchers or bring in academic researchers to inform our thinking.'*

Researchers

The tendency of most researchers was to access research online. One interviewee also mentioned that they tended to review the same online journals as *'a short cut you develop over time'*.

Primarily online platforms were mentioned across the focus groups and interviews as being the core means of accessing research. The majority mentioned open source and open access databases, Google Scholar and online journals, education policy institutes and government department websites One researcher mentioned that a lot of students and practitioners also use Research Age and academic.edu, and often found authors were very happy to share their research.

Social media, as well as email alerts, were indicated by one researcher as a primary route for accessing research. One academic discussed the website "Evidence for the Frontline" where teachers can post an issue *'and a researcher will synthesise evidence for them and present it to them in a more manageable way.'* The EEF and the Institute for Effective Education (which runs Evidence for the Frontline) were also indicated by one researcher as key research tools, while another had previously used RSS feeds, conferences and journals. The two databases held by the Economic and Social Research Council (ESRC) and the National Foundation for Educational Research (NFER) were mentioned, in particular by one researcher, as having an '*amazing selection of current research*' and '*incredibly practitioner-orientated research*'. Another researcher considered the EEF learning and toolkit as having a '*good digest of researching findings*'.

Teachers

Attendees at four focus groups noted that most teachers do not know where and how to access research, and require additional support: '*if you're looking at what the average teacher is looking at… The average teacher*

has little access to academic research.' One teacher said that although research exists in schools, it is often outdated. Three participants from different focus groups noted that many teachers are unaware of alternative search tools such as Google Scholar: *'I'd talk to someone who's been in education for years and didn't know Google Scholar existed.'*

Sources mentioned by teachers attending the focus groups included social media, such as Twitter, blogs and podcasts; one teacher also noted attending a lot of conferences as a means of discovering new research. Most teachers noted online sources as being the key means of signposting and accessing research, including memberships of online fora, subscribing to newsletters, and by reading research digests and online repositories such as the RISE project. Other specific sites through which research is accessed and discussed include the EEF, ASKAL, Teach Secondary and Teach Meets.

One teacher indicated that practitioners in their college had developed an online portal as a new strategy to spread knowledge about new research: *'It's not good if it's kept by a few people. It's got to be shared out by the organisation, otherwise it doesn't get disseminated.'* The teacher also suggested that the online portal was used to connect all lecturers and a place where they were able to access all of the CPD material and toolkits.

Significant Regional Differences

Welsh participants pointed to greater accessibility of research generally because of their learning model, which encourages practitioners to *'carry out research, inquiry, reflect and be analytical';* further, the Professional Learning Passport used by the Welsh Assembly provides staff in policy contexts the ability to locate and share research. A similar emphasis was noted by one Scottish policy maker, who reported that the use of data to drive improvement is evident in his region at present. Accessibility of relevant research was also reported by a teacher in Scotland as being better than in his previous teaching positions in England, due to the open provision of research on the General Teaching Council website.

Key Findings

- While policy makers feel confident in locating relevant information, the majority of teachers do not know where and how to access research.
- The primary means of accessing research for all participants was online, either through databases or journals, or indirectly through digests and newsletters.
- Networks were also an important source of research and information for policy makers, as well as the support provided from internal research departments, who serve to locate and summarise relevant research on request.
- Utilising summaries and analyses from other organisations such as the JRF is considered by policy makers to be an effective means of obtaining reliable information. Websites reported across all participant groups to provide good access to research in education include those of the EEF, the IEE, ESRC and NFER.
- Social media platforms including Twitter were noted by policy makers, researchers and teachers as a source of information.

4.3 Barriers to Using Research

Policy Makers

Barriers to using research mentioned by policy makers include the disconnect between research and implementation due to the lack of involvement from researchers in policy, and the absence of evidence-

based approaches. One focus group attendee said that the level of involvement from government in education, in contrast with other fields such as medicine, was another barrier: '*[the government is] not telling doctors how to do heart surgery*'. Another focus group attendee said that '*there's no culture in the education system that encourages changes based on evidence-based approach',* while another indicated that research is often '*too broad based*'.

Other barriers include research written in a language that may be inaccessible for some individuals, and other academic research requiring statistical knowledge and skills in understanding of research methodologies, time pressures, and cost. One policy maker said the lack of honesty about the strengths and weaknesses of available research was a barrier, particularly when commissioning external research, as some organisations appear to stretch the evidence base in ways that are not appropriate. A second policy maker suggested despite being able to access lots of research through technology and online search engines, these platforms '*almost…[make]…it worse because you have no assessment of the quality of the research*'.

Several policy makers indicated that time was a major barrier for engaging with research. One policy maker indicated they had time to access research '*but not to read and absorb it*'. Another policy maker mentioned a specific pressure on policy makers in terms of evidence: '*politicians always want something yesterday, so if you want to do something based on evidence… it takes time to work that through*'. Also relevant to policy makers were the high stakes involved in the accountability system, as well as certain ministers pursuing their *'favourite research'*. One participant from Belfast indicated that an issue may be around the willingness to engage with research with potentially uncertain outcomes: *'there's almost a fear - it might go against existing policy and cause a problem. We work for the public and if research says we're doing it wrong, we need to take it into account.'*

Researchers

Among academics, barriers include difficulties in getting access to recent research due to the delays associated with publishing and the peer-review process. Further barriers included lack of available time and the skills someone not qualified as a researcher needs to '*search intelligently… without formal training'* and disseminate research. A couple of researchers raised concerns about accessing research online: '*we tend to just go to the internet and find information and not… reflect on what it is that we don't know or how we know came to be in the first place'*.

Academics also indicated the challenges of engaging teachers with education research. One focus group attendee suggested that there is '*a particular language around education research that's difficult to demystify for people'*. Another participant indicated that '*research is usually not written with teachers in mind*'. Time pressures, experience, and incentives to engage with research were further challenges preventing teachers from accessing educational research. One academic teaching teachers on a masters programme illustrated how their students '*struggle with framing what they want to find out*'.

Another individual noted that there is no source for new and cutting edge educational research, in contrast to other fields such as medicine, where professionals get regular access to medical breakthroughs. Other challenges include the difficulties in applying research to different contexts, the lack of conversations about evidence-based research (this was felt to be particularly the case in England, whereas devolved nations were seen to be far better), and the challenges in finding what you are looking for (getting *'lost'* in research).

Teachers

One of the significant barriers for teachers to access research is a lack of time in which teachers could look at new research: *'the problem with this job is you're having to do five things at once, all the time - so [the research] needs to be really accessible - needs to come to you, rather than you looking for it. I start at 7.30am, get back at 6.30pm and then I'm working till nearly 10pm on lesson planning.'* Another barrier is the prohibitive

subscription fees to access journals, research databases, and the cost of conferences, which many schools could not afford. One attendee suggested that the *'Joe Bloggs teacher'* is often unaware of how to access resources beyond Google Scholar. Conferences scheduled during term time also make it difficult for teachers to engage with research.

There was a sense among some focus group attendees that many teachers have a serious lack of trust in research or are afraid to test new practices; the way in which research is presented can also be a barrier: *'We haven't presented the research as well as we could - it often seems like guys in lab coats are telling teachers how to teach. Quickly in their careers teachers become self-reliant, and independent, and they're suspicious of anyone telling them what to do.'* Several individuals also commented on an absence of research that is applicable for teacher audiences: *'if you can access it and a lot of the time it's very broad, not very applicable'*. One teacher suggested that *'it's a motivational issue in terms of engaging teachers and research… There's so much research out there that it can be so daunting and the anxiety about getting it wrong overcomes the kind of joy that we should have as educators.'*

Significant Regional/City Differences

While participants across the board reported barriers to using research, those in Scotland and Wales in particular noted that initiatives were in place to improve access: in Scotland, teachers are reportedly able to bypass paywalls to access research in support of professional development, and in Wales a new set of national networks are being established to ensure that teachers have access to robust research summaries in support of their practice. In Northern Ireland, Members of the Legislative Assembly (MLAs) have access to short briefing sessions from academics on different topics, to ensure that they are knowledgeable about the latest issues and findings.

Key Findings

- Accessibility of language is the primary barrier to understanding and using research, according to participants from all three stakeholder groups.
- A lack of time in which to discover and engage with research is a critical barrier for policy makers, researchers and teachers; the latter group are often required to engage with research in their own time due to workload pressures.
- The lack of control over research outcomes can dissuade policy makers from engaging with research, as it may contradict current or planned policy direction.
- Lack of funds for purchasing access to journals, or attending conferences, is a significant barrier for teachers wishing to engage with research.
- Teachers reportedly have a serious lack of trust in research and a fear of testing new practices; these issues can prevent them from engaging with and utilising research effectively.

5. Research Skills and Accessibility

5.1 Characteristics of Good Quality Research

Policy Makers

According to policy makers, good quality research includes research that is led from the bottom up rather than the top down, is responsive to broader trends in society, has clear and succinct messages, and includes terminology that is accessible: *'Is it comprehensible? Is it loaded with jargon? Is it so self referential that you've got to read 20 other papers before you can understand where they're coming from?'* One policy maker argued that good quality research ought to consider a broad range of different angles, and is clear on why the research was conducted and who the audiences are.

For most policy makers, the usefulness and relevance of research is a key indicator of its quality; according to one participant, good research focuses on addressing the current public policy issues and creating positive impact. Another policy maker agreed that good quality research needs to be *'clear, practical, deployable.'* Clarity of structure and reporting was also an indicator of good research for one policy maker, who felt that a lot of research they encounter in their work is overly theoretical.

In terms of methodology, the value of qualitative research was noted by one policy maker, who felt that while it was often a more lengthy and complex mode of research, it often yields insights that are not obtainable in any other way. Neutrality of argument and a robust evidence base are also key, according to one participant.

Researchers

In contrast with policy makers, researchers were far more likely to focus on the academic credentials of the research and the researchers, such as being published or cited in reputable peer reviewed journals and association with an esteemed university. Many focus group attendees commented that high quality research is not so much about single studies, however, as about the weight of the evidence; '*volume helps you judge and compare and find emerging themes*.' Originality of thought was noted by one participant as being important: *'really good stuff is stuff that pushes your thinking forward…it should be something that takes you off in a new direction and that does genuinely offer new insights.'*

Researchers were also more likely to mention the importance of a rigorous research methodology: '*the right research design for the right problem and right issue*'. Important factors mentioned by the attendees include sample size, mixed methods approaches including quantitative and qualitative data, and criticality: '*I had a piece a few weeks ago that looked like a sales pitch - no criticality - a piece of opinion*.' Randomised controlled trials (RCTs) were favoured by some academics, although one individual noted that they are frequently used inappropriately. As one researcher noted, research methods should be appropriate and defensible: *'So if it's a quantitative paper, I want to see the regression analysis. In… qualitative work, the claim to knowledge needs to have used tried and trusted methods; or the authors need to be attentive to things like their own bias, and their own immediate assumptions about the research areas.'*

Publications and studies that are tailored for non-research audiences were also viewed favourably by focus group attendees, with one participant citing a colleague who appends a *'plain English'* version of their articles to the university website for teachers to access. Another participant in the same group, however, pointed out that the definition of '*good*' research is objective: '*So there's different kinds of good research depending on perspective and depending on what you're looking for so it's quite difficult, I think, to come down with a definitive*

one.'

Teachers

From a research user's perspective, one teacher commented that the more *'multi-layered'* research is, the more confidence they have in it; this means studies not just relying on statistical data, but also surveys and more qualitative input. Another teacher, who also felt that methodology is critical to the quality of research, indicated that the appropriateness of the methodology used is most important; in their view, there is an unhelpful emphasis on RCTs as the 'gold standard'.

Two teachers mentioned the importance of authors to understand the value of a piece of research: '*I'd check out that person first - through colleagues. Is this person worth looking at and reading?'* One teacher also mentioned the value of researchers with first-hand experience of the education context: '*I think the more you know, the better the actual research - because you're actually basing it on experiences.*' Several participants, from focus groups and interviews, emphasised relevance as being a key characteristic of good research: *'it should be fulfilling a need that we have'*. Clarity and brevity were also noted as being valuable, due to the time constraints faced by most teachers.

Significant Regional Differences

No regional differences were observed.

Key Findings

Good research is considered to have the following characteristics:

- Led from the bottom up, rather than the top down.
- Responsive to broader trends in society.
- Clear, responsive to practitioner' and users' needs, and deployable.
- Accessible to multiple audiences, not just research professionals.
- Has a significant weight of evidence.
- Has a research design and methodology appropriate for its aims.
- Demonstrates clear originality of thought.
- Authored by reputable institutions and researchers, and is published in reputable journals.

5.2 Skills for Accessing and Engaging with Research

Policy Makers

According to policy makers, the ability to approach research critically and having a basic knowledge of statistics were the top skills required to access and use research. Being able to understand and interrogate research, particularly when it is intended to support policy implementation, is also an important skill: '*[it] helps in terms in interpreting and not misusing the results from research'*. For policy makers producing their own reports or recommendations from research, it is also vital that they possess the ability to assess the relevance of different pieces of evidence: *'being able to separate what's strong, good, well-founded research and what's ideological'*. Specific skills required for accessing research, according to policy makers, also includes the

ability to sift through and manage the volume of information available on the web.

Two participants commented on the paucity of research training courses and skills development opportunities for non-professional researchers, with one noting that they are not aware of any course available to help them, as a policy maker, even to understand research. Another policy maker noted that while teaching is a graduate profession, and therefore teachers will at some point have developed research skills, there are limited research-specific CPD opportunities: *'It is then about the expectation that's set by schools themselves around how they support the profession in a more systematic way. Certainly if you're a surgeon or if you're a lawyer then there's a professional code there that actually supports you to keep these skills live.'*

Researchers

As with policy makers, the overwhelming response from researchers was that the most important skills needed in order to access and engage with research were critical reading and thinking; these skills, researchers believe, are also essential to distinguish between high and low quality research. Assessing the robustness of research was also noted by several researchers, particularly related to evidence-based policy making: *'there are some wonderful messages coming out but when you dig down into the evidence base it may not be as robust as the authors have signalled or been signalled in other ways. As an education profession, we must have that criticality to avoid being pulled into a blind alley and building policy around poor research.'* Understanding research methods and presentation was also noted by researchers as being key to engaging with research, particularly in order to understand academic written styles, which may be less accessible to non-research professionals. A rudimentary understanding of statistics was also considered to be important by two researchers.

Digital literacy is a critical skill in accessing research, according to researchers, particularly in terms of being able to construct effective searches online and in digital library catalogues; alongside this, the ability to sift through search results to find relevant material is essential: *'sifting through it and having the skills to actually make the right judgement about what they're going to use to start with and what's useful and what isn't useful.'* Related to this point, two researchers also indicated the importance of being able to sift through abstracts and research articles to locate items of interest.

Teachers

As with researchers and policy makers, most teachers believed that having a critical eye and the skills to challenge evidence are key to accessing and engaging with research: *'Be bold and ask "why?" What difference does it make and how do we know? Where is the credibility in what's coming through the door?'* This also extends, according to one teacher, to being able to ascertain and understand a reporting bias in research, to determine its overall robustness.

The ability to express oneself succinctly was also noted as being an important attribute in terms of engaging with, and using, research; as one teacher noted, however, teaching is a degree profession and practitioners will thus have engaged with, and likely produced, research before.

Significant Regional Differences

No significant regional differences were observed.

Key Findings

- The ability to assess and utilise research critically was the most important skill cited by policy makers, researchers and teachers.
- A rudimentary understanding of statistics and research methods was considered essential by some policy makers and researchers, who believed it necessary in order to assess the robustness of research.
- Digital literacy, including constructing effective search strings is important for those researching online; being able to sift through search results and abstracts to find wholly relevant information is a corollary skill.
- Policy makers noted a paucity of research training courses and skills development opportunities for non-professional researchers; there were also limited opportunities for CPD

5.3 Current Skills in Teaching and Policy

Policy Makers

The majority of policy makers feel that they have the skills needed to access and use research effectively, with some referencing their background in academic study, and several respondents holding masters and doctoral qualifications. Two respondents also mentioned that they had developed their research skills through personal and professional development programmes. One participant, who felt their research skills were not sufficient, mentioned that their initial on-the-job training did not necessarily include an understanding of research, evidence and evaluation. Another policy maker referenced the '*hierarchical system*' within the civil service, and a lack of willingness to engage with research that '*almost discouraged [civil servants] from going outside to look for solutions*'; another participant admitted to *'not always knowing where to look*'.

There was disagreement as to the extent to which policy makers should be expected to have skills in research, however: while one policy maker indicated that within their department they expect all candidates to have *'a good foundation of research skills*', another claimed that *'you should not expect [policy makers] to be experts… You need to be able to be reliant on researchers.'*

Teachers

The majority of teachers felt that they lacked some of the necessary skill-sets to access and engage with research effectively. Professional pressures such as pupil attainment, the anxieties of preparing pupils for assessments and having limited time or inclination were highlighted as key obstacles to developing and utilising research skills: '*the only thing that's important is attainment… The sort of research you're talking about is long term… You have to be committed.'*

Commenting on existing research skills within teaching, one teacher noted that awareness of research methods is often lacking, while another indicated that '*there's a culture of non-criticality…. We need a culture of criticality among staff to be seen as a more positive thing.*' One teacher suggested that it would be helpful if teachers were wholly research literate: '*not just the nitty gritty of the research methodology, but everything from grants, to literature searching, to dissemination'*. And, there were two respondents who considered the role of researching to be beyond the scope of a teacher and that teachers should be the recipients.

Significant Regional Differences

The Scottish Association of Language Teachers is an organisation through which individuals read and use research. One individual referenced the historical subject centres for teachers: *'the subject specialists really valued them and we don't have them anymore in Scotland'*.

Key Findings

- Most policy makers believe that they have the skills needed to access and use research, although they do not necessarily feel that this is something that they need to possess when they have researchers available to support them.
- Likewise, teachers do not feel that they have all the skills needed for effective use of research; there are several significant barriers to them developing these skills on the job, such as their workloads.
- Fostering more critical thinking skills among teachers would be of value.

5.4 Making Research Accessible to Users

Policy Makers

The use of clear language, access to key publications and publication format were felt to be critical ways in which research can be made more accessible. One attendee at a focus group said that '*any research report should have a one-page abstract and a three-page action summary, and then the nine pages*'. A small number of policy makers involved in research design discussed converting research into *'bite sized, interesting stuff'*, developing executive summaries, providing a '*high-level glossary*' and web links, and making use of multi-media options. One policy maker commented that research design was considered very important in their organisation: '*It's very easy for us to write a report in a classic research way and think job done. Communications are always challenging us…to make things clearer in our executive summary.*'

Another issue, strongly felt by policy makers, was the need to make research open access and improving the way in which research is disseminated to users. One attendee at a focus group said, '*the irony is… key messages from research are probably far more available than they've ever been… but it's how you encourage people to access what's there*'. It was suggested that policy makers have a responsibility to share their research with practitioners, ensuring it influenced practice and encouraged a dialogue with practitioners; '*I think first and foremost is that as a teacher/lecturer they have to see what I'm doing reflects what I'm asking them to do. I'm bringing valid and focused research into what I'm teaching them in terms of relevance.*'

Existing and previous models, such as the Teaching and Learning Research Programme (TLRP) and research schools, were highlighted as key in promoting access to research and its practical use. One policy maker suggested establishing '*a portal where public bodies have a role to take and present evidence in an accessible way*'. Another recommended getting *'interesting speakers… at professional development events, conferences… get research champions to get the message out there*'. Three policy makers also suggested giving teachers skills to use online research databases and promoting online portals where research could be collated from a wide range of sources and made easily accessible for practitioners.

Researchers

Some researchers felt that the trend for summarising research into executive summaries has meant, in practice, not a distilling of messages and findings, but rather a condensation of the research into shorter,

more complex prose. As one researcher noted: '*we shouldn't be snobbish about the language we use; even as an experienced researcher, I want the Ladybird version as I have such a busy life*'. One academic recognised the need for '*language brevity and clarity*', while another said '*everything I do has two formats: an academic journal publication and what I call* "in a format that can be read on a busy train'". Primarily, amongst academics, there was a consensus as to the need for '*readability, navigability… pressing home the implication of the research without oversimplifying*'.

The format of research publications was also considered important, with researchers pointing particularly to the benefits of social media and platforms such as Twitter to publicise research and also to gauge the interest shown from different stakeholder groups. The website www.meshguides.com was also mentioned by two academics as a forum for distilling research findings and communicating them to practitioners. One professor noted that '*it still comes down to audience, who is it that you are trying to influence, or change, or what is it you're trying to make different and then working back from that and thinking what is the best way to achieve that aim*'. YouTube clips, as well as podcasts, were also noted by several academics as being a method of sharing and explaining research that makes it immediately accessible to diverse and younger audiences. One researcher cautioned, however, against focusing unnecessarily on accessibility of research, which they felt was greater now, as a result of social media and the internet, than ever before; the priority, they felt, was trying to raise an interest in research amongst practitioners and policy makers, and ensuring the applicability of findings.

Researchers noted a range of ways in which they design their work to be accessible to policy makers and practitioners, including involving participants (practitioners) in research design and dissemination, and involving teachers as co-researchers. Some academics also mentioned some disparities within research design; one academic suggested there was a lack of incentives for smaller pieces of research and another said that often only '*something shiny will catch the policy maker's eye*'. One member of a university also indicated that often research is designed for senior leaders and management rather than those working at ground level.

Teachers

Most teachers believed that making research open access and easy to locate was extremely important; one teacher noted that a '*one stop shop*' where relevant research could be located would be useful. Teachers also felt that the format of research was important; making research '*relatively easy to read*', '*accessible to non experts*' and in '*a way that is meant to be very applied*'. One teacher also mentioned improving the value placed on research amongst teachers.

Teachers also highlighted the relevance of social media, and Twitter was noted to be '*really good for getting snapshots of research and getting an idea of what teachers might be interested in*'. Two teachers considered the visual representation of research to be effective. Webinars, Youtube, conferences and signing up to monthly bulletins were also suggested as crucial for '*getting people in the sector involved*'. Two teachers, however, indicated that time constraints often restrict teachers from attending conferences, even virtually, and having the opportunity to hear from educational researchers.

Many teachers felt there were still shortfalls in the use of online platforms and databases; '*isn't it bizarre… I can go on to the NHS and I can find loads of home remedies, but I can't go on to a website and have a video to teach my son how to do phonics*'.

Significant Regional Differences

In Wales, the Education Workforce Council has made a portal available to all registered teachers, but only those with significant levels of time and motivation are likely to access it. Knowledge transformation may require money and time. In Belfast, universities present digested versions of their research when the

Assembly is in session: *'MLAs are not going to read research papers. Researchers might, but you need to persuade the MLA to take note.'*

Key Findings

- Good presentation design was the key means of making research accessible among policy makers, with a focus on easy to read executive summaries with colourful graphics. Making research easily accessible online was also thought to be effective, as was its communication with target groups.
- Researchers, on the other hand, were also concerned with the practical design process and whole-process engagement in terms of accessibility, ensuring that teachers are involved in both research design and dissemination. They also discussed communication of findings on social media and websites.
- Teachers would benefit from a single portal from which to access research.

6. Current Issues for Research in Education

6.1 Current Issues in Education

Policy Makers

Policy makers were broadly concerned with four main issues in education: the quality and performance of schools and teachers; enhancing the profile of the teaching workforce; the wellbeing (current and long-term) of pupils; and inequality of educational outcomes.

Two participants discussed quality of schools, with one policy maker noting a lack of consistency in terms of performance between schools with similar intakes and situations. Another participant, from a focus group in Wales, mentioned a concern about the quality of teaching and leadership; linked to this issue, according to another policy maker, are the levels of current and forecast teacher shortages in the sector, and the likely impact of this situation. Teacher quality, retention and recognition may also be improved, according to one participant, by raising the profile of the profession: *'best practice [from other countries] would suggest … that if you have that approach to teaching, with practice… being enhanced, chances of excellent teachers and schools are also enhanced'*.

Policy makers were also concerned with the wellbeing of pupils, and the inequality in education outcomes. One policy maker felt that the education system is increasingly being expected to provide '*a social services function'* to compensate for recent cuts in social care funding; another participant felt that the long-term economic impact of higher tuition fees on young people from low income households is an issue requiring urgent consideration. The impact of social media on the mental health of young children was also raised as an issue by one participant. Closing the attainment gap was raised as a specific issue by two policy makers, one of whom raised it as a specific issue in the Scottish education system; another participant felt that while inequality of education outcomes is understood to be a pressing issue, the solutions are not yet properly understood.

Researchers

Researchers raised five main issues in the current education sector: teacher recruitment and quality; pupil support and wellbeing mechanisms; employability and education; a lack of evidence in policy making; and the attainment gap.

Four researchers noted concerns about the recruitment, retention and recognition of teachers; two further researchers specifically perceived issues with the current range of routes into the teaching profession (specifically, the Teach First programme) and the resulting impact on the quality of teachers. In the wider school context, researchers also raised concerns about the wellbeing of students; as with policy makers, the specific issue of the impact of digital media upon child wellbeing was raised. Two researchers also cited concerns about the impact of the loss of wider services upon schools, and the extent to which schools are becoming disengaged from families and communities.

The links between employment and education, particularly the ways in which employers can be engaged in school contexts, was raised by several researchers as a key issue. Identifying methods for ensuring participation in post-compulsory education, particularly in non higher education disciplines, was also considered important by one researcher. The issues around employability were seen by another researcher as not just being a current issue, but also one that will feature prominently in the future, particularly as technology continues to develop rapidly and has a significant impact upon the workplace.

The perception that policy making is not sufficiently supported by robust research was raised by three researchers as being a significant issue: *'for years, for decades, there's [been] whim-based decision-making rather than evidence-based decision-making at all levels and that's fact'*. The prospect of '*initiative exhaustion'* by a continuous cycle of policy interventions was also noted by one researcher. In Wales, one focus group attendee commented on the current government emphasis on evidence-based policy and the resulting issue created by the existing state of educational research in the nation, which they considered to be weak: *'within our academic institutions and universities, it's probably weaker than it's ever been at the moment - it's a very serious issue.'* Two interviewees also expressed concern about the use of policy-based evidence in government rather than evidence-based research, suggesting that research is often used to prop up, rather than guide policy: '*[research] is used, generally speaking, to support political initiative rather than to drive political initiative.'*

As with policy makers, researchers perceived a serious issue in the difference in attainment between young people from different socio-economic backgrounds; this was noted by respondents from all four devolved nations as being an omnipresent issue underpinning a policy imperative.

Teachers

Teachers were concerned with issues similar to those raised by policy makers and researchers, including the need for robust evidence behind decision making; pupil wellbeing; and the pressures facing the teaching workforce.

According to one participant, the most pressing issue in primary education is the fact that research is not utilised sufficiently in policy and practice: '*we don't use the research we know is good. We don't use the research that says young children should not be in a formal setting of a classroom'*. Another teacher felt that there was a strong need to put emphasis on the use of evidence, as many decisions made by government appear to be '*ideological decisions, not necessarily supported by research evidence'*.

As with other participant groups, teachers felt that pupil wellbeing is a significant issue in education; specifically, two teachers noted the influence of digital media and social media, and the resulting impact on student behaviour. Another teacher mentioned the difficulties of connecting with disaffected parents, and engaging them in education, as well as the long term impact of failing to engage parents sufficiently. Related to this point, teachers also noted the complexities of working in areas of social disadvantage, and attempting to mitigate the impact of disadvantage upon young people.

Teachers also mentioned the workload they face as being a serious issue, alongside what one teacher characterised as *'performativity': 'so much of education these days is a lot less focused on doing a good job and a lot more focused on providing the evidence to make it look like you're doing a good job'*. Another teacher noted the '*unrealistic'* expectations on teachers, which fail to take into consideration the challenges of working in different environments, with children and families with varying levels of need; according to another participant, the work-life imbalance for teachers is driving many out of the profession.

Significant Regional Differences

Welsh respondents were particularly aware of Welsh strategy and issues, where there is a new curriculum and a new teacher education design process; likewise, participants from Scotland (a need for more evidence-based policies) and Northern Ireland (with a duplication of education between Catholic and nominally Protestant schools) were very much aware of their own context. This was notably not the case for participants from England.

Key Findings

- Quality and performance of schools and teachers was one highlighted issue, with schools of similar structure and intakes often experiencing divergent outcomes. Linked to this, inequality in educational outcomes is key.
- Teacher recruitment and retention is a critical issue, which has also been highlighted in other sections. There is a general feeling among educationalists that good quality applicants are lacking and there is an impending recruitment crisis.
- Pupil wellbeing is another key issue, with wellbeing influenced negatively by digital and social media, and also by disadvantage. Wellbeing has an impact on behaviour.
- A lack of evidence in education policy and practice was an important issue for researchers and teachers, together with initiative exhaustion.
- Workload was highlighted as a particular issue by teachers, along with unrealistic expectations and the pressure to tick boxes rather than do a good job.

6.2 Use of Research within the Education Sector

Policy Makers

One policy maker said that, in their experience, research is broadly ignored by school leaders: '*I think the education interventions that schools, teachers, curriculum leaders [and] school leaders look to are generally not evidence based*'. Instead, interventions are driven by a range of interest groups such as local authorities, multi-academy leadership, education experts and local universities. One Scottish policy maker said that the key challenge was ensuring that research gets out to teachers and schools, and ensuring that they have easy access to new research.

It was also suggested that research uptake is limited among policy makers: '*if policy makers were serious about research and serious about making their decisions on evidence, then that would percolate down into schools and classrooms, and teachers would then be more focused on what the research evidence is saying about how they go about their work*'. Several others, however, outlined their own use of research and evidence, suggesting that it is also used more widely among policy makers. One Welsh policy maker thought that significant improvements have been made in this area, and that research is referenced much more in key policy documents.

It was highlighted by one policy maker that where research is done in post-compulsory education, it tends to be in sixth forms, rather than in further education (this was echoed in a number of other comments made by policy makers in response to other questions).

Researchers

There was a high degree of scepticism around the wider use of education research in policy making, with participants suggesting that it was used selectively: '*May's call for grammar schools is a classic example of a complete rejection of all the research evidence*'. Several expanded on concerns around biased selection of evidence when making policy decisions, saying that evidence is cherrypicked to support a particular agenda. '*I think we are still dealing with a backlash from the rejection of experts and evidence that's happened over the last few years,*' said one researcher. It was further suggested that the Department for Education is trying to position itself as an evidence-based policy organisation, but that the evidence suggests that its external image is not being reflected in its decisions: for example, '*with the new funding formula, I can't see how they*

have consulted with any school or any teacher or young person in order to inform that policy. It seems that it's come from a hands-detached, civil-servant-in-Whitehall approach'.

One researcher was more positive, saying that the Department for Education is currently trying to develop more of an evidence base. In terms of policy makers' use of education research, one researcher gave the example of a local authority head of service, who did a piece of research around leadership in education and used it to develop a model for implementing change; this model was then used across the local authority to manage the change process in education. Another thought that research directly influences policy around attainment levels.

At a school level, two researchers said that they felt that research is increasingly being used: *'[you] see teachers having reading groups; [you] see teachers using it and going with it… We wouldn't have seen them doing that - using research or engaging in systematic evaluation - even 20 years ago.'* Schools tend to do research into their own data to inform how they allocate funding. The EEF's toolkit has had an influence on schools' use of evidence in terms of how they spend pupil premium funding, according to two researchers. Others felt that research uptake in schools is still limited, however, with a lack of critical thinking and a tendency to *'jump on a bandwagon'*.

Research funding can be a problem, as funders have priorities: *'that shapes what people do because they want to be funded'*. On the other hand, according to one researcher, there are some spaces for research that is initiated by researchers who determine what the problems are.

Teachers

One teacher felt that it was more important for research to inform policy '*first and foremost - it does to a limited degree, or too broadly - a little research will put in a whole policy which will have an unforeseen effect'*. Another said that the use of research in policy is often heavily politicised.

Teachers were generally in consensus that research is also not being used enough in practice, and some felt that where it is being used, it is not yet being used effectively. One countered the point made by researchers about the use of evidence to support pupil premium spending: in this teacher's experience, the funding is used to get in more numeracy and literacy, whereas *'in effect, the best way is to provide children with different experiences to incorporate in their education'*. According to another teacher, it is hard to access research: *'we are very much left to our own devices or to go and find the research ourselves. Some amazingly crazy stuff gets done, but because there isn't that mechanism to feed it back in, how do people know it's being done and that it's effective? Too often it comes down to [the] effectiveness of individual practitioners and [it's] not about raising national standards.'*

One teacher felt that use of research is cultural, rather than generational, and is supported by technology: *'there [is] a group of teachers who use it a lot, who are often on Twitter, who are very engaged in the research that's coming out now'*. Social media allows teachers to interact and to share ideas.

Significant Regional Differences

It was felt that research in education has often not worked effectively in Wales, but that this is changing: *'I think that's a positive thing and I hope that will generate some of the evidence that will allow us to… try to influence policy decisions in a more robust manner as we move forward'*. One policy maker still feels, however, that there is an issue in Wales with producing educational research that is relevant to policy and practice.

Key Findings

- Policy makers' use of evidence was strongly criticised by researchers and teachers, with many suggesting that research is cherrypicked in order to support political agendas.
- Interventions in schools are often not based on evidence, and are instead driven by a broad range of interest groups; likewise, where research is being used, it is often not being used effectively. Research use, however, is more prevalent in schools than it has been previously, particularly in terms of how they allocate funding. A lack of critical thinking in schools' use of research was highlighted as a limitation.
- Teachers' use of research can be supported by online social networks, which provide a forum through which teachers can interact and share ideas.
- Funding has a tendency to shape research according to the funders' priorities. This may seem an obvious point, but it is important in that the research landscape is already shaped before new research projects are initiated.

6.3 Technology and Education Research

Policy Makers

Removing barriers to accessing research was a key benefit of technology, according to one policy maker; this applied both to ensuring that individuals have greater and more immediate access to research, and also in terms of making research available internationally. Technology such as digital conferencing, such as Zoom, and social media platforms, such as Twitter, were also viewed by policy makers as being beneficial in terms of connecting people who otherwise would not necessarily have the opportunity to interact: *'[it's] very valuable in terms of providing critical reflection - even when geography is a problem'*.

Technology also offers valuable opportunities in the sphere of learning and development, according to policymakers; one participant reported that the local authority for whom they work uses an online professional development platform, which includes networks, blogging and fora. Another policy maker from Scotland reported an increasing reliance on technology as a means of disseminating research to practitioners. This secure platform, linked to each school in Scotland, provides information about resources, key messages and important publications.

In terms of research methodology, policy makers felt that technology had contributed positively for the most part; this particularly related to the ability to conduct large-scale surveys virtually and simultaneously via the internet, and also the ability to collate and analyse large scale datasets. One policy maker, however, indicated that alongside greater opportunities to publicise research through media such as Twitter, there can be a corresponding loss of control: *'We were only planning to survey a small number of school teachers who we're working with - someone got the link and put it on Twitter. We expected about 250 [responses], but it went up to 4,000 and was taken out of context.'*

Researchers

Accessibility

Researchers feel that technology (and specifically the internet) has '*democratised academia*' by giving the wider public access to research; the flip side of this accessibility, however, is the resulting lack of control over research usage and output. It has also made available studies conducted internationally, according to one researcher: *'the international dimension is really, really important, because a lot of the research that's relevant*

is not done in the UK because we can't afford to do it yet'. The internet has also revolutionised the way education research can be conducted; one participant noted that he had been able to complete a number of international school evaluations remotely by observing lessons and conducting interviews over Skype. The ability to attend conferences and webinars virtually was also noted as a benefit, as was the ability to share documents. One researcher highlighted the benefits of webinars for '*networking… connecting, collaborating*', while another predicated that the efficiency and cost-effectiveness of webinars is likely to lead to their use continuing to increase in the coming years.

Methodology

In terms of the resources available, a number of researchers identified statistical and qualitative data analysis software as having a significant impact on what it is possible to do; according to one researcher, this kind of technology has '*transformed*' the way that they work because of the potential to analyse much larger datasets, working with colleagues on the same dataset simultaneously, and writing up findings collaboratively using tools such as Google Docs. Others researchers highlighted the benefits of online surveys to collect much larger datasets, as well as having online access to extensive government dataset to inform research.

Networks and Communities

Social media has a key role to play in facilitating research dissemination, according to researchers. Platforms such as Twitter and personal blogs, for example, allow current research to be shared with other researchers and the practitioner communities with whom they work. As one researcher commented, these platforms are '*really, really key*' to increasing the dialogue between researchers and practitioners. Another researcher pointed towards platforms such as Skype as a valuable tool to share documents and other resources with schools.

Social media platforms such as YouTube also act as a key resource for research, practitioners and students; one researcher observed that there is '*a lot of amazing stuff on there that can help inform you and keep you abreast of what is going on in your sector*' and that students were equally likely to use YouTube as a key tool for research when completing their homework. Another researcher noted that students at university also make use of a Twitter bot that identifies your key works and brings up relevant research as another way in which social media facilitates communities of learners.

Impact on Learning

There were a number of different ways in which technology has had an impact on learning for researchers and the practitioners with whom they work. For example, massive open online courses (MOOCs) and webinars have helped to overcome the traditional barriers of '*cost, capacity, reception*' in providing effective professional development opportunities for teachers, according to one researcher that works in this field.

Devices such as iPads in schools and electronic '*voting buttons*' in universities were identified as examples of specific tools that create new opportunities for learning. As one researcher noted, however, when iPads were first introduced, teachers struggled to understand how to make use of them in a learning context, but that they had had '*a profound impact on learning because the kids were using them - the kids had worked out how to do it and they were being quite creative*'.

One teacher noted, however, that there is often pressure for teachers to teach new technologies to pupils without having sufficient training or preparation in the method themselves: *'It's bizarre because teachers have no idea what they're doing, so they watch YouTube before they teach children how to programme. They're supposed to pick it up in an hour's session after school when they're knackered… Teachers are on the back foot on technology.'*

Benefits of Technology

A number of researchers felt that the potential impact of technology for educational research had not yet been fully harnessed. One researcher explained that the generational profile of current researchers may be a contributing factor. While '*many of them have learnt effective digital skills… they are not digital natives*'. As such, the researcher felt that future generations of researchers would be likely to make much more sophisticated use of the technological resources available.

Another point raised by a different researcher was the increased pressure on academics as a result of online profiles and monitoring of activity: '*We have got ResearchGate profiles, twitter profiles, we've got ways of tracking how our research is read, used, integrated, we've got citation indices, metrics… but that whole sense of everything we do can be tracked [is a] bit 1984 for me, there is a sense of being academically vulnerable.*'

Teachers

Accessibility

Teachers emphasised how technology has opened up access to a diverse range of ideas and resources; examples given were broadly similar to those identified by researchers, such as the use of webinars for professional development and the development of research communities on social media platforms. One teacher felt that technology was having a positive impact on learning: '*social media is bringing down the barriers and reducing exclusivity*'. Another teacher queried the quality of the resources produced by some researchers for social media platforms, although still felt that these research-led online communities were important for '*getting certain research aired*'.

Sharing Good Practice

Teachers discussed using technology to share good practice. As well as attending external webinars, one Vice Principal described setting up online classrooms to share good practice with teachers. Another teacher talked about using software to film lessons and using those recordings as the basis for weekly CPD sessions.

Significant Regional Differences

No significant regional differences were observed.

Key Findings

- There was a consensus amongst policy makers, researchers and teachers that new technologies such as social media had helped to make research more accessible to practitioners working across the education sector. There was also evidence that researchers were becoming more innovative in the ways that they presented their research online.
- New technologies have also supported policy makers and researchers in collecting and analysing datasets for education research, as well as creating new avenues to disseminate that research.
- Social media platforms such as Twitter have created opportunities for networking and dialogue with other researchers and practitioners across the globe. All three groups of participants (policy makers, researchers and teachers) also identified the benefits of webinars and/or virtual conferences to share learning and best practice.
- A number of researchers felt that the use of technology would continue to expand with younger academics from the generation of '*digital natives*' developing innovative ways to harness the potential of

these technologies. One researcher expressed concerns, however, that the growing reliance of technologies had also created adverse effects, such as the constant monitoring of academic performance through online profiles and metrics.

- Teachers appeared to be less engaged in using technology for research purposes in comparison to policy makers and researchers. Uses of technology among teachers centred on accessing resources and information, as well as the sharing of good practice through digital tools.

7. Future Research Priorities and Recommendations

7.1 Future Research Priorities

Within this section, responses from each stakeholder group are presented under common themes including: structure and systems, teaching and learning, schools, outcomes, early years, vocational education and training, and social justice.

There was broad consensus amongst policy makers, researchers and teachers around future research priorities in terms of the impact of social disadvantage on educational outcomes, the value of technology in education, as well as more research that focuses on further education and non-traditional learning models. All three stakeholders groups also specified the following areas where research is likely to be required in the future: assessment of structural changes in the education system; the impact of government agendas and policies; research on curriculum design, particularly the impact of exam-based or performance-led models; and research on work-based learning.

Future research priorities identified by the three stakeholder groups also varied; for example only policy makers and researchers identify early years education and the impact on social mobility as a key research priority, as well as research to reduce teacher retention and incentivise recruitment of high quality professionals. Researchers and teachers were among the stakeholders who identified engaging parents, young people and communities in education as another research priority for the future.

It is also notable that further education tended to feature more prominently among interviewees in comparison to schools and early years for future research priorities. One possible factor may be a discrepancy in the volume of research currently available across the different sectors, with five interviewees alluding to further education being under-researched in comparison to schools, or a lack of high quality research related to vocational education: '*the FE world - it has been under-researched and under-resourced compared to schools*'. One interviewee also felt that issues within the schools sector are more likely to be researched in comparison to further education; '*I can't think of anything that won't be researched in schools*'.

Policy Makers

Structure and Systems

- How the needs of the 21st century can be better integrated into the school system, while retaining a classic academic base.[3]
- A longitudinal study (20 years) on the current structural approach of academies/MATs/federations and its impact on the community/social cohesion (as a result of schools being brought together).
- Research on types of schools, such as grammar schools, and their impact.
- How to have a system that is 'fit for purpose'.
- Curriculum ownership: according to one attendee of the London focus group, *'the biggest concern in the last curriculum review, under Gove, put specific things in the history curriculum that he believed in - maybe that's a contrast against the commercial side'*.
- Curriculum design, taking into account the 'whole child' and factoring in mental health and wellbeing.
- Sustainable education models, potentially drawing on those which exist elsewhere, for the next 50 years.

[3] Two individuals.

- Why people are not being attracted into teaching as a profession; and how 'high quality' individuals could be attracted into it.[4]
- The impact of policy changes, both intended and unintended.

Teaching and Learning

- The development of an evidence base 'across the board' which can support better practice.
- Teaching and learning in a general sense - what it is to be a teacher; how children learn[5]; and what the relationship is between teaching and learning.
- Whether a focus on explicit knowledge is an effective approach, and how it affects long-term knowledge and development of analytical skills.
- Testable trials at a secondary level. According to one participant, most trials are focused at a primary level, *'and that's because we don't get as many people coming to us with ideas or testable things at secondary, which is interesting because it gets into the subject specific bit'*.

Schools

- School improvement, both inside and between schools.
- Technology in schools.
- School leadership, which is an area in which one participant has noticed a lack of good quality proposals.

Outcomes

- Assessment.[6] One participant from Exeter said that research into assessment should not just be that it needs to be done: *'it needs to inform policy and [be] given to schools in a way they can understand and act on without fear'*. Another commented that capturing attainment should not just be done at the individual level, but also at an institutional level, and research should be done which captures this.
- How to measure wider skills and states, such as personal skills and wellbeing, which are not currently captured in schools: *'that's an area that needs more research and action research - being able to come up with instruments to measure and demonstrate progress for pupils'*. Another participant said: *'there is a rich vein of potential there, I think, for researching how do we build up ways of more genuinely reflecting the full range of outcomes that we seek to develop through the curriculum'*.
- How education prepares people for the world of work (with a view to challenging the widely held assumption that more qualifications necessarily lead to better rewards in the labour market).

Early Years

- Early years education and its impact on both poverty and later education; and how 'deficiencies or developmental delays' can be addressed through early years education so that there is more of a level playing field later on.[7] According to one participant, *'if we're going to improve social mobility, which is a big government focus or just improve the achievement of disadvantaged young people in education - social mobility being a more challenging issue - then we do need to focus very sharply on those very first years'*.

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[4] Two individuals.
[5] Two individuals.
[6] Three individuals.
[7] Three individuals.

Vocational Education and Training

- Vocational learning.
- More practice-based research in further education.
- How school-based practice can be translated into the further education sector.

Social Justice

- How to break the cycle of the impact of disadvantage on educational outcomes.
- The extent to which schools and teachers can promote social justice.

Researchers

Structure and Systems

- Teacher quality and teacher retention[8], perhaps facilitated through systematic exit interviews when teachers leave the profession. Research into retention, in particular, has *'a huge part to play in terms of changing the face of teaching because we have such a crisis'*.
- How to train teachers in a way which is not '*woefully inadequate*', where aspirations and expectations are low; as with policy makers, comments were made about good people no longer applying for PGCEs.
- Engaging parents and communities in education, and how to include this consideration in curriculum design; and also engaging young people more in the educational opportunities available to them: '*we can't continue with a system where a significant group of young people see school life is irrelevant or a distraction*'.
- The impact of having abolished professional organisations providing safeguards, such as the General Teaching Council.
- The effects of the Curriculum for Excellence, and whether the underlying principles need to be reconsidered.
- What is and should be at the heart of the curriculum.
- How the current government's agenda - particularly in terms of the Shanghai Model, phonics teaching and grammar schools[9] - *'will be detrimental to the next generation of children'*.
- How to change education to move away from the current generation of *'extremely stressed'* children and young adults (the researcher who said this made the point that they would not want this to be funded by the policy makers who they believe have created this: *'I think they fund the research that gives them the answers they want')*.

Teaching and Learning

- What children expect from schools and education.
- The value of technology in learning.[10]
- The effects of qualifications on learning.
- An evidence base of which policies are working most effectively for young people.
- Unconscious biases in primary school, especially around gender.

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[8] Two individuals.
[9] This interview took place before the Queen's Speech in which grammar school plans were not mentioned.
[10] Two individuals.

- The impact of exam-based or performance-led data on the teacher-student dynamic: *'is that pressure going to facilitate a more dynamic, driven educational experience, or is it going to exhaust the energy the learner and the teacher has to the point that ultimately everyone is worse off?'*

Schools

- How to hold schools to account in a way which does not rely solely on testing.

Outcomes

- Whether more children are emerging with functional literacy and if not, why not (linked to a concern that a single approach may not necessarily be the most effective).
- The longer term effect of GCSE 'exam factories'.
- How to get both high achievement and high equity, potentially looking internationally for examples.

Early Years

- Early years education and *'making sure everyone gets a good start'*.

Vocational Education and Training

- Lifelong learning.
- Work- based learning and the shift to technical education.
- Learning pathways, linking back to the Tomlinson report.
- Further education and how to address lower standards and expectations.

Social Justice

- Systemic approaches to 'levelling the playing field'.
- Disadvantaged children not going to university (with a view that we are going backwards in this area).
- Attainment of white working class boys.
- The distribution of educational experiences across the UK: *'we know about unequal outcomes - and the consequences of socioeconomic disadvantage - but there is relatively little research on the hugely differing kinds of experiences and resources that are made available to learners'*.
- The effects of geography on outcomes: *'what you need is more of a qualitative understanding, more of an anthropological approach to understanding what it is about place that informs your identity, what are those factors more directly, and therefore how we can genuinely improve social mobility'*.

Teachers

Structure and Systems

- Basing policy (e.g. grammar schools) and school leadership decisions on actual evidence so that teachers can get behind the decisions and support them.
- The branding of teaching, looking at models such as Teach First which *'makes it seem… like consulting'*.
- Joining up education research with policy to a much greater extent, so that policy is based on evidence and feasibility of implementation.

- The impact of certain generational, societal conditions on education.
- Scrutiny of school standards and similar areas, ensuring that there is an evidence base for them.

Teaching and Learning

- Reading and phonics.[11]
- How to help teachers to make the best use of their time.
- How to approach children as a heterogeneous group.
- Use of technology.
- Whether teachers should focus on character development, or solely focus on core content.
- Inclusive education and pedagogy, and how to meet the needs of all learners.
- Parental involvement[12] and how teachers can best encourage that to the benefit of parents and children.
- The fundamentals of teaching and learning - how to get pupils to learn, remember and understand things better.

Schools

- How best to use pupil premium funding (not instructions, but guidance for schools on what works).
- How to implement the Curriculum for Excellence.

Outcomes

- Whether the changes in GCSEs and A levels are actually helping: *'it looks like they're changing things for the sake of changing them… Results improve over time, but that's because you get more familiar with what the exam requires.'*

Vocational Education and Training

- Further education (in general, as it is under-researched), and in particular on English and maths achievements linked to GCSE resits.
- The impact of closing down adult courses on local communities.
- Non-traditional models in further education, including distance and blended learning, and the use of technology: *'we all jumped in without knowing what we're doing'*.
- What skills are needed by employers (communicated to colleges).

Social Justice

- The link between the question raised above (under researchers) about white working class boys, and where they end up (further education).
- Blending research on social disadvantage with pedagogy: *'they need to come together more so we can look at certain educational approaches, help students access education - [there is a need to] look at them in tandem'*.

[11] Two individuals.
[12] Two individuals

Significant Regional Differences

One teacher from Glasgow commented: *'Longer term, we need to spend time looking at the systems [that] education's got to work within… A lot of non-teaching politicians are being given evidence and not using it. It needs to be recognised that researchers know what they're talking about and should be used in policy.'* The point was raised by another teacher that it is not just about getting better and more research, but about the dissemination of existing research and using it effectively.

One policy maker based in Northern Ireland made the point that educational research tends to go round in circles; another said, *'we did that in 1950 and it didn't work then either'*. Every region has its own unique circumstances and research must address the issues and problems that people face within their working lives; *'that doesn't mean to say there can't be highly theoretical research in areas of high abstraction around, for example, the philosophy of education. I think it all has a role, and different researchers will bring different skills and aptitudes and projects to the table from which we can all learn.'*

7.2 Potential Improvements

Participants' recommendations for ways in which research in education can be improved, or be better utilised, include:

- Building research literacy into teacher education and practice, including developing skills in critical analysis and reflective assessment. This also includes recognising that funding and support will be required to enable time away from the classroom.
- Encouraging hub models of research, where practitioners (schools and further education) work in partnership with researchers or research centres to feed into studies.
- Disseminating the importance of research, and the potential impact it can have on educational outcomes, to schools and the wider school community.
- Promoting a greater understanding of the ways in which research is commissioned, funded and utilised.
- Developing a national development board or network aimed at connecting policy makers, practitioners and education researchers and allowing for the formulation of coherent strategies.
- Incentivising research occurring within or in partnership with schools and local authorities, to make the opportunities attractive to academic researchers.
- Creating a portal or platform where teachers or other practitioners conducting action research can share their studies and findings with their peers; this may be a means of sharing good practice and key findings, and also inspiring other teachers to conduct research.
- Encouraging 'joined up research' across sectors to understand the multi-disciplinary impact of initiatives and/or policies; this may apply, for example, to studies concerning the impact of cuts to support services on schools.
- Developing technology, possibly through an app, to connect classroom teachers and encourage the sharing of research, ideas and good practice. There is also the potential to share recorded lessons online.
- Building research capabilities and skills into CPD requirements and also requirements for progressing in the teaching profession.
- Recognising the fluidity and commonalities between teachers and researchers rather than treating them as distinct categories.

7.3 Concluding Thoughts

- The propensity for policy makers to cherrypick research is an important challenge: evidence-based policy making will not be possible until policy makers select from the weight of available evidence, rather than selecting the research which best supports their approach. The work of the Education Endowment Foundation and the Education Media Centre is working to address this issue, but it is likely that a wider understanding of research evidence and bias avoidance is necessary in order to underpin better policy making.

- There is a real demand for a single portal for education research evidence which can be accessed by teachers, researchers and policy makers alike. This could include digests of newly published research, systematic review findings, practice ideas, YouTube tutorials and discussion groups. It could also act as a signpost to other websites and research sources, and could pull in the work of existing highly rated sources such as the EEF, IEE and the JRF.

- Teachers need access to research which is specific and applicable in their own classrooms; much of the time research is overly broad (or hard to find). The volume of research available can also be daunting. This point links back to making research easier to find, perhaps through the single portal idea; it would need to have an extremely good search capacity and filtering system. It would also need to present research in digested form with clearly accessible language and findings.

- An understanding of good quality research is likely to be important when defining the future education research agenda. There are differences between stakeholder groups as to what constitutes good quality research, which may suggest that different aspects need to be pulled out for different groups when communicating findings, but there are nevertheless some general findings pulled together from across the groups that may be of use, as highlighted earlier in the report (e.g. around accessibility, responsiveness and authorship).

- Better uptake of research in schools could be encouraged by communicating research as a tool to improve practice; schools and teachers do not always realise that practice improvement is usually based on having better evidence. It is also important to get school leaders on board in order to shift the balance in schools between interventions being led by a broad range of interest groups, and them being driven by good evidence.

- Networks and social media are critical to the communication of research findings; both policy makers and teachers often signpost new research to each other through existing networks and online fora. Technology has huge potential for skills development in education research, the delivery of the research itself, and its later communication. The potential here has not yet been fully harnessed and may need attention in order to identify how it can best be used.

- Supporting teachers to develop research skills, a central part of which is thinking critically about research findings (and a further corollary being implementation according to context and need), may be worth considering as part of initial training as well as CPD. While some policy makers may also feel that their skills are lacking in this area, many do not feel that they need them (which may require a separate communications effort in itself).

- Key current issues in education research centre around the quality and performance of schools and teachers; teacher recruitment and retention; pupil wellbeing; a lack of evidence in education policy and practice; and teacher workload. It may well be worth considering how the future education research agenda can help to support improvements in these areas. Research in further education is another area which is sorely needed; it was mentioned several times as being extremely sparse when compared with other areas of education research. It will also be important to focus on the research priorities

articulated separately by participants, which centre around structure and systems, teaching and learning, schools, outcomes, early years, vocational education and training, and social justice.

Appendix 1: Discussion Guide

Introduction

Thank you for coming today to talk about education research in primary, secondary and further education.

Just to recap the purpose of this discussion, we've been commissioned by the Royal Society and the British Academy to organise and facilitate a series of focus groups, like this, across the UK. The information we collect from you today will contribute to evidence being gathered by the two organisations as they examine how best to create the conditions that will allow high quality research to flourish and have a transformative impact on education in the UK and internationally.

During this discussion we are looking to hear about your own experiences, rather than that of the organisation or sector you represent. As you are aware, we are conducting these discussions across the country, and hope to be able to compare findings across the regions, as well as across the Home Nations.

There are no wrong answers - I'd like to know what you think because you are the experts. If you don't want to answer a question, you can stop or leave any time you like.

The focus group will last for approximately 90 minutes. Although we'll be recording this session and providing a transcript to the Royal Society, everything you say will be anonymous. We won't use your names when we write up this report and nobody outside this room will know what you said. I would be grateful, however, to ensure I know who is who so that if the Royal Society would like to explore any particular comments you make I can ask your permission before passing on your name and details.

[Facilitator to take names around the table.]

Do you have any questions?

Does anybody object if I press record now?

Questions

Accessing Research

How, if at all, does research feature in your daily work? *[Prompt: Do you use it? Read it? Produce it? Why/Why not? What was the last piece of evidence you used, and where did it come from?]*

If you use research in your job/school/organisation, how do you access it? *[Prompt: Is it given to you by colleagues? Do you search online? How could access be easier?]*

Are there any barriers preventing you from using research? *[Follow up: If so, what are they? Is this typical, do you think, across your profession?]*

What characteristics do you think define good quality research? *[Prompt: recognised source, citations, written style]*

Research Skills

What skills do you think are needed in order to access or engage with research?

Do those of you in teaching and policy feel you have the skills you need to access research and use it effectively? *[Follow up: If not, how could you develop them?]*

How could research be made more accessible to users?

To what extent and how, if at all, do those of you in research design your work to be accessible to policymakers and practitioners?

Role of Research

What do you think the most pressing issues are in education today? *[Prompt: Techniques and tools, evaluations, good practice, statistics]*

In which ways do you think research is used within the education sector?

Research Outcomes

What areas of education do you think need more, or better, research in the short term? And over the next 20 years? *[Follow up: Why are these areas so important? What should be the top priorities for research?]*

What impact, if any, is technology having on education research? *[Follow up: what technology/technologies is/are emerging?]*

Closing

Do you have any other recommendations for how we can improve research in education and how we can make better use of it?

Any other comments?

Thank you.

Appendix 2: Research Participants

Please note that the following table contains role descriptors for participants, to avoid compromising their anonymity.

	Policy Maker	Researcher	Teaching Practitioner
Manchester	• Councillor • Education Councillor	• PhD Candidate • University Lecturer	• College Teacher • Secondary School Teacher
Coventry	• Councillor • Government Agency Employee • Research Team Staff	• University Lecturer • University Lecturer • University Lecturer • Open University Lecturer	• Secondary School Teacher • FE Teacher
Cardiff	• Councillor • Councillor • Educational Charity • Head of Research • Government Agency Employee	• University Lecturer • University Lecturer • University Lecturer • University Lecturer • University Lecturer • Early Career Researcher • Head of Research • University Professor • Research Analyst • Research Lead and Director	• Secondary School Teacher • Secondary School Teacher
London	• Education Chief Executive • Education Manager • Senior Policy Adviser • Director of Education Policy	• Head of Education • Education Analyst • Education Consultant • Head of Evaluation (Data) • University Professor • Research and Communications Officer • Researcher • Head of Research and Evaluation • Education Research Consultant	• Academy School Teacher /PhD student • College Lecturer
Glasgow	• Education Councillor • Government Agency Employee • Head of Research	• University Lecturer/ Researcher • University Lecturer / Researcher	• College Teacher • Deputy Head Teacher • Primary School Teacher
Edinburgh	• Education Official	• University Lecturer • University Lecturer • University Lecturer • University Lecturer • University Lecturer	• FE Teacher

	Policy Maker	Researcher	Teaching Practitioner
York	• Policy Adviser • Councillor	• University Lecturer • University Lecturer • University Professor • Research Consultant	• Primary School Teacher • Secondary Deputy Head • Secondary Assistant Head
Sheffield	• County Councillor • Independent Education Consultant • Education Policy Researcher • Government Agency Employee • Education Consultant	• Independent Consultant • University Lecturer • Researcher • University Professor	• College Principal/ Researcher • Primary Assistant Head
Exeter	• Senior Education Adviser • Education Consultant/ Teacher	• University Professor • Director of Education Research • Researcher	• College Teacher • Secondary Maths Teacher • Secondary Teacher/ Assistant Principal
Belfast	• Senior Education Policy Adviser • Senior Education Officer • Director of Education	• University Research Director	

Appendix 3: Stakeholder Mapping

In order to generate a full list of possible research participants, a stakeholder spreadsheet was created, listing all sources known to the Research Base and recommended by the Royal Society. These included individuals and organisations across the stakeholder groups and intended regions as well as more general education contacts.

Our initial approach was to use a networking system, whereby all warm sources were contacted by the Research Base with a request for recommendations for possible focus group attendees and utilisation of dissemination channels - some sources provided assistance in disseminating the information via newsletters and social media. Further searches were run through Google to identify stakeholders, as well as regional websites to identify schools. Emails were sent to a large number of primary and secondary schools, as well as FE colleges, in order to identify possible participants in specific geographic areas. Social media was also used directly by the Research Base, including calls for participants via Twitter, Facebook and LinkedIn.

The mapping exercise was iterative and exhaustive, and was managed by a central database, recording targets achieved and existing gaps, and city-specific databases, which included contact details and the details of the number of contacts made.