

**Investigating the Use of Research-Based Information (RBI)
by Educational Practitioners in Finland and the UAE**

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ABSTRACT

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Over the past few decades, educational research has created a vast knowledge base that has the potential to greatly impact teaching and learning. However, despite the valiant efforts of various stakeholders, there continues to be a persistent gap between research and the application of the knowledge obtained to inform teaching practices.

The purpose of this study was to evaluate the use of Research-Based Information (RBI) in education in Finland and the United Arab Emirates (UAE), to examine the factors that influence the use of RBI by practitioners and to investigate what kind of support they need, and to investigate correlations between demographic variables, RBI use, and factors that influence the use of RBI. A total of 90 educational practitioners responded to an online questionnaire that was based on the “Questionnaire about the Use of Research-based Information”, (Dagenais et al., 2008; Lysenko et al., 2014); 45 from the UAE and 45 from Finland.

The data collected in this study suggests that while research use by educational practitioners continues to be a challenge, practitioners in this study reported using more RBI than those in previous studies, especially RBI from the internet. It is likely that the increased use of RBI is due to factors related to the COVID-19 pandemic, as the majority of practitioners from both countries reported using more RBI this year compared to last year. The results also illustrate that promoting the use of RBI begins with cultivating positive attitudes toward educational research, developing practitioners’ digital competences and research expertise, promoting the benefits of research use, and creating capacity for research utilization among educational organizations.

Keywords: Educational research, research use, research-based information, RBI, educational practitioners, UAE, Finland.

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1 INTRODUCTION

The relationship between research and practice has always been a point of interest which has given rise to numerous debates among researchers, policy makers, practitioners and other stakeholders. While research in the field of formal sciences is often believed to have a greater influence on policy and practice, educational research on the other hand is viewed by some as “ivory tower” research that is disconnected from everyday life. Although some believe that educational research indirectly influences policy and practice (Bates, 2002; Levin, 2004), others such as Broekkamp and Van Hout-Wolters (2007) believe that educational research is inconclusive, often yielding few practical results.

That being said, one thing numerous researchers, policy makers and practitioners agree on is that a gap exists between research and practice, and this gap has been widely discussed in literature (Gore, & Gitlin, 2004; Levin, 2004; McIntyre, 2005; Whitty, 2006; Bauer & Fisher, 2007). Consequently, in an attempt to bridge the gap, numerous studies have been carried out to investigate how often and for which purposes practitioners and policy makers use research as well as on the factors influencing research use. However, according to Vanderlinde and van Braak (2010), although many articles and papers have been written on this topic, there still is a lack of empirical data. Furthermore, the majority of the studies carried out on this topic were geographically limited to a single country or region.

This study seeks to evaluate the use of Research-Based Information (RBI) in education in Finland and the United Arab Emirates (UAE), to examine the factors that influence the use of RBI by practitioners and to investigate what kind of support they need, and to investigate correlations between demographic variables, RBI use, and factors that influence the use of RBI.

In the following sections, I will discuss what research-based education is, the factors influencing the use of RBI, the gap between research and practice, some proposed solutions for bridging the gap, and the research questions that this study aims to answer.

1.1 Research-based education

The world is changing, and changing fast. The global population has exploded, the climate is changing, the internet has changed the way we do everything, and social media has taken over. Furthermore, due to government efforts aimed at containing the spread of COVID-19, UNICEF estimates that more than 1 billion children are at risk of falling behind (2020). It is no surprise that education in turn is expected to keep up with these changes and meet the ever increasing needs and demands of different stakeholders; to do more and deliver more – often with increasing accountability and diminishing resources (Davies, 1999). Thus, over the past few decades, there have been more and more calls for education to become a research-based practice. Research-based practices can be defined as “instructional techniques that meet prescribed criteria related to the research design, quality, quantity, and effect size of supporting research, which have the potential to help bridge the research-to-practice gap and improve student outcome” (Cook & Cook, 2011, p.1).

Traditionally, educators have used sources such as one’s own personal experience, traditional practices, and expert opinion to inform their practice and ascertain what works in the classroom (Cook & Cook, 2011). However, many of these practices are not research-based and have not always produced meaningful outcomes for students. Yet, one of the main reasons they still exist is because practitioners are familiar with them and feel comfortable following them. Why should they get out of their comfort zone to implement a new practice? After all, if the way they were taught worked for them, why should it not work for others? Unfortunately, even if such traditional approaches to teaching and learning worked in the past, many of these practices have become outdated and fail to equip today’s students with the tools that they would need to succeed in a future clouded by uncertainties.

Educational research has the potential to fill these gaps and overcome the limitations of traditional strategies. The sources and purposes of RBI use will be presented in the following paragraphs.

Sources of RBI. Naturally, when the term "Research-Based information" is mentioned, sources such as scholarly documents and professional publications are the first to come to mind. However, although such sources might be the most popular among scholars and academics, Dagenais, Janosz, Abrami, Bernard, and Lysenko (2008) identified also other sources of RBI such as school evaluations, internet and websites, multimedia (video and DVD), mass media (TV, radio and newspapers), pre-service training, in-service training, workshops, conferences and presentation, and experts and resource people.

Purposes of RBI use. Although there are various purposes for which practitioners use RBI, Dagenais et al. (2008) identified seven general but comprehensive purposes of RBI use which were classified into three categories; instrumental, conceptual, and symbolic use. Instrumental use includes activities such as developing new activities, programs, and guidelines, improving professional practice, and resolving problems in one's daily work. Similarly, conceptual use includes activities which serve to help achieve a better understanding of issues in one's work, satisfy intellectual curiosity, and reflect on one's attitudes and practices. Finally, symbolic use means using RBI to justify or validate one's decisions. That being said, it is important to remember that research alone is not capable of changing or influencing practice. There are numerous factors that influence the use of RBI by practitioners. These factors will be stated and discussed in the following section.

1.2 Factors influencing the use of RBI

Research alone does not affect practice, and this is true in every field - be it social sciences or formal sciences. Boser and McDaniels (2018) argue that "studies are not enough to shift the day-to-day practice and habits of professionals; just putting information into someone's hands does not help them understand how to use that information to improve their work"(p. 1). There are various factors that could enable practitioners to make better use of research findings. Dagenais, Lysenko, Abrami, Bernard, Ramde, and Janosz (2012) identified four main factors that influence educational practitioners' use of RBI:

Awareness activities. Awareness activities aim to shed light on relevant research findings and bring both the academic and practitioner communities closer. According to Louis (1996), ongoing dialogue between academics and practitioners could make research more accessible, available, and user-friendly. Moreover, activities that promote dialogue between practitioners and researchers have been recognized as means of further encouraging research use (Cousins & Walker, 2000; Huberman, 1990). Lysenko, Abrami, Bernard, Dagenais, & Janosz (2014) suggest that activities such as (1) opportunities to discuss research results with the research team, (2) demonstrations about how to apply research recommendations, (3) regular contacts with people who distribute RBI, (4) research results accompanied by clear and explicit recommendations, (5) discussions of RBI with colleagues, (6) the practitioner's involvement in a research project, and (7) presentations of research findings tailored to the practitioner's needs have the potential to make practitioners more aware of relevant research findings.

Organizational Factors. It goes without saying that organizational factors such as a school's setting (Hultman & Hörberg, 1998), culture and educational norms (Ratcliffe et al., 2005) influence its capacity to support teachers' professional development and individual learning efforts. For example, leadership approaches that promote lifelong learning, educational change and school reform are more likely to "provide time and opportunities for teachers to read research and to link the understanding of research to teaching practices" (Lysenko et al., 2014, p.6). In addition to that, efforts by governments and ministries of education to pave the road and encourage research use in schools also affect research adoption rates (Vanderlinde & van Braak, 2010).

According to Lysenko et al. (2014), some of the organizational factors that could influence research are: (1) the presence of a supportive environment, (2) the availability of qualified staff, (3) organizational importance for professional development, (4) incentives such as remuneration, honoraria, and reduced workload, (5) opportunities to challenge established habits and traditions, (6) available facilities and technology, (7) organized groups such as unions, granting agencies, and media,

and (8) the availability of time for activities such as reviewing educational research or applying new techniques and interventions.

Opinions about research. Lysenko et al. (2014) argue that opinions about research are in many cases the sole metric employed to reflect research use, suggesting that practitioners highly value qualities such as research clarity, timeliness, practical relevance, and amenability to action. Similarly, school principals favoured research that showed evidence of clear school benefits (Vanderlinde & van Braak, 2010). To sum up, practitioners seem to value research that is (1) easy to understand, (2) relevant to their reality, (3) easy to transfer into practice, (4) useful to guide or improve professional practice, (5) easy to find, (6) reliable and trustworthy, and (7) offers timely information (Lysenko et al., 2014).

Individual expertise. Individual expertise refers to a practitioner's capacity to use RBI for a variety of ends. According to Lysenko et al. (2014), research-related competencies such as "the ability to formulate research questions about [one's] practice, to find solutions by locating and critically appraising research, and to apply [research] in practice" (p. 5) influence the way practitioners perceive and use RBI. Other factors include (1) the practitioner's ability to assess the quality of RBI, (2) skills to use information technology such as Internet and databases, (3) ability to read and understand research, and (4) expertise to translate research findings into practice (Lysenko et al., 2014).

Negligence towards these four factors is thought to contribute to the research-practice gap, a phenomenon common across various professions all over the world (Rolfe, 1992). In the following sections, this phenomenon will be discussed together with some proposed solutions for bridging the gap.

1.3 The gap between research and practice

Literature is saturated with papers discussing the so called "gap" between research and practice (Gore, & Gitlin, 2004; Levin, 2004; McIntyre, 2005; Whitty, 2006; Bauer & Fisher, 2007). Although these reports discussed the issue from the points of view of

numerous stakeholders such as practitioners, researchers, and policy makers, they all have one thing in common; they “vented serious doubts about the quality and relevance of educational research, arguing, among other things, that educational research did not provide answers to the questions the government asks in order to develop educational policy; that it did not provide educational professionals with clear guidance for their work; that it was fragmented, noncumulative, and methodologically flawed; and that it often was tendentious and politically motivated” (Biesta, 2007, p.1).

Based on a literature review, Broekkamp and Van Hout-Wolter (2007) describe four problems that characterize the gap between educational research and practice:

Educational research yields only few conclusive results. Some critics such as Kennedy (1997) argue that educational research rarely provides valid and reliable results that are supported by unambiguous and compelling evidence. Moreover, even when there is clear evidence for certain effective methods or interventions, this does not necessarily guarantee that the results have practical implications and are replicable in different contexts. Although this could be attributed to the complexity of educational research, it may also be due to the narrow and one-sided focus of some researchers who tend to focus solely on “cognitive aspects” of learning, often paying little attention to the broader context (Broekkamp & Van Hout-Wolter, 2007). Other reasons according to Gore & Gitlin (2004) could be that scientific norms are not always followed and that researchers may have limited control over the environment in which they conduct their research.

Educational research yields only few practical results. One of the main criticisms of educational research has to do with the practicality of the findings. Numerous studies targeting practitioners (Vanderlinde & van Braak, 2010) suggest that practitioners have more appreciation for research that is practical and applicable. However, on the other hand, some scholars argue that academic research is meant to be theoretical so it is natural that a direct or immediate connection between research and practice cannot always be found. For example, Piccoli and Wagner (2003) argue that “academic

research has a relatively long horizon and does not typically focus on the details involved in immediate problem-solving activities. Instead, researchers extrapolate from specific instances to make far-reaching and long-lasting statements..." (p. 30). In other words, Piccoli and Wagner argue that it is not necessary for research to be practical to be considered useful as some research findings have theoretical implications that have an effect on future research within field or even policy decision.

Practitioners believe that educational research is neither conclusive nor practical. In a study targeting pre-service and in-service teachers by Gore and Gitlin (2004), some teachers viewed academic research as irrelevant, unreliable, and inaccessible. Some participants also expressed negative views about researchers, claiming that they "don't really have the hands-on experience of knowing what really is happening in the classroom" (Gore & Gitlin 2004, p. 42). Such opinions about research and researchers suggest that there is a disconnect between the academic and practitioner communities. Moreover, since opinions about research have been found to correlate with research use (Lysenko et al., 2014), it is not surprising that practitioners with negative perceptions about research make little use of RBI

Practitioners make only little (appropriate) use of educational research. One of the reasons behind these negative perceptions could be poor Knowledge Mobilization, which can be defined as the "process of connecting research to policy and practice across diverse organizations and sectors" (Cooper, 2015, p. 5). Stevens (2004) argues that researchers tend to move on to a new study once their research has been published in academic journals - without communicating or sharing their findings with the professional community. Thus, important findings are not made available for utilization by practitioners. In the next section, some of the proposed solution for bridging the gap will be stated and discussed.

1.4 Bridging the gap

Over the years, numerous researchers have attempted to formulate proposals on how to bridge this gap between research and practice. Some authors call for the creation of better lines of communication between academics and encouraging practitioners to

get more involved in the research process (Levin, 2004; Edwards, Sebba, & Rickinson, 2007), while others argue that more opportunities should be provided where practitioners and researchers meet to “share visions, disseminate findings, co-construct ideas, and set research agendas together” (De Vries & Pieters, 2007, p. 237).

Lysenko et al. (2014) argue that there should be structures in place to support the practitioner. These structures should (1) provide access to research that is written for non-scientists and accompanied by clear recommendations and demonstrations on how it is to be effectively applied, (2) integrate on-going research-based professional development, (3) create opportunities and stimulating intellectual needs to share experience gained in research implementation, and (4) put in place administrative and managerial support structures for the time and energy required (p. 51).

Moreover, Vanderlinde and van Braak (2010) conducted a study to assess how teachers, school leaders, researchers, and intermediaries perceive the research-practice relation. In the study, intermediaries were defined as “people or organisations responsible for distributing and translating research findings to practitioners” (p.304) and can be thought of as mediators between researchers and practitioners. The barriers to research use identified in the study were lack of applicability, ambiguity of research material, technical and complex language, and descriptive research. On the other hand, research with practical applications, providing evidence of the benefits, time to read and use research, and pressure from the government to use research were identified as factors that facilitate research use.

As the findings suggest, practitioners value practical research that has real life implications. They also agree that the usage of technical and complex language in research papers could act as a barrier that obstructs communication between academics and other professionals. However, although researchers recognise these problems, they argue that following academic norms and writing in technical language is easier than producing simplistic texts that are optimized for consumption by the general public. Moreover, since publication output in scientific journals is often taken into account when assessing a researcher’s work, researchers might not have the

time to translate their findings into material with high relevance for practitioners (Vanderlinde and van Braak, 2010).

1.5 Research Questions

The study seeks to evaluate the use of Research-Based Information (RBI) in education in Finland and the United Arab Emirates (UAE), to examine the factors that influence the use of RBI by practitioners and to investigate what kind of support they need, and to investigate correlations between demographic variables, RBI use, and factors that influence the use of RBI. Toward these ends, it sought to answer the following research questions:

1. How often and to which ends do educational practitioners use RBI?
2. How influential are the four factors (awareness activities, organisational factors, opinions about research, and individual expertise) and what kind of support do practitioners need to make better use of research findings?
3. Is there a correlation between demographic variables such as gender, age, experience, etc. and RBI use and factors that influence the use of RBI?

2 RESEARCH METHODS

2.1 Research participants

A total of 90 educational practitioners responded to the online questionnaire; 45 from the UAE and 45 from Finland. The even number of responses was a mere coincidence as the researcher did not have direct control over the number of responses. Although the participants comprised a convenience sample, the sample was geographically diverse. It is important to note that the phrase “respondents from the UAE” does not necessarily imply that the participants are UAE nationals (Emiratis) because at 80%, the UAE has one of the highest shares of expats in its total population in the world (GMI, 2021). On the other hand, it is safe to assume that the vast majority of the respondents from Finland are in fact Finnish (Finns) as foreigners living permanently in Finland comprises a mere 4.5% of Finland’s population (ThisisFinland, 2018). Moreover, the questionnaire was administered in Finnish.

Out of the 45 respondents from the UAE, 15 were males and 30 were females. Their ages ranged from 22 – 60 years (Mean = 38.1) and they reported having between 2 and 35 years of work experience (Mean = 11.6). On the other hand, 18 of the Finnish participants were males and 27 were females. Their ages ranged from 27 – 65 years (M = 49.3) and they reported having between 0 and 35 years of work experience (M = 11.6). It is interesting to note that even though the practitioners from UAE were on average 11.2 years younger than Finnish practitioners, they had 1.4 more years of work experience. Table 1 summarises the aforementioned information:

Table 1.

Participants’ sex, age, and work experience

Country	Number of Survey Respondents	Sex		Mean Age (years)	Mean work experience (years)
		Male	Female		
UAE	45	15	30	38.09	11.64
Finland	45	18	27	49.29	10.22

Regarding the participants' highest level of education, Finnish practitioners had higher educational qualifications than their counterparts. The majority of Finnish practitioners had completed a master's degree (35), six a PhD, and four a bachelor's degree. On the other hand, the majority of the UAE practitioners had a bachelor's degree (29), eight had a master's degree, five had completed upper secondary, two had other educational qualifications, and one participant had completed basic education.

As for the participants' experience with research, practitioners from both countries had similar numbers. It might seem strange that 10 Finns reported having no research related experience when 41 participants reported completing at least a master's degree. Although these responses could be attributed to the participants misunderstanding the question or accidentally selecting a different option, it is also possible that participants did not think of their theses or coursework on research methods as research experience. The participants' educational qualifications and research experience can be found in Table 2.

Table 2.

Participants' highest level of education and research experience

Highest Level of Education	UAE	Finland
Basic education	1	0
Upper secondary	5	0
Bachelor's Degree	29	4
Master's Degree	8	35
PhD	0	6
Other	2	0
Research Experience	UAE	Finland
Received education in research methodology	13	14
Conducted/Co-conducted research projects	19	21
No research-related experience	13	10

2.2 Data Collection

To carry out this study, the researcher chose a questionnaire-based quantitative research design in which hypotheses are tested empirically and critically (Hoy, 2010). Some of the advantages of using a questionnaire for data collection include the ability to collect a large amount of data in a short time span, ease of delivery, anonymity, and most importantly, the possibility of utilizing previous questionnaires that have been already verified and validated.

The questionnaire used in this study is based on the “Questionnaire about the Use of Research-based Information” (Dagenais et al., 2008; Lysenko et al., 2014) and it can be found in the appendix. Following the cover letter, the first section contained demographic questions such as sex, age, education, and work experience. In the second section, the participants were asked to rate the frequency with which they have used RBI from sources such as scholarly documents, school evaluations, the internet, etc. Section three concerned the dimensions of use of RBI, such as “to improve professional practice” and “to justify or validate your decisions”. Both questions in sections two and three had a scale ranging from 0 to 3, however, in section two, 0 indicated no use, 1 indicated once or twice, 2 indicated three or four times, and 3 indicated five or more times, whereas in section 3, 0 indicated no use, 1 indicated sometimes, 2 indicated often, and 3 indicated always.

Section four asked the participants about their opinions regarding factors that influence the use of RBI. The four factors were awareness activities, organizational factors, opinions about research, and individual experience. The four factors had a total of 26 sub-items which followed a 5-point Likert scale ranging from strongly disagree to strongly agree.

To collect data from the UAE, the questionnaire was used in its original language (English) for two main reasons. First, since expats comprise 88.52% of the population of the UAE (GMI, 2021), translating the questionnaire into Arabic would mean excluding a large portion of potential respondents who do not speak Arabic. Second, since the main language of instruction at the schools where the research participants

worked is English, it made sense to ask the participants to respond in English. However, to collect data from Finland, the questionnaire was translated into Finnish. For similar reasons, this was done to ensure that the presence of a language barrier would not deter the participants from responding.

The researcher also chose to include a few open-ended questions in the questionnaire because responses to open-ended questions “can reassure the researcher that all relevant issues have been covered. Responses may also be used to corroborate answers to closed questions, offering reassurance to the researcher that the questionnaire is valid, or highlighting problems with particular question” (O’Cathain & Thomas, 2004, p.2). O’Cathain and Thomas (2004) categorize open-ended questions into four types:

Extension: “Other, please specify” is used at the end of a list of response options to ensure that all options are covered

Substitution: An open question substitutes for a closed question

Expansion: A closed question is followed by an open question in which respondents are asked to elaborate on the answer given within the closed question

General: Respondents are asked to elaborate on their general experience in relation to the overall topic of the survey (p.3)

The researcher chose to include questions of the first type at the end of every closed-ended question in sections two, three, and four in order to elicit the participants’ comments and ensure that the questionnaire is comprehensive. Moreover, in order to provide more insight into the quantitative data, two open-ended questions of the second type were added at the end of the questionnaire:

1. What other factors influence your use of educational research?
2. What kind of support do you need to make better use of research findings?

However, since this was meant to be a quantitative study, the responses to these questions were quantified. More information on how the data was analysed will follow in the next section.

2.3 Data Analysis

The analysis was carried out in a manner similar to that done in the study from which the questionnaire was taken (Lysenko et al., 2015). First, the data was screened to make sure that the respondents were within the target group. Although there were some missing values, they were very few in number and had no effect on the reliability of the data. For example, there was a total of 11 missing responses in the question about the frequency of RBI use, 7 from the UAE data set and 4 from the Finnish one. There are missing entries because the participants were not forced to respond to any of the questions. It was decided that this approach to data collection is the best because requiring participants to answer every question has been found to increase dropout rates and decrease the quality of the responses received (Décieux, Mergener, Neufang, & Sischka, 2015).

The quantitative data was then analysed by using IBM's Statistical Package for the Social Sciences (SPSS) 26. To check for normality, the skewness and kurtosis values were calculated for each item in the questionnaire. It was concluded that the data was normally distributed since almost all values were within the acceptable range of ± 2 (George & Mallery, 2010). Independent samples T-tests were also carried out to compare the responses of each group in order to determine whether there was a significant difference between the means. Moreover, demographic information such as age, gender, teaching experience, and education level was used for correlational analysis with the four composites of RBI use as well as the four factors. Since the data was normally distributed, Pearson's correlation coefficients were calculated.

As for the qualitative data, the responses were not analysed qualitatively. Instead, the qualitative data was quantified by turning the data from words into numbers (Bernard, 1996), which was done by coding the data and looking for emerging patterns (Green, 2001) and noting the number of responses that correspond to each category. Since Finnish participants replied to the questions in Finnish, the responses were translated to English with assistance of native Finnish speakers prior to analysis.

2.4 Evaluation

LoBiondo-Wood & Haber (2013) argue that in addition to results, consideration should be given to the rigour of the research, which is reflected by the extent to which the researchers worked to enhance the study's quality. In a quantitative study, this is achieved through the evaluation of the reliability and validity. In this section, I will discuss the reliability and validity of the study as well as the ethical matters that were considered to ensure the confidentiality of the data and research participants.

Reliability. According to Heale and Twycross (2015), reliability relates to the consistency of a measure. Although there are various methods of evaluating reliability, this study adopted homogeneity (or internal consistency) since the questionnaire used in this study has been used before in another study. Homogeneity refers to "the degree to which the items that make up the scale are all measuring the same underlying attribute" (Muijs, 2011, p. 6). If a quantitative questionnaire has various items intended to address the same underlying construct, the scores of each item could be correlated with scores on all other items, and internal consistency can be demonstrated by the average of the correlations among all the items in the questionnaire (Streiner & Norman, 2008).

Since the data meets the prerequisites (ideridis, Saddaawi, & Al-Harbi, 2018), Cronbach's alpha was chosen to determine the reliability of the data. Table 3 below describes the reliability of the six measures and the overall reliability of the English and Finnish versions of the questionnaire.

Table 3.

Cronbach's alpha coefficients of the questionnaires

Measure	Cronbach's alpha coefficient (α)	
	English Questionnaire	Finnish Questionnaire
Use of RBI Sources	.81	.68
Dimensions of use of RBI	.86	.86

Awareness activities	.87	.80
Organizational factors	.84	.70
Opinions about research	.78	.91
Individual expertise	.77	.69
Over all	.93	.83

To interpret Cronebach’s alpha, George and Mallery (2003) provide the following rules of thumb: “_ > .9 - Excellent, _ > .8 - Good, _ > .7 - Acceptable, _ > .6 - Questionable, _ > .5 - Poor, and _ < .5 - Unacceptable” (p. 231).

As the results suggest, the English version of the questionnaire had two items with acceptable reliability and four with good reliability, and an overall excellent reliability. Although two items of the Finnish version had a questionable reliability, its overall reliability was considered to be good. It is worth noting that the original (English) questionnaire was slightly more reliable than the Finnish one, and this could be due to discrepancies in the translation, which will be discussed among other topics in the following section.

Validity. In a quantitative study, validity refers to “the extent to which a concept is accurately measured” (Heale & Twycross, 2015, p. 66). Heale & Twycross (2015, p. 66) explain that there are three major types of validity; content, construct, and criterion validity. Since the quantitative questionnaire used in this study had already been used in previous studies (Dagenais et al., 2008; Lysenko et al., 2014, Lysenko et al., 2015), it was safe to assume that the validity of the questionnaire was assured. Furthermore, the slight modifications done to the questionnaire should not have a negative effect on its validity since they were done only after consulting with the research supervisors. However, since the questionnaire was translated to Finnish to collect data from Finland, ethical considerations concerning the process of translating the questionnaire will be discussed in the following subsection.

Ethical Considerations. Participation in this study was based on informed consent of the participants. A cover letter preceding the online questionnaire informed the participants of their rights, the research aims, and data handling procedures. The

participants were also provided with a link to the privacy notice document. Confidentiality was ensured through anonymization of the data. Moreover, although the participants were required to share information related to their profession and education, none of the participants were asked to disclose personally identifiable information such as their name or email address. Responsible conduct of research (JYU, 2020) was followed throughout the research process and only the researcher and his thesis supervisors had access to the research data, which will be archived until May 2025 according to the rules of the University.

According to Robinson (2003), translation ethics can be defined as “the practice to keep the meaning of the source text undistorted” (p. 25). In accordance with this understanding of research ethics, the researcher’s supervisors handled the translation of the questionnaire from English to Finnish as they were fluent in both languages and aware of the context and aims of the study. Furthermore, multiple checks and revisions were conducted before administering the questionnaire to enhance the reliability and eliminate any sources of ambiguity of the translation. Finally, since the researcher was not involved in the translation process as he does not speak Finnish, it is safe to assume that the researchers’ own beliefs or biases were not reflected in the Finnish version of the questionnaire. The Finnish questionnaire can be found in the appendix.

3 RESULTS

Prior to the analyses, the distributions of all measures were assessed for normality by calculating the skewness and kurtosis values for each item in the questionnaire. Almost all values were within the acceptable range of ± 2 (George & Mallery, 2010) except for 3 items in the UAE data set and 4 in the Finnish one. However, this did not have an impact on the results because when these items were averaged, the skewness and kurtosis values of the averages were within the acceptable range. Moreover, the responses to the extension questions at the end of every close-ended had very few responses (from zero to five) and revealed no new information, which is why they will not be included in the analysis.

This section was divided into three subsections, one for each research question. Sections 3.1 and 3.2 highlight the frequency and purposes of RBI use and the perceived influence of the four factors respectively, while shedding light on the different preferences of practitioners in Finland and the UAE. Section 3.3 shows the correlations between the demographic variables, the four composites of RBI use and the four factors.

3.1 Frequency and purposes of RBI use

The responses to the questionnaire show that each source of RBI was used at least once in the past year. All respondents from the UAE (100%) reported obtaining RBI from the internet at least once, whereas only 59% referred to pre-service training to inform their practice. In addition to the internet, all Finnish participants (100%) obtained RBI at least once from mass media and resource people as well as in-service training, whereas pre-service training was also the least used source of RBI (40%). Figure 1 shows the percent of participants who used RBI at least once during the last year:

Figure 1.

Percent of participants who used RBI at least once for the past year

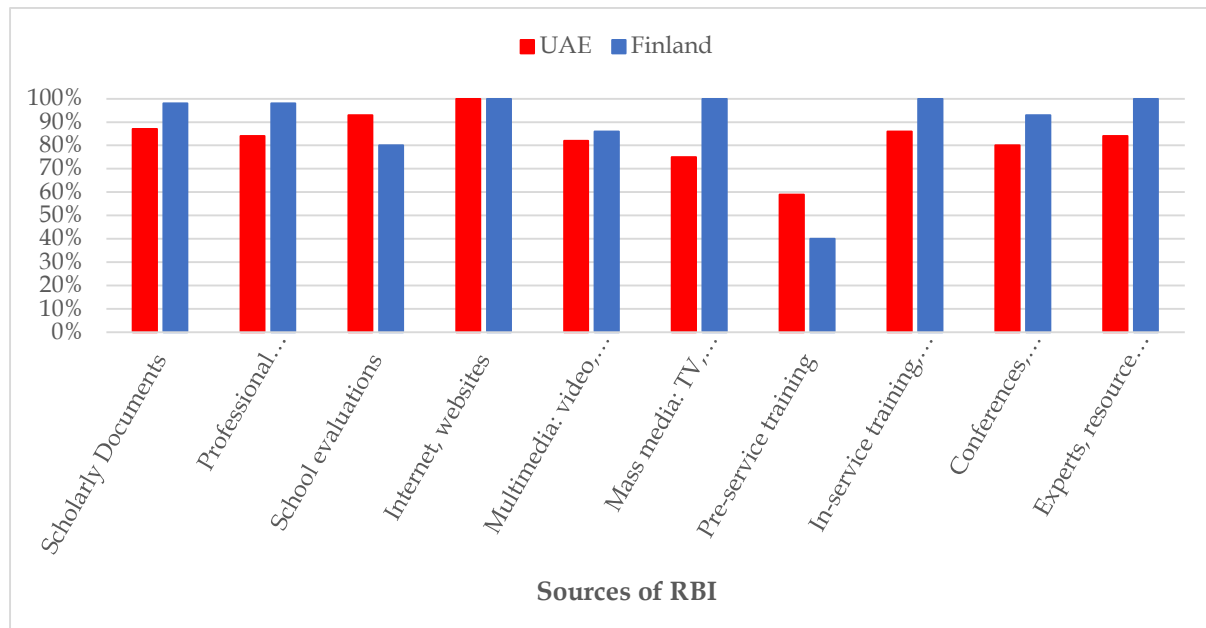


Table 4 shows the frequency with which different sources of RBI were used last year. The T-tests revealed some differences in RBI use between both groups of practitioners, which were highlighted using asterisks according to the level of significance. The mean scores revealed that Finnish practitioners used on average more RBI than practitioners in the UAE. However, some amount of variation is noticeable in the reports from all ten sources.

Respondents from both countries reported using online sources (e.g., websites) most frequently whereas pre-service training was rated as the least used source of RBI. Interestingly, Finnish practitioners used significantly more RBI from scholarly documents, professional publications, internet, mass media, and resource people, while practitioners in the UAE used significantly more RBI from school evaluations. There were some differences in RBI use among the other sources, however, these differences were not significant. Nonetheless, these differences hint at the some differences between the evaluation cultures of Finland and the UAE.

Table 4.*Use of RBI sources (Means & SD) in UAE and Finland*

Use of RBI sources	Means (SD)	
	UAE	Finland
Rate the frequency with which you have used the RBI from the following sources during the last year: 0 – never; 3 – five or more times		
1. Scholarly Documents**	1.76 (1.05)	2.36 (.91)
2. Professional Publications***	1.64 (.99)	2.53 (.76)
3. School evaluations**	1.84 (.94)	1.20 (.89)
4. Internet, websites*	2.56 (.72)	2.82 (.49)
5. Multimedia: video, DVD	1.91 (1.18)	1.70 (1.07)
6. Mass media: TV, radio, newspapers***	1.52 (1.15)	2.64 (0.71)
7. Pre-service training	1.09 (1.16)	.77 (1.09)
8. In-service training, workshops	1.68 (1.14)	1.91 (.85)
9. Conferences, presentations	1.61 (.99)	1.80 (.98)
10. Experts, resource People***	1.57 (1.07)	2.31 (.79)
RBI Use average*	1.72 (.62)	2.01 (.44)

*p < .05; **p < .01; ***p < .001

Using a 10 point Likert scale where 0 represented much less RBI use, 5 represented the same, and 10 represented much more, the participants were also asked to compare their use of RBI this year (during the pandemic) to last year. 30 practitioners from Finland (M = 7.27, SD = 1.53) and 32 from the UAE (M = 7.56, SD = 1.91) reported using more RBI this year than the previous year, which suggests that the shift to distance learning during the pandemic encouraged practitioners to make better use of research findings.

In respect to the ends to which practitioners reported having used RBI, the mean scores summarized in Table 5 revealed that improving professional practices was most frequently reported by practitioners in the UAE whereas justifying or validating decisions was the least. On the other hand, Finnish practitioners reported using RBI to achieve a better understanding of issues in their work the most, whereas developing new activities, programs, and guidelines was reported the least. Although there were not that many significant differences between the dimensions of RBI use of the two groups, the T-tests revealed that Finnish practitioners used RBI significantly more for conceptual uses such as achieving a better understanding of issues in one's work, satisfying one's intellectual curiosity, and reflecting on one's attitudes and practices.

Table 5.

Dimensions of use of RBI (Means & SD) in UAE and Finland

Dimensions of use of RBI Rate the frequency with which you have used RBI during the last year... 0 – never; 3 – always	Means (SD)	
	UAE	Finland
<i>Instrumental use composite</i>	2.09 (.72)	1.95 (.73)
1. To develop new activities, programs, guidelines	2.04 (.82)	1.84 (.88)
2. To improve professional practice	2.12 (.91)	2.07 (.84)
3. To resolve problems in your daily work	2.09 (1.08)	1.93 (.89)
<i>Conceptual use composite*</i>	2.01 (.83)	2.40 (.67)
4. To achieve a better understanding of issues in your work**	2.04 (.95)	2.58 (.58)
5. To satisfy intellectual curiosity**	1.95 (.99)	2.51 (.82)
6. To reflect on your attitudes and practices	2.02 (1.00)	2.11 (.96)
<i>Symbolic use</i>	1.77 (1.08)	2.11 (.93)
7. To justify or validate your decisions	1.77 (1.08)	2.11 (.93)

*p < .05; **p < .01

3.2 The four factors influencing RBI use

Contrary to the researcher's expectations, the mean scores of the observed factor variables did not gravitate around the point of neutrality as the respondents seemed to agree about the importance of the four factors.

The mean scores summarized in Table 6 revealed that among the awareness activities, discussing RBI with colleagues was rated by Finnish practitioners as the most useful activity, whereas the presentation of tailored research findings was rated highest by practitioners in the UAE. On the other hand, regular contacts with RBI distributors and opportunities to discuss RBI with the research team were rated lowest by both groups of practitioners. T-tests revealed no significant differences among the responses of the practitioners as the mean scores of both groups were relatively close to each other.

Table 6.

Usefulness of awareness activities according to practitioners

Rate the extent to which you agree that the following activities are useful to make you aware of RBI... 1 – strongly disagree, 3 – neutral, 5 – strongly agree	Means (SD)	
	UAE	Finland
1. Opportunities to discuss research results with the research team	3.77 (.77)	3.76 (.77)
2. Demonstrations about how to apply research recommendations	3.82 (.81)	4.04 (.64)
3. Regular contacts with people who distribute research-based information	3.71 (.94)	3.98 (.87)
4. Research results accompanied by clear and explicit recommendations	4.02 (.72)	4.09 (.76)
5. Discussions of research-based information with colleagues	4.05 (.78)	4.36 (.71)
6. Your involvement in a research project	4.11 (.69)	4.13 (.76)
7. Presentation of research findings tailored to your needs	4.13 (.79)	4.24 (.91)
Awareness activities average	3.94 (.59)	4.09 (.52)

Even though the average scores might suggest that both groups of practitioners had a similar outlook towards the influence of organizational factors, the mean scores of the individual items in Table 7 and T-tests highlighted some interesting differences. While practitioners in the UAE rated “available facilities and technology” highest, Finnish practitioners valued the presence of a supportive environment the most, with “opportunities to challenge traditions” coming in second. Interestingly, “opportunities to challenge traditions” was rated as the least influential factor by practitioners in the UAE. Moreover, while Finnish practitioners rated the impact of organized groups (such as unions) on their decision to implement research the least, it was rated significantly higher by practitioners in the UAE.

Table 7.

Influence of organizational factors according to practitioners

Rate the extent to which you agree that the following organizational factors influence use of RBI... 1 – strongly disagree, 3 – neutral, 5 – strongly agree	Means (SD)	
	UAE	Finland
1. A supportive environment	4.24 (0.71)	4.40 (0.58)
2. Human resources, such as the availability of qualified staff	4.18 (0.72)	4.11 (0.88)
3. Organizational importance for professional development	4.24 (0.88)	4.31 (0.70)
4. Incentives, such as remuneration, honoraria, and lessening the workload	4.16 (0.81)	3.89 (0.98)
5. Opportunities to challenge established habits and traditions**	3.84 (0.93)	4.34 (0.61)
6. Available facilities and technology	4.36 (0.71)	4.29 (0.76)
7. Organized groups, such as unions, granting agencies, media**	4.00 (0.9)	3.40 (0.84)
8. Available time to read a journal, apply a new technique, etc.	4.29 (0.66)	4.32 (0.86)
Organizational factors average	4.17 (.55)	4.13 (.47)

*p < .05; **p < .01; ***p < .001

As the results in Table 8 suggest, considerable disparity in mean scores was observed for the variables pertaining to opinions about research. Compared to their Finnish counterparts, practitioners in the UAE had more reserved opinions about RBI, to the extent that the item they rated the highest (usefulness to improve practice) was still rated lower than the item rated lowest by Finnish practitioners (ease of transfer into practice). Moreover, the results suggest that Finnish practitioners view research as reliable and trustworthy since item 7 was rated the highest among the seven statements. Contrastingly, practitioners in the UAE had more reserved views regarding the ease of understanding and accessibility, the reliability, and trustworthiness of RBI, as items 5, 6, and 7 were rated the lowest.

Table 8.

Practitioners' opinions about research

Rate the extent to which you agree on RBI... 1 – strongly disagree, 3 – neutral, 5 – strongly agree	Means (SD)	
	UAE	Finland
1. Is relevant to your reality*	4.07 (.70)	4.40 (.49)
2. Offers timely information**	3.91 (.86)	4.41 (.50)
3. Is easy to transfer into your practice*	3.93 (.83)	4.25 (.61)
4. Is useful to guide or improve your professional practice	4.23 (.68)	4.36 (.53)
5. Is easy to understand**	3.75 (.84)	4.27 (.69)
6. Is easy to find**	3.89 (.87)	4.32 (.67)
7. Is reliable and trustworthy***	3.64 (.72)	4.50 (.55)
Opinions about research average**	3.94 (.51)	4.36 (.47)

*p < .05; **p < .01; ***p < .001

The means in Table 9 suggest that practitioners had positive opinions regarding the necessity of IT and research appraisal skills, as all items in the list were rated high except for the “ability to assess the quality of RBI”, which was rated the lowest by practitioners in UAE.

Table 9.*Necessity of IT and research appraisal skills according to practitioners*

Rate the extent to which you agree that the following skills are necessary in everyday practice... 1 – strongly disagree, 3 – neutral, 5 – strongly agree	Means (SD)	
	UAE	Finland
1. Ability to assess the quality of research-based information*	3.93 (0.78)	4.30 (0.51)
2. Skills to use information technology such as Internet, databases	4.40 (0.62)	4.23 (0.52)
3. Ability to read and understand the research publications	4.29 (0.76)	4.36 (0.53)
4. Expertise to translate research findings into practice**	4.07 (0.72)	4.43 (0.50)
Individual expertise average	4.17 (.55)	4.33 (.37)

*p < .05; **p < .01

To ensure that the four factors were comprehensive, the participants were asked if there were any other factors that influenced their use of research. A total of 35 participants responded to the question, 20 from the UAE and 15 from Finland. Out of the 35 responses, 8 were deemed irrelevant as they discussed topics that were unrelated to the question. Since the responses were few in number and highlighted similar points, the responses of both groups were analysed together.

The analysis revealed no new factors that could influence RBI, further suggesting that the four factors were comprehensive and well-defined. Out of the remaining 27 responses, 2 mentioned awareness activities, 10 mentioned organizational factors, 12 mentioned aspects about RBI such as availability, quality, and relevance, and 1 mentioned individual expertise. It is interesting to note that half (5) of the responses about organizational factors mentioned the availability of time. Aside from that, one participant mentioned the frequent switching between face to face and distance learning, and another mentioned time of the school year, suggesting that they would usually like to introduce something new to their classroom when school starts.

The participants were also asked to indicate what kind of support they need to make better use of research findings. A total of 35 participants responded to this question as

well, 21 from the UAE and 14 from Finland. Out of the 35 responses, three were deemed irrelevant as they discussed topics that were unrelated to the question. However, some participants mentioned multiple areas in which they needed support, so the number of responses reached a total of 37. Content analysis revealed four main areas in which practitioners needed support; organizational support (N=19), research accessibility (N=9), research utilization (N=6), and technical support (N=3), each of which will be briefly discussed in the following subsections.

Organizational support. The results suggest that the majority of the participants appreciate more support from their organization or work place. The allocation of time to read and apply research findings was mentioned 8 times, workshops and professional development opportunities were mentioned 5 times, while other types of support such as financial support and support from the workplace community was mentioned 6 times.

Research accessibility. 9 participants mentioned that they do not have access to educational journals or that RBI is scattered “haphazardly” such that they do not know where to find RBI that is relevant to their discipline. Some of these participants suggested that they would benefit from the presence of a centralized database where research is stored and organised according to its subject area and is free for public use.

Research utilization. Some participants (N=6) mentioned that they need help understanding research articles, incorporating research findings into their practice, confirming the reliability of the findings, and finding research that is useful and has practical implications.

Technical Support. Very few participants (N=3) said that they need help with technology, suggesting that they would rather receive RBI in the form of hard copies rather than soft copies.

3.3 Correlations between demographic variables, RBI use, and the four factors

To answer the third research question, correlation analysis was used to examine the association between the subscales of the questionnaire and the demographic variables such as gender, age, experience, and education. When interpreting statistically significant correlation coefficients, Taylor (1990) suggests that “correlation coefficients (in absolute value) which are ≤ 0.35 are generally considered to represent low or weak correlations, 0.36 to 0.67 modest or moderate correlations, and 0.68 to 1.0 strong or high correlations with r coefficients ≥ 0.9 very high correlations” (p. 37).

Summarized in Table 10 for the UAE dataset, the coefficients show that experience positively and moderately correlated with the use of RBI for instrumental purposes as well as the first two factors; awareness activities and organizational factors. Moreover, the four factors also correlated positively and moderately with the four composites of RBI use. Gender, age, and level of education on the other hand did not correlate with any of them, further reaffirming the results of the previous studies (e.g. Lysenko et al., 2015) and suggesting that experienced participants were more likely to report frequent RBI use than those with higher educational qualifications.

On the other hand, the correlation analysis of the Finnish dataset summarized in Table 11 did not reveal any significant correlations other than a negative but weak correlation between work experience and the participants’ views towards the influence of organizational factors. This hints at an interesting difference between the views of less experienced and more experienced educators regarding the roles of organizations in facilitating research use. For example, while less experienced educators might rely more on their organisations and expect more support from them, more experience educators seem to place more emphasis on one’s own expertise and experience.

Table 10.*Correlations Between Demographic Variables, RBI use, and the four factors (UAE)*

Measure	1	2	3	4	5	6	7	8	9	10	11	12
1. Use of RBI	—											
2. Instrumental use	0.57**	—										
3. Conceptual use	0.43**	0.67**	—									
4. Symbolic use	0.40**	0.45**	0.71**	—								
5. Gender	0.02	-0.12	-0.18	0.08	—							
6. Experience	0.52**	0.42**	0.10	0.12	0.08	—						
7. Age	0.23	-0.09	-0.14	0.02	0.13	0.63**	—					
8. Education	0.10	-0.11	-0.14	-0.13	0.07	0.12	0.18	—				
9. Awareness activities	0.50**	0.24	0.32*	0.33*	-0.01	0.32*	0.09	0.12	—			
10. Organizational factors	0.42**	0.17	0.15	0.22	0.16	0.32*	0.20	0.44**	0.00	—		
11. Opinions about RBI	0.41**	0.57**	0.46**	0.37*	-0.16	0.27	-0.11	0.03	0.00	0.00	—	
12. Individual expertise	0.44**	0.33*	0.31*	0.28	0.03	0.28	0.22	0.24	0.00	0.00	0.00	—

* $p < .01$, ** $p < .05$

Table 11.*Correlations Between Demographic Variables, RBI use, and the four factors (UAE)*

Measure	1	2	3	4	5	6	7	8	9	10	11	12
1. Use of RBI	—											
2. Instrumental use	0.32*	—										
3. Conceptual use	0.41**	0.56**	—									
4. Symbolic use	0.41**	0.63**	0.50**	—								
5. Gender	0.03	0.21	0.22	0.00	—							
6. Experience	0.06	0.14	0.16	-0.03	-0.17	—						
7. Age	0.19	0.21	0.16	0.15	-0.08	0.42**	—					
8. Education	0.05	-0.17	-0.10	-0.17	-0.21	0.02	0.36*	—				
9. Awareness activities	-0.01	0.12	0.01	0.21	-0.18	0.00	0.01	-0.08	—			
10. Organizational factors	-0.11	0.07	0.08	0.15	0.17	-0.342*	-0.24	-0.01	0.00	—		
11. Opinions about RBI	-0.13	0.03	0.06	0.08	0.09	-0.09	-0.26	0.18	0.00	0.00	—	
12. Individual expertise	0.02	-0.23	0.02	-0.12	-0.05	-0.03	-0.20	0.14	0.00	0.00	0.00	—

* $p < .01$, ** $p < .05$

4 DISCUSSION

The purpose of this study was to evaluate the use of Research-Based Information (RBI) in education in Finland and the UAE, to examine the factors that influence the use of RBI by practitioners and to investigate what kind of support they need, and to investigate correlations between demographic variables, RBI use, and factors that influence the use of RBI. In this final section, the findings will be discussed considering extant research, the strengths and limitations of the study will be mentioned, and implications and recommendations for future research will be stated.

4.1 The use of RBI by practitioners

The data collected in this study suggests that research use by practitioners continues to be a challenge. However, compared to previous findings (Cousins & Walker, 2000; Kretlow & Helf, 2013; Williams & Coles, 2007; Lysenko et al., 2014; Lysenko et al., 2015), practitioners in this study reported using more RBI, especially from the internet. This increased use of RBI was particularly evident among Finnish practitioners, who reported using RBI of any sort three or four times on average in the past year. Nevertheless, while it is tempting to believe that the renewed calls for knowledge mobilization and research-based practices have come to fruition, it is likely that the increased use of RBI is due to factors related to the COVID-19 pandemic as the majority of practitioners from both countries reported using more RBI this year compared to last year. Vijayan (2021) states that “While much of the online teaching pedagogies have been theoretically and practically explored to a limited extent, the scale at which these were deployed was unprecedented” (p. 1). This has led a large number of practitioners to seek support regarding issues in their daily practice from researchers and resource people who shared the challenges, solutions and knowledge obtained during this period.

As for the purposes of RBI use, the self-reports suggest predominantly instrumental uses by practitioners in the UAE but conceptual uses by Finnish practitioners. These differences highlight some key areas in which practitioners from both countries could

use more support. For instance, Lysenko et al. (2015) suggest that “it is possible that the research findings aren’t presented in a way that offers answers to specific issues of practical concern or perhaps practitioners are simply used to going elsewhere (e.g., to colleagues) to find a quick fix” (p. 50).

The four factors, comprising of practitioners’ opinions about RBI, their attitudes toward awareness activities, expertise, and organizational factors were uniformly rated high by both groups of practitioners. Similar to previous findings (Lysenko et al., 2015), the results of the UAE dataset also showed significant correlations of varying strengths between the four factors and the four composites of research use. The correlations between opinions and the four composites were most notable as they revealed that educators who shared more positive views of RBI were more likely to report frequent use of RBI, but not to a large extent. Research expertise also was also rated highly by both groups of practitioners. Research suggests that cultivating practitioners’ capacity to assess research findings also enhances their ability to understand and use research, thereby facilitating RBI use (Cousins & Walker, 2000).

While awareness activities that involve creating sustainable partnerships between researchers and practitioners are expected to promote research use (Cousins & Walker, 2000; Huberman, 1990), both groups of practitioners seem to have a preference for traditional approaches of research dissemination such as discussions with colleagues as well as the presentation of tailored research findings that are accompanied by clear and explicit recommendations. However, the responses to the open-ended questions suggest that such practices might be insufficient for practitioners who do not know where to find reliable sources of RBI as some respondents seem to be unaware of the presence of free databases for educational research such as the Education Resources Information Center (ERIC). Finally, although some practitioners face no challenges in utilizing RBI, it seems that many – especially those in the UAE – expect a great deal of support from their organizations in the forms of allocating time (Vanderlinde & van Braak, 2010) and other necessary resources such as technology (William & Coles, 2007), as well as providing professional development and workshops (Wilson & Easton, 2003).

4.2 Strengths and limitations of the study

There are a few limitations that must be taken into consideration when evaluating the results of this study. First, compared to previous studies which had thousands of participants, this study's participants represented a convenience sample, and the sample sizes (N=45) were relatively small. Moreover, while the Finnish participants represented various cities in Finland, the practitioners in the UAE were from the two largest cities. Since the diversity and randomness of participant selection contribute to the generalisability of the findings (Tracy, 2012), the results of this study may not be generalizable to the whole populations.

Second, the research methodology includes some limitations such as correlational design and self-reports. While correlations provide a quick and easy way to describe the strength of a relationship, they cannot be used to identify causal relationships and they cannot provide conclusive information (Stangor, 2011). Moreover, while self-report questionnaires are inexpensive, fast, and simple to administer, they suffer from some critical disadvantages due to the way people generally behave. For example, self-reported answers may be exaggerated, and respondents may feel embarrassed to provide responses that are typically considered low or unsatisfactory (Northup, 1996).

Third, since creating, validating, and testing a new questionnaire requires a great deal of time and effort, this study was constructed on an existing questionnaire since it was found to go hand in hand with this study's aims and objectives. However, this did not constrain the scope of the study. Instead, as it allowed the researcher to focus on modifying and contextualizing the questionnaire to ensure that it's fit for purpose. The data collected shows that the questionnaire served its purpose and succeeded in providing a relatively accurate measure of the concepts in question. Yet, even though the questionnaire was translated to Finnish, the Finnish version was not validated and piloted due to time constraints caused by the pandemic. Perhaps the Finnish questionnaire would have been more accurate had it been linguistically and culturally validated. However, whether the Finnish dataset would have generated more significant correlations is anyone's guess.

Finally, it is impossible to expect the participants to accurately recall the frequency with which they have used RBI from various sources as well as the number of times RBI was used for various purposes over the past year. Since practitioners usually do not count the frequency with which they use RBI, it is likely that they forgot a few occasions of RBI use or miscounted some activities as instances of RBI use. Consequently, the data obtained is only an estimate of research use and the findings are by no means conclusive.

However, despite the presence of these limitations, several insights can be drawn from this study, most notably the need for cultivating positive attitudes toward educational research and creating a capacity for research utilization among organizations, as we will see in the following final subsection.

4.3 Implications and recommendations for future research

The results of this study illustrate that promoting the use of RBI begins with cultivating positive attitudes toward educational research, developing practitioners' digital competences and research expertise, promoting the benefits of research use, and creating a capacity for research utilization among educational organizations.

Teacher education programs can greatly support the utilization of RBI by improving practitioners' digital competences based on the Digital Competence Framework for Educators. Moreover, since students' perceived relevance and usefulness of research was shown to correlate highly with their positive attitudes toward research (Papanastasiou, 2005), teacher programs can also help teacher students develop skills that would enable them to find reliable sources of RBI, appraise its appropriateness for their context, evaluate its effectiveness, and apply it to their practice (Lysenko et al., 2015). On top of that, educational leaders can play an important role in creating a capacity for research utilization within their organizations. Many practitioners feel that it is the responsibility of their organization to provide them with workshops, trainings, and opportunities for professional development. They also agree that they

would benefit from additional support, such as providing them with the appropriate resources, allocating time for the consumption of RBI, and supporting them when incorporating new teaching methods or strategies.

Building upon previous research, the present study provides more information about the use of research based information by practitioners. Nonetheless, the original aim of this study was to investigate the use of RBI by practitioners and policy makers in the field of education since there is lack of data on this topic. However, due to difficulties in the data collection mainly due to the COVID-19 pandemic, the scope of the topic had to be confined. Thus, future research could examine how practitioners and policy makers use RBI and compare each group's preferences. Furthermore, since evidence of a positive impact of research-based practices on academic performance is still lacking (Demski & Racherbäumer, 2017), future studies can look at the relationship between research use by practitioners and student achievement.

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6 APPENDIX

Questionnaire about the Use of Research-based Information (English)

Part 1: Personal Background Information

2. Are you a male or a female?

- Male
- Female
- Other / Prefer not to answer

3. How old are you?

4. What is the highest level of formal education you have completed?

- Basic education
- Upper secondary education
- Bachelor's Degree
- Master's Degree
- PhD
- Other

5. Please, indicate the role/position in which you reply to the survey.

- Teacher - Please indicate the grade(s) you teach and your subject area(s)
- Assistant / Vice Principal
- Other

6. How many years of work experience do you have in your present and corresponding positions, regardless of whether you worked full-time or part-time?

7. Have you taken part in courses on research methods or participated in research projects? Please select what applies to you:

- Received education in research methodology
- Conducted/Co-conducted research projects
- No research-related experience

Part 2: Use of RBI

8. Rate the frequency with which you have used RBI from the following sources during the present year:

	0 - never	1 - one or two times	2 - three or four times	3 - five or more times
1. Scholarly Documents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Professional Publications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. School evaluations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Internet, websites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Multimedia: video, DVD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Mass media: TV, radio, newspapers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Pre-service training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. In-service training, workshops	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Conferences, presentations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Experts, resource People	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Other: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part 3: Dimensions of use of Research Based Information (RBI)

9. Rate the frequency with which you have used RBI during the present year:

	0 - never	1 - one or two times	2 - three or four times	3 - five or more times
1. To develop new activities, programs, guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. To improve professional practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. To resolve problems in your daily work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. To achieve a better understanding of issues in your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. To satisfy intellectual curiosity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. To reflect on your attitudes and practices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. To justify or validate your decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Other: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. Rate the extent to which you agree that the following activities are useful to make you aware of RBI:

	1 - Strongly Disagree	2 - Disagree	3 - Neutral	4 - Agree	5 - Strongly Agree
1. Opportunities to discuss research results with the research team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Demonstrations about how to apply research recommendations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Regular contacts with people who distribute research-based information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Research results accompanied by clear and explicit recommendations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Discussions of research-based information with colleagues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Your involvement in a research project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Presentation of research findings tailored to your needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Other <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. Rate the extent to which you agree that the following organizational factors influence use of RBI:

	1 - Strongly Disagree	2 - Disagree	3 - Neutral	4 - Agree	5 - Strongly Agree
1. A supportive environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Human resources, such as the availability of qualified staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Organizational importance for professional development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Incentives, such as remuneration, honoraria, and lessening the workload	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Opportunities to challenge established habits and traditions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Available facilities and technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Organized groups, such as unions, granting agencies, media	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Available time to read a journal, apply a new technique, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Other <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Rate the extent to which you agree on RBI:

	1 - Strongly Disagree	2 - Disagree	3 - Neutral	4 - Agree	5 - Strongly Agree
1. Is relevant to your reality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Offers timely information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Is easy to transfer into your practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Is useful to guide or improve your professional practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Is easy to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Is easy to find	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Is reliable and trustworthy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Other <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

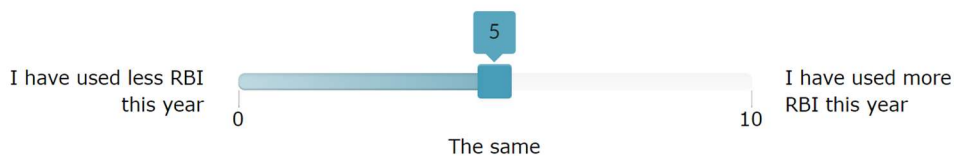
13. Rate the extent to which you agree that the following skills are necessary in everyday practice

	1 - Strongly Disagree	2 - Disagree	3 - Neutral	4 - Agree	5 - Strongly Agree
1. Ability to assess the quality of research-based information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Skills to use information technology such as Internet, databases	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Ability to read and understand the research publications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Expertise to translate research findings into practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. What other factors influence your use of Educational Research?

15. What kind of support do you need to make better use of research findings?

16. How does your use of RBI this year (during the pandemic) compare to last year's?



Questionnaire about the Use of Research-based Information (Finnish)

Osio 1: Taustatiedot

2. Missä kunnassa työskentelet? *

3. Sukupuolesi? *

- Mies
- Nainen
- Muu / En halua sanoa.

4. Minkä ikäinen olet? *

5. Mikä on korkein suorittamasi tutkinto? *

- Perus-/kansakoulu
- Toinen aste
- Alempi korkeakoulututkinto
- Ylempi korkeakoulututkinto
- Tohtorin tutkinto
- Muu

6. Mistä roolista/asemasta vastaat kyselyyn? *

- työntekijä, nimikkeesi ja kouluaste, jolla työskentelet
- Luottamushenkilö, nimikkeesi
- Muu, mikä rooli

7. Miten monta vuotta sinulla on kokemusta nykyisestä tai vastaavasta roolistasi (ks. vastauksesi kysymykseen 6) riippumatta siitä, oletko toiminut siinä koko- tai osa-aikaisesti? *

8. Oletko osallistunut tutkimusmenetelmäkoulutukseen tai osallistunut tutkimushankkeisiin? Valitse itselles sopivat vaihtoehdot. *

- Olen osallistunut tutkimusmenetelmäkoulutukseen
- Olen osallistunut tutkimushankkeisiin
- Minulla ei ole kokemusta

Osio 2: Tutkimusperustaisen aineiston lähteiden käyttö

9. Miten usein olet käyttänyt alla olevia tutkimusperustaisen aineiston lähteitä kuluneen vuoden aikana?

	En koskaan	1-2 kertaa	3-4 kertaa	5 kertaa tai useammin
1. Tieteellisiä asiakirjoja	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Ammattijulkaisuja	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Oppilaitosarviointeja	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Internet, verkkosivut	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Multimedia: video, DVD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Joukkoviestintä: TV, radio, sanomalehdet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Perustutkintokoulutukseen osallistuminen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Täydennyskoulutukseen osallistuminen, työpajat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. konferensseihin ja esityksiin osallistuminen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Asiantuntijoiden kuuleminen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Muu <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Osio 3: Tutkimusperustaisen aineiston käytön tavoitteet

10. Miten usein olet käyttänyt tutkimusperustaista aineistoa alla oleviin tarkoituksiin kuluneen vuoden aikana:

	en koskaan	1-2 kertaa	3-4 kertaa	5 kertaa tai useammin
1. Uusien toimintojen, ohjelmien ja ohjeiden kehittämiseen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Toiminnan laadun parantamiseen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Toiminnan ongelmien ratkaisemiseen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Ymmärryksen parantamiseen työhösi sisällyvistä asioista	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Ammatillisen tiedonjanosi tyydyttämiseen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Asenteittesi ja käytäntöjesi pohtimiseen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Päätösten perusteluun tai vahvistamiseen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Muu <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Osio 4: Tutkimusperustaisen aineiston käyttöön vaikuttavat tekijät

11. Miten arvioit seuraavien tekijöiden auttavan lisäämään tietoisuuttasi tutkimusperustaisen aineiston käytöstä:

	1 - olen vahvasti eri mieltä	2 - olen eri mieltä	3 - neutraali mielipide	4 - olen samaa mieltä	5 - olen vahvasti samaa mieltä
1. Mahdollisuus keskustella tutkimustuloksista tutkimustiimin kanssa	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Tutkimussuositusten käytön havainnollistamiset	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Säännölliset yhteydet tutkimusperäistä tietoa jakavien ihmisten kanssa	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Tutkimustieto, johon liittyy selkeät ja yksityiskohtaiset suositukset	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Keskustelut kollegojen kanssa tutkimusperustaisesta tiedosta	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Oma osallistumisesi johonkin tutkimushankkeeseen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Omiin tarpeisiisi räätälöity tutkimustulosten esittäminen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Muu <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Miten arvioit seuraavien organisaatioon liittyvien tekijöiden vaikuttavan tutkimusperustaisen aineiston käyttöösi:

	1 - olen vahvasti eri mieltä	2 - olen eri mieltä	3 - neutraali mielipide	4 - olen samaa mieltä	5 - olen vahvasti samaa mieltä
1. Tukea antava ympäristö	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Henkilöstöresurssit, kuten pätevän henkilöstön saatavuus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Organisaation vaikutus ammatilliseen kehittymiseen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Kannustimet, kuten palkka, palkkiot ja työkuorman keventäminen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Mahdollisuudet haastaa vakiintuneet tavat ja perinteet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Käytössä olevat oppimisympäristöt, välineet ja teknologia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Järjestötoiminta, kuten ammattiyhdistysliikkeet, rahoituslähteet, media	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Käytettävissä oleva aika lukea julkaisuja, käyttää uutta teknologiaa jne	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Muu <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. Miten arvioit seuraavien tutkimukseen kohdistuvien mielipiteidesi vaikuttavan tutkimusperustaisen aineiston käyttöösi:

	1 - olen vahvasti eri mieltä	2 - olen eri mieltä	3 - neutraali mielipide	4 - olen samaa mieltä	5 - olen vahvasti samaa mieltä
1. Tutkimus liittyy omaan todellisuuteesi	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Tutkimus tarjoaa ajankohtaista tietoa	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Tutkimusta on helppoa soveltaa käytäntöön	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Voit käyttää tutkimusta ohjaamaan tai parantamaan omaa ammatillista osaamistasi	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Tutkimusta on helppo ymmärtää	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Tutkimus on selkeä	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Tutkimus on luotettava	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Muu <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Miten tarpeellisiksi arvioit seuraavat taidot tutkimusperustaisen aineiston käytöllesi:

	1 - olen vahvasti eri mieltä	2 - olen eri mieltä	3 - neutraali mielipide	4 - olen samaa mieltä	5 - olen vahvasti samaa mieltä
1. Taito arvioida tutkimusperustaisen tiedon laatua	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Taito käyttää informaatioteknologiaa kuten internet, tietokannat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Taito lukea ja ymmärtää tutkimusjulkaisuja	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Asiantuntijuus soveltaa tutkimustuloksia käytäntöön	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. Mitkä muut tekijät vaikuttavat tutkimustiedon käyttöösi?

16. Millaista tukea tarvitset, jotta voit paremmin hyödyntää tutkimustietoa ja -tuloksia?

17. Onko tutkimusperäisen tiedon käyttösi muuttunut kuluneen vuoden (koronatilanteen) aikana?

