

How Teachers Access and Engage with Educational Research

Daniel Mixson

St. Mary's College of Maryland

Abstract: This study explores how teachers in Saint Mary's County Public School System access and engage with educational research. Research-based approaches generally have better classroom outcomes. This study was conducted via a self-report questionnaire that was shared with teachers around the county. It addressed how often they access and engage with educational research, where they are able to obtain educational research, and some of the challenges they identify that impact their ability to access and engage with educational research. Overall, it was noted that administrators can have a significant impact on teachers' access to educational research. Additionally, learning support staff significantly impacted both teachers' access to and engagement with educational research, and that the major challenges impacting teachers' ability to access and engage were time and money.

Introduction and Justification

As a teacher, it is important to maintain knowledge of current research concerning teaching methods. However, teachers often report that it is difficult to access quality research (Hoff, 2014; Polly, 2017). Many educators rely on other teachers' opinions of lesson plans and educational practices to inform their own choices as to how they conduct their own classroom (Bates et al., 2018; Polly, 2017). Whereas these discussions can be invaluable in teachers' pedagogical development, because of individual beliefs, biases, and other subjective aspects, practices derived from other teachers may not be as beneficial to another teacher as scientifically-backed research.

Many teachers are under an immense amount of pressure to deliver quality lessons in a condensed time frame, which limits their ability to access and thoroughly evaluate educational research. For educators entering the field, being aware of the resources that are available to teachers is necessary, especially for those who are attempting to establish their teaching practices in a new classroom. However, for established teachers, it is equally important to continually update classroom practices so as to not stagnate in methods based on outdated research. Unfortunately, such teachers are less likely to use educational research to inform their instruction (Lamanauskas et al., 2020). However, the reasons why teachers use or fail to use research are not well-established in the literature. If by choice, then the preconceptions that teachers may have toward research must be investigated so as to rectify this divide. If it is a problem of access, then providing teachers with a method by which they could locate and engage with educational research could greatly increase their

ability to implement evidence-based practices in their classroom. The goal of my study is to explore how teachers access and engage with educational research, and to examine how teacher's influences regarding educational research may affect how much they engage with educational research.

This research could impact essentially all teachers, especially those in Saint Mary's County Public School System. However, this study would specifically be targeted to help those who are interested in becoming teachers, as being aware of the resources available could be incredibly beneficial to those entering the field. Providing prospective teachers with methods through which they might access research intended to inform their teaching practices is a necessary service.

Literature Review

Research, in many areas, may provide insight into and understanding of phenomena, and generally enhance knowledge and practices pertaining to a discipline. Scientific research is defined as the systematic collection of data from which inferences and conclusions can be drawn so as to attempt to explain a possibly verifiable claim (Spear-Swerling, 2007). A major difference between social sciences like educational studies and the natural sciences is the incredible variation of context that is prevalent in the classroom (Berliner, 2002; Black & Wiliam, 2003). Despite such complexities, educational research can help to inform teacher practices and produce more favorable student outcomes (Berliner, 2002; Black & Wiliam, 2003; Spear-Swerling, 2007).

Regardless of the benefits of educational research, it has not always been readily adopted by practicing educators. Teachers may acknowledge the importance and benefit of educational research but have some level of hesitance or disinterest in engaging with such resources (Hennessy & Lynch, 2019; Lamanauskas et al., 2020). Researchers and educators sometimes have different views about the effectiveness of instructional strategies and approaches (Boardman et al., 2005). For example, whereas educational psychologists widely regard learning styles as a myth, the majority of educators endorse the practice of teaching students according to their individual styles (Nancekivell et al., 2020). However, the hesitancy of teachers to adopt certain practices is sometimes justified. The effectiveness of a given practice may be dependent on context such that, whereas some classrooms may benefit from certain practices, others may find those practices to be ineffective if not outright counter-productive (Berliner, 2002). Furthermore, current educational practices, even those that are derived from research, may become less appropriate in the ever-evolving nature of education (Berliner, 2002).

The divide becomes more clear when the reasons behind this break between educational research and educational practitioners is explored. One of the primary reasons behind why teachers struggle with incorporating research into their classroom practices seems to be feasibility (Boardman et al., 2005; Borg, 2009). Because of the variation between classrooms, a practice that may be deemed appropriate due to research-based evidence may not be applicable (Berliner, 2002). It is impossible to account for all contingencies that may occur in a classroom, and because teachers must constantly alter their instruction based on the needs of the students (Biesta, 2007; Boardman et al., 2005).

Additionally, though teachers may struggle with the applicability of a given evidence-based practice in their classroom, the concept of research literacy limiting educator's ability to engage with educational research must also be taken into account (Williams & Coles, 2007). Educational research may be intended to inform the practices of teachers, but if the method through which the research is presented alienates the teacher and prevents them from locating the core concepts through which to inform their practices, then the research will not effectively educate the educator on their educational practices (Fishman et al., 2013).

Although research-based practices may not always be applicable in certain classrooms and teachers may struggle with understanding how best to apply a research-based practice, many teachers have reported that they have difficulty accessing educational research (Hoff, 2014; Polly, 2017). Hennessy and Lynch (2019) noted that many teachers struggle with finding the time or money to be able to adequately explore research. For example, a teacher may not be able to afford, both monetarily and timewise, to attend a conference concerning a given piece of educational research, or to gain access to good quality academic journals (Sato & Loewen, 2019).

There may also be friction between teachers' beliefs, dispositions, and attitudes about educational research (Remillard & Bryans, 2004). A teacher's existing beliefs and practices may inhibit their ability to engage with research, as they may attempt to incorporate new research into their existing practices (Zeuli, 1994). Once a teacher has become comfortable with their teaching practices, it may be difficult to alter their methods of educating their students when presented with new information (Remillard & Bryans, 2004). Moreover, educators contend with time constraints and workloads that make it difficult to interpret and incorporate new research into existing practices (Hennessy & Lynch, 2019; Hoff, 2014).

In lieu of educational research, many teachers turn to alternative methods of identifying potential practices which could be implemented in the classroom (Polly, 2017). Some teachers, particularly those early in their careers, may rely on basic search engines such as Google to identify classroom practices (Moore & Chae, 2007). Teachers who use such an approach tend to search for practices that were recommended by other teachers, or were highly rated on websites such as Teachers Pay Teachers (Bates et al., 2018; Knake et al., 2021). However, Cleaver and Wood (2018) noted that the use of such websites for educational purposes can be problematic, as they are not academic and therefore are not obligated to ensure that the shared practices are research-based, which could result in misinformation being shared, damaging a teacher's educational effectiveness.

In sum, it would seem that a major contributor to the divide between educational research and practice is restrictions of access due to time and money (Borg, 2007, 2009; Hennessy & Lynch, 2019; Sato & Loewen, 2019). However, while providing teachers with the time and money to access research could help, it must also be noted that the feasibility of a given research-based practice within a classroom could also be an obstacle (Boardman et al., 2005; Fishman et al., 2013). This seems to highlight the need for research to be firmly grounded in practicality, so as to allow for teachers to more easily incorporate it into their classroom practices.

Purpose Statement and Research Questions

The purpose of this study is to explore how teachers in Saint Mary's County access and engage with educational research, as well as some of the challenges they identify that impact their ability to access and engage with educational research.

1. How do teachers access educational research?
2. How do teachers engage with educational research?
3. What are the influences that impact teachers' ability to access and engage with educational research?

Methods

Sample

This study involved a convenience sample, teachers in the county who had connections to Saint Mary's College of Maryland, consisting of 40 teachers from a Southern Maryland public school system. Of these 40 teachers, 7 had been teaching between one and five years, 3 had been teaching between five and ten years, and 30 had been teaching longer than ten years. Additionally, 15 of these teachers taught elementary school, 7 taught middle school, and 18 taught high school.

Procedure

This study was conducted through the use of an online questionnaire. This questionnaire was delivered to teachers throughout the county via email or was shared with grade-level or subject teams by participating teachers. Because the questionnaire was completed online, no identifiable information was collected. As a result, all participants were able to remain anonymous.

Measures

For the purposes of this study, a questionnaire was generated with both quantitative and qualitative responses and consisted of 16 selected-response and 3 constructed-response items (see Appendix A). The selected response items were broken into three subscales: access, consisting of five Likert-type scale items, engagement, consisting of four Likert-type scale items and two constructed response item, and influences, consisting of seven Likert-type scale items and two constructed response items. The three constructed-response items were intended to add explanation to the selected-response items, as it provided participants with an opportunity to expand upon their responses. Furthermore, the Influences subscale was used to expand upon the relationship, or lack thereof, between teachers' perception and engagement with educational research, and how often they access educational research. The selected-response items were analyzed using a bivariate correlation, and the constructed response items were used to explain the results of any potential relationship between variables.

Results

A bivariate correlation statistical analysis was used to explore the relationship between variables. A sum score was generated for the Access subscale and the Engagement subscale, and the variables in the Influences subscale were correlated individually against each of the summative variables.

How do teachers in Saint Mary's County access and engage with educational research?

There was a significant relationship between Access ($M = 14.70$, $SD = 3.963$) and the Impact of Learning Support Staff ($M = 3.18$, $SD = .992$). The correlation was positive and moderately strong ($r(40) = .524$, $p < .05$). The relationship between Access and the Impact of Administrators ($M = 3.23$, $SD = .947$) was significant ($r(40) = .346$, $p < .05$). The relationship between Engagement ($M = 13.98$, $SD = 2.860$) and the Impact of Learning Support Staff was significant ($r(40) = .498$, $p < .05$). Additionally, the constructed response that pertained to engaging with educational research indicated that the majority of teachers in Saint Mary's County did not experience difficulty in engaging with educational research. However, a number of participants did note that they were more likely to trust educational research if there is evidence of its effectiveness in the classroom, either from colleagues or from repeated studies from multiple demographics.

What challenges do teachers identify in accessing and interpreting educational research?

While it was not significant, the Impact of Teachers ($M = 4.43$, $SD = .594$) was weakly, negatively correlated with Engagement ($r(40) = -.265$, $p > .05$). Additionally, though also not significant, the impact of Time ($M = 1.85$, $SD = 1.001$) was negatively correlated with Access ($r(40) = -.257$, $p > .05$) as well as with Engagement ($r(40) = -.252$, $p > .05$). The relationship between the impact of Interest ($M = 3.83$, $SD = 1.035$) and Access was not significant, but was negatively correlated ($r(40) = -.151$, $p > .05$). The relationship between the impact of Money ($M = 3.13$, $SD = 1.399$) and Access was not significant, but was negatively correlated ($r(40) = -.275$, $p > .05$), as was the relationship with Engagement ($r(40) = -.076$, $p > .05$). Furthermore, the constructed response items in the Influences subscale seemed to reinforce that the majority of teachers in Saint Mary's County do not experience noteworthy challenges when accessing or engaging with educational research. A several of the participants did indicate that time and money were factors in their ability to access and engage with educational research, as it limited their ability to seek out educational research on their own.

Conclusions and Implications

The purpose of this study was to explore how teachers in Saint Mary's County accessed and engaged with educational research, as well as exploring some of the difficulties they identified that might impact their ability to access and engage with educational research. This study was limited by only having access to a convenience sample

of participants. Additionally, due to the complex and busy lives of educators, the time it took to complete the questionnaire may have impacted responses. This study was also limited by the lack of prior research in this area. The measure used to collect this data was also not an established measure, which may have further limited its findings. Finally, because this study was focused on only educators in Saint Mary's County, its findings may not be generalizable to the larger population of teachers.

According to this study, school administrators had a significant impact on how much teachers accessed educational research. This may be, at least partially, due to the restricted amount of time that teachers have to explore educational research (Hennessy and Lynch, 2019). One participant noted that a challenge that impacts their ability to access educational research was time, saying "Time is the biggest factor. I usually go with research that the supervisors have provided to justify their pacing guides and instructional practices". However, it should be noted that this study found that time did not significantly impact teachers' ability to access or engage with educational research, although it did seem to indicate that time has a minor impact. As this participant noted, they rely on educational research delivered by supervisors, which seems to indicate that, while teachers are accessing and engaging with educational research, time does limit their ability to seek it out of their own volition. Another participant noted that "if administrators send out the research I am more likely to trust it," further indicating that educational research is being disseminated throughout the county by school administrators, and that teachers respond positively to this method of accessing and engaging with educational research.

While teachers in the county seem to be able to access educational research, this study did find that, though administrators may aid in the access to educational research, the engagement with educational research was not similarly correlated. Williams and Coles (2007) denotes that, while teachers may be able to access educational research, they may experience some difficulty in making sense of, understanding, and engaging with that educational research. This study found that learning support staff significantly and positively impacted teachers' ability to engage with educational research, which may indicate that learning support staff can assist teachers in the understanding of the meaning behind a given piece of educational research, and the implementation of that meaning in the teacher's classroom. Furthermore, Fishman et al. (2013) noted that teachers' research literacy can impact their ability to explore educational research. Several participants noted difficulties in understanding educational research, one noting that "Clear, concise research that makes it easier to understand what the research found as opposed to numerous pages of academic language that is difficult to follow.". Another expressed that "A lot of the research is very general, and I prefer things that are less fluff and easy to utilize. I can trust a lot of research; I can't necessarily buy into the strategies." as a challenge of engaging with educational research.

While generally, participants did not note money having a significant impact on their ability to access educational research, there was a weak, negative correlation between access and money, which indicated that, though they may still be able to obtain educational research, there may be some difficulty due to the expensive nature of such documents. In prior literature, it was noted that a large contributor to teachers' inability to access educational research was the cost of subscriptions or conferences pertaining to educational topics (Borg, 2007, 2009; Hennessy & Lynch, 2019; Sato & Loewen, 2019). Additionally,

though the impact of other teachers on engagement with educational research was not significant, a weak, negative correlation was found. This would seem to indicate that, while teachers may be able to access some educational research, other teachers' negative opinions of a given piece of research may decrease engagement. Prior literature noted that teachers may seek out the judgment of other teachers concerning research in order to inform their own practices (Bates et al., 2018; Knake et al., 2021; Polly, 2017). This was supported by participant responses, as participants noted that "Feedback from colleagues that I know to affirm the validity of the research", or "If a colleague uses it, and I trust their expertise, I put more faith in it" in response to a question asking what helps them trust educational research.

Finally, while interest was not found to significantly impact access and engagement with educational research, a weak, negative correlation was found. Prior literature noted that teachers' disinterest in educational research topics may impact their engagement with educational research (Hennessy & Lynch, 2019; Lamanaskas et al., 2020). Furthermore, Remillard and Bryans (2004) noted that teachers' own personal beliefs and experiences may influence their engagement with educational research, and their implementation of research-based practices. One participant noted that "I am more likely to trust educational research that aligns with my personal/professional experiences and training", while two others expressed that a challenge to accessing or engaging with educational research was "Locating research that matches my interests or search criteria." and "Knowing where to find the research that I may be looking for or interested in studying/reviewing." This may indicate that teachers are more likely to trust and implement research which matches their experience in the classroom, and also emphasizes the divide between educational research and educators (Boardman et al., 2005).

Finally, there may be an issue of trust in educational research among educators. Berliner (2002) expressed that, because of differences in views between researchers and educators, as well as the ever-evolving nature of the classroom, educational research may not be feasibly applicable to certain teachers' practices. Several participants noted similar issues, one stating that they are more likely to trust research if that research comes "from teachers or professionals actually in the field daily.", while another participant explained that a challenge of engaging with educational research is that "It is constantly changing and evolving so it's truly hard to know/believe what should be used/believed next."

In conclusion, it seems that teachers in Saint Mary's County do have the ability to access and engage with educational research. Despite this, however, several challenges and baffles must still be addressed, and potentially rectified to allow for teachers to explore quality educational research that can be functionally applied in their classrooms, and matches their teaching styles. Providing teachers with access to quality educational journals, time to explore these journals, and perhaps classes on research literacy, as one participant noted that their ability to evaluate educational research was aided by taking "a couple of classes that helped tremendously", could serve to increase the integration of research-based practices in the classroom, but on a level that is more personalized to the needs of the teachers and the students, as opposed to larger, more county-wide directives. Furthermore, there is currently no effective reward system which promotes the individual exploration of educational research by teachers. Implementing a system by which teachers could be rewarded for their engagement with educational research, as well as providing

them access to educational research, might improve the dissemination of educational research among educational professionals. For future research, exploring the administrator and supervisor perspectives on educational research, and how decisions are made concerning what research to share, may provide further insight into this topic. Additionally, broadening the scope of the research to explore different locations around the country may increase the generalizability of the study. Finally, generating a tested, research-based measure may increase the validity of the study overall.

References

- Bates, M. S., Phalen, L., & Moran, C. (2018). Understanding teacher professional learning through cyber research [Article]. *Educational Technology Research & Development*, 66(2), 385-402. <https://doi.org/10.1007/s11423-017-9553-y>
- Berliner, D. (2002). Educational research: the hardest science of them all. *Educ Res*, 31, 18-20.
- Biesta, G. (2007). WHY “WHAT WORKS” WON’T WORK: EVIDENCE-BASED PRACTICE AND THE DEMOCRATIC DEFICIT IN EDUCATIONAL RESEARCH [Article]. *Educational Theory*, 57(1), 1-22. <https://doi.org/10.1111/j.1741-5446.2006.00241.x>
- Black, P., & Wiliam, D. (2003). 'In Praise of Educational Research': Formative Assessment [research-article]. *British Educational Research Journal*, 29(5), 623-637. <http://proxy-sm.researchport.umd.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=edsjsr&AN=edsjsr.1502114&site=eds-live>
- Boardman, A. G., Argüelles, M. E., Vaughn, S., Hughes, M. T., & Klingner, J. (2005). Special Education Teachers' Views of Research-Based Practices. *The Journal of Special Education*, 39(3), 168-180. <https://doi.org/10.1177/00224669050390030401>

- Borg, S. (2007). Research engagement in English language teaching [Article]. *Teaching & Teacher Education*, 23(5), 731-747. <https://doi.org/10.1016/j.tate.2006.03.012>
- Borg, S. (2009). English Language Teachers' Conceptions of Research [Article]. *Applied Linguistics*, 30(3), 358-388. <https://doi.org/10.1093/applin/amp007>
- Fishman, B. J., Penueel, W. R., Allen, A.-R., Cheng, B. H., & Sabelli, N. (2013). Design-Based Implementation Research: An Emerging Model for Transforming the Relationship of Research and Practice. 21. <https://docs.edtechhub.org/lib/ NYT7JDUT>
- Hennessy, J., & Lynch, R. (2019). Straddling the marshy divide: exploring pre-service teachers' attitudes towards teacher research. *Educational Review*, 71(5), 595-616. <https://doi.org/10.1080/00131911.2018.1459482>
- Hoff, P. (2014). *The implementation of research-based instructional strategies using technology: An action research study* (Publication Number 3617143) [D.Ed., Capella University]. ProQuest Dissertations & Theses Global. Ann Arbor. <http://proxy-sm.researchport.umd.edu/login?url=https://www.proquest.com/dissertations-theses/implementation-research-based-instructional/docview/1527094429/se-2?accountid=14095>
- http://sfx.umd.edu/sm?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation&genre=dissertations+%26+theses&sid=ProQ:ProQuest+Dissertations+%26+Theses+Global&atitle=&title=The+implementation+of+research-based+instructional+strategies+using+technology%3A+An+action+research+study&issn=&date=2014-01-01&volume=&issue=&spage=&au=Hoff%2C+Paula&isbn=978-1-303-84282-5&jtitle=&btitle=&rft_id=info:eric/&rft_id=info:doi/

- Knake, K. T., Karimi, H., Hu, S., Frank, K. A., & Tang, J. (2021). Educational Research in the Twenty-First Century: Leveraging Big Data to Explore Teachers' Professional Behavior and Educational Resources Accessed within Pinterest [Article]. *Elementary School Journal*, 122(1), 86-111. <https://doi.org/10.1086/715482>
- Lamanauskas, V., Augienė, D., & Makarskaitė-Petkevičienė, R. (2020). Primary School Teachers' Educational Research: Educational Practice and Professional Development Context [Article]. *International Journal of Cognitive Research in Science, Engineering & Education (IJCRSEE)*, 8(3), 1-18. <https://doi.org/10.23947/2334-8496-2020-8-3-1-18>
- Moore, J., & Chae, B. (2007). Beginning Teachers' Use of Online Resources and Communities. *Julie A. Moore*, 16. <https://doi.org/10.1080/14759390701406844>
- Nancekivell, S. E., Shah, P., & Gelman, S. A. (2020). Maybe they're born with it, or maybe it's experience: Toward a deeper understanding of the learning style myth. *Journal of Educational Psychology*, 112(2), 221–235. <https://doi.org/10.1037/edu0000366>
- Polly, D. (2017). Elementary school teachers' uses of mathematics curricular resources [Article]. *Journal of Curriculum Studies*, 49(2), 132-148. <https://doi.org/10.1080/00220272.2016.1154608>
- Remillard, J. T., & Bryans, M. B. (2004). Teachers' orientations toward mathematics curriculum materials: Implications for teacher learning. *Journal for research in mathematics education*, 35(5), 352-388.
- Sato, M., & Loewen, S. (2019). Do teachers care about research? The research–pedagogy dialogue. *ELT Journal*, 73(1), 1-10. <https://doi.org/10.1093/elt/ccy048>
- Spear-Swerling, L. (2007). The Research-Practice Divide in Beginning Reading. *Theory Into Practice*, 46(4), 301-308. <https://doi.org/10.1080/00405840701593881>

Williams, D., & Coles, L. (2007). Teachers' approaches to finding and using research evidence: an information literacy perspective [Article]. *Educational Research*, 49(2), 185-206.

<https://doi.org/10.1080/00131880701369719>

Zeuli, J. S. (1994). How do teachers understand research when they read it? *Teaching and Teacher Education*, 10(1), 39-55.

[https://doi.org/https://doi.org/10.1016/0742-051X\(94\)90039-6](https://doi.org/https://doi.org/10.1016/0742-051X(94)90039-6)

Appendix A

Demographics

How long have you been teaching?

- 1) 1-5 years
- 2) 5-10 years
- 3) 10 or more years

What grade level do you work in?

- 1) Elementary
- 2) Middle
- 3) High

Accessing Educational Research

- 1) How often are you exposed to educational research? (Likert scale, 1 – Never, 5 – Very Often)
- 2) How often do you seek out educational research of your own volition? (Likert scale, 1 – Never, 5 – Very Often)
- 3) How often do you receive educational research as part of Professional Development? (Likert scale, 1 – Never, 5 – Very Often)
- 4) How often do you receive educational research from administrators? (Likert scale, 1 – Never, 5 – Very Often)
- 5) How often do you receive educational research as a justification for a given practice? (Likert scale, 1 – Never, 5 – Very Often)

Engaging with Educational Research

- 1) I tend to trust the findings of educational research. (Likert scale, 1 – Strongly Disagree, 5 – Strongly Agree)
- 2) I find it easy to make sense of findings from educational studies. (Likert scale, 1 – Strongly Disagree, 5 – Strongly Agree)
- 3) I find it easy to access educational research. (Likert scale, 1 – Strongly Disagree, 5 – Strongly Agree)
- 4) I find educational studies to be instructive and useful for my classroom. (Likert scale, 1 – Strongly Disagree, 5 – Strongly Agree)
- 5) When it comes to assessing the quality of instructional strategies, what would make you more likely to trust educational research? (constructed response)
- 6) Who/what has more impact when it comes to determining the effectiveness of an instructional strategy? (Likert scale, 1 – no impact, 2 – minimal impact, 3 – moderate impact, 4 – strong impact, 5 – very strong impact)

- a. Other teachers
- b. School administrators
- c. Learning Support Staff
- d. Educational Research

Challenges with Educational Research

- 1) How much do the following influence your engagement, or lack thereof, with educational research? (Likert scale, 1 – no influence, 2 – small influence, 3 – moderate influence, 4 – strong influence, 5 – very strong influence)
 - a. Time
 - b. Money
 - c. Interest
 - d. Personal Beliefs
 - e. Perceived effectiveness
- 2) What would make it easier for you to know how to evaluate/assess the quality of educational research? (Constructed Response)
- 3) What challenges do you encounter when trying to access good quality educational research? (Constructed Response)