Action Research Guide for Educators

How to Conduct Action Research on Vocabulary.com Usage and Outcomes

About this document
This document provides resources and step-by-step guidance for educators to conduct action research on the use of Vocabulary.com within their classroom(s) and/or school.

What is action research?
Action research is an iterative process undertaken by practitioners (teachers, principals, administrators) who want to create a "cycle of action or cycle of inquiry" (Glossary of Education Reform) to reflect on and improve practice or enact change within an organization. When you conduct action research, you are, in essence, being proactive to create a continuous cycle of inquiry to strengthen your instructional or organizational practices.

Action research can be conducted individually, as a collaborative effort between and among colleagues, or as a collaboration between practitioners and university researchers.

Why conduct action research?
Action research helps educators to gauge and reflect upon the effectiveness of their current practice which can result in positive change, renewed commitment to best practices, and greater teacher self-efficacy.

Why conduct action research related to vocabulary instruction?
Vocabulary is multifaceted and develops over time. We add to our treasure trove of words over our entire lifetimes. However, it takes a lot of work to develop a student's vocabulary--work by the student and work by every teacher they have ever had. The most that we as educators can hope for in our vocabulary instruction is that we continue to add to both students' expressive and receptive vocabulary by instilling in them a love of words, by teaching them words explicitly, and by teaching them word learning strategies. Vocabulary.com helps you to do all of these things when you make it an integral part of your classroom culture and students' daily lives.

Think about it. How many of your students are logging on to Vocabulary.com daily? How is the combination of Vocabulary.com and your classroom instruction working? How are you integrating Vocabulary.com into your curriculum so that students are getting maximum exposure to the academic and content-specific words you need them to know? Can you tweak your implementation to get greater results? To get greater participation?

Action research can help you with the answers to your questions and shine a light on future instructional decisions.

Role of vocabulary instruction in literacy improvement
Although researchers do not agree on their estimates of how many words children learn each year (e.g., Anderson & Nagy), they do agree that wide gaps in vocabulary growth exist among good, average, and poor readers (e.g., Beck & McKeown, 1996; White, Graves, & Slater, 1990). This consensus extends to teachers, who believe the word gap is growing (Jane Harley, Strategy Director, UK Education, Oxford University Press). Unfortunately, without intervention, the gaps persist and become wider each year, potentially leading to reading deficits and eventual academic failure (RAND Reading Study Group, 2002), both of which have grave societal consequences.

Vocabulary plays a key role in reading comprehension, one of the "five pillars of reading instruction" (Cassidy et al., 2010, p. 644) named in the Report of the National Reading Panel in 2000. Vocabulary remained on the list as a topic of interest in the annual "What's Hot" list (i.e., a list of areas of interest within the field of literacy that researchers deem to be of importance) until 2016 when the methodology of the survey changed. In the latest *What's Hot in Literacy Report* (ILA, 2020), teaching vocabulary is listed among the top five areas where teachers desire more professional development to strengthen their literacy practice. That vocabulary remains of interest among educators is testament to the widely held belief among literacy experts that vocabulary instruction (e.g., Graves, 2006; Nagy, 1988; Stahl & Nagy, 2006) is fundamental to good reading instruction (Cassidy et al., 2010).

You can do this.
Right now you may be thinking... whaaaat? Yes, the idea of conducting research in your classroom may be daunting. When will you have the time to make the plan? When will you have time to gather the data? When will you have time to analyze the data? Disseminate the data? Present the data? The beauty of action research is that you are conducting research and gathering data on your current students, your classroom, your classroom practices, and your timetable so that you can determine if it is working or if you need to make some adjustments or add something... It is totally do-able!

We can help.
Have questions? Use us as a resource! Email our research coordinator: research@vocabulary.com

Need some inspiration? Check out: Teacher Wins Prize for Research on Impact of Vocabulary.com on Reading Comprehension

How to conduct your own action research

Below are the steps to follow to conduct your action research.

Think about and document these things as you plan:

1. Pick your focus.
What about the use of Vocabulary.com (among individual students, in your classroom, in your department, in your school, or in your district) has you curious? What do you want to know? Do you want to take an in-depth look at how one prolific student user of Vocabulary.com engages in the application and why he or she is so successful? Do you want to take a hard look at your implementation of Vocabulary.com within your curriculum? Do you want to look at student achievement? Do you want to look at your students' writing to see how Vocabulary.com has increased their expressive written vocabulary? The possibilities are endless. Take the time to determine your focus before beginning your inquiry so that your research project is manageable.

2. Decide... What theories do you want to put to the test or use as an approach your inquiry?
Moody et al. (2018) suggest four appropriate theoretical perspectives in which to approach research on vocabulary instruction: a) social constructivism and sociocultural theory; b) schema; c) dual coding theory; and d) motivational theory. Social constructivism and sociocultural theory suggest that learning is enhanced when it takes place when activities are social. Schema theory recognizes the need to build prior knowledge to support learning. Dual coding theory suggests that cognition is supported when learners are provided with multiple ways to encode information, both verbal and nonverbal (i.e., both words and an image). Motivational theory supports the need to align instruction to students' needs and wants by providing both intrinsic and extrinsic motivation to learn. All of these theories fit within the pedagogy used within the Vocabulary.com application.

3. **What are your research question(s)?**
You should have one or more research questions. Good questions for teacher action research involve open-ended questions. Stay away from questions that you can answer with a "yes" or "no." If you have a "yes" or "no" question, you should have additional questions that follow that ask "who," "what," "when," "why," or "how."

Some sentence stems to get you started with the thinking process:

- I would like to explore change in...
- I wonder about...
- I want to know more about...
- Something I would like to try is...
- I am interested in knowing...

What to consider when writing your questions:

Your questions should be stated concisely. Don't get wordy. Include the important things and nothing more.

Your question(s) should be consistent with your focus. Make sure that the questions are consistent with your focus. If you are focusing on how Vocabulary.com has influenced your students' expressive written vocabulary, you would not ask a question pertaining to reading achievement.

Your question(s) should be answerable by you. Don't be too ambitious. Start with one or two questions. The iterative nature of this process will allow you to come back around to any questions that arise as you work through this process.

Your question(s) should include your sample. Who or what will you be studying? Will you be looking at the use of Vocabulary.com among the 10 history teachers in your school? Then, the 10 history teachers in your school will be the sample. Are you looking at the Vocabulary.com use of the students in your classes? Then the 150 students who are currently in your classes will be your sample.

4. **What is your research method?**

Qualitative
Qualitative data are any type of data that you collect that don't involve numbers. Will you be gathering observational data or interview data (qualitative)? Will you record and analyze group discussions held in your classrooms to determine if words students mastered on Vocabulary.com are being utilized as a part of their

expressive vocabulary (qualitative)? Will you interview one or more of your students and look for trends in their responses (qualitative)? If so, your research design might be a case study on one person or a collective case study on an entire class or all of your classes. Your method will be qualitative and your design would be a type of case study.

Quantitative
Quantitative data are data collected from test scores or from time-on-task measures, etc. If it involves a number, it is quantitative. If you are looking at whether there are differences in achievement before or after Vocabulary.com, you are probably going to use a quantitative method because you are going to use numbers to answer your questions. If you want to compare a student's reading improvement and their mastery of words on Vocabulary.com, you will use quantitative data. You have a lot of quantitative data available to you--your gradebook data, student achievement data, Vocabulary.com gradebook data. It is all there, waiting for you to pull it together and analyze it.

Mixed Methods
When you use both types of data, your method is mixed methods. Will you use both qualitative data and quantitative data? For example, if you are looking at students' motivation to use Vocabulary.com and how their motivation influenced their vocabulary learning, you might be using both quantitative data (i.e., quantitative answers to a survey or the amount of time on task) and qualitative data (i.e., student writing, interviews, surveys that include written responses, analysis of videos).

5. Collect and analyze the data.

What are your variables?

To determine what data you will use, you will first need to decide on your **variables.**

Mirriam-Webster defines variable as "a factor in a scientific experiment that may be subject to change." This definition really describes a **dependent variable**. It is dependent because it is "dependent" on something like instruction or an intervention to bring about change. For example, students' vocabulary achievement can be influenced by Vocabulary.com usage; therefore, vocabulary achievement is the dependent variable because we are trying to determine how use of Vocabulary.com influences it. Another example of a variable would be student reading achievement because student reading achievement can increase or decrease from one assessment to another and is dependent on instruction to bring about the change. Another example would be the number of words mastered because the number of words that a student masters can change from one month to another.

However, some variables are treated as constants — like school, teacher, and grade — because, although they can change, they must remain constant during your action research. We call these variables **descriptive variables**. If you are looking at the use of Vocabulary.com among the 10 history teachers in your school, then descriptive variables might include the gender of the teachers or the years of experience of the teachers or the education level of the teachers. If you are analyzing the writing of your first period class, you would include the number of students, their gender, LEP classification, special education classification, GT classification, their level of achievement, and any other variables you would include and want your audience to include among the data. You will also have variables that you will classify as you collect the data pertinent to your study.

After you determine your questions and how you will go about answering them, think carefully about your variables and the role they will play in your research.

How will you collect and analyze your data?

How you collect and analyze your data is important because you want to be sure that your findings can be trusted. For your findings to be trusted, you have to consider the **validity** and **reliability** of your data. There are several things to consider when you look at validity and reliability. You achieve validity only if the measurement is measuring what it says it is measuring. For example, if you want to measure your students' fluency, you would not want to include items in the fluency rubric that measure comprehension. If you did, the measurement would not be valid because it measured something other than fluency. Additionally, when you look at the reliability of data, you want to look to see if a measure of achievement is consistent from test to test. Does the instrument measure the same each time it is administered under similar circumstances with the same students?

If you are using your state achievement data, your state has employed experts to determine how valid and reliable your student data are. To find this information, you can look up the specifications for the assessment on the state assessment website, but probably just accept that your state data are both valid and reliable given the level of care they take at the state level to assure validity. You can also be assured that the data you pull from your gradebook in Vocabulary.com are valid and reliable because we use the same statistical methods to validate our data. However, if you are using an instrument that you created or if you are using qualitative data, you will not be able to determine validity and reliability to the same extent that your state's or Vocabulary.com's experts do. However, there are things that you can do that will give you a measure of assurance that your instrument is valid and your data are reliable. You can **triangulate** your data.

How will you triangulate your data?

In order to bolster the trustworthiness of findings, researchers sometimes triangulate their data by gathering multiple types of data that they then analyze to determine if the findings from one source of data supports the findings from another source of data. In order to achieve reliability in qualitative data analysis, researchers also triangulate their findings by having multiple researchers analyze data to determine if all researchers come to similar conclusions after data analysis. So, for example, if you are analyzing your students' writing to determine if, after using Vocabulary.com for a set period of time, their academic vocabulary use improves, you could have multiple people analyze the student writing and compare analyses to see how well you agree. You can even quantify agreement by documenting the level of agreement and calculating a percentage.

6. How will you disseminate your findings?

Sharing your findings

Although action research generally is conducted to inform the instructional practice of the teacher(s) and/or administrator(s) conducting the research, there are multiple opportunities for teacher researchers to present their findings to a larger audience of educators. For example, will you provide a presentation to your colleagues in a whole-school environment? Will you present your findings in your department? Will you present your findings to an educator conference? Will you publish your findings by submitting a manuscript to a practitioner's journal or a teacher action research journal? Many opportunities exist to share your findings. Don't keep your new-found knowledge to yourself.

Writing Up Your Findings

When you do write up your report and create a presentation of your findings, consider including the following in a comprehensive report or presentation to colleagues at your school or at a conference:

- An introduction that includes a) information about you as an educator; b) your questions; and c) a discussion of why you engaged in the action research
- A discussion of your theoretical perspectives (how did theory on vocabulary instruction inform your study)
- A review of pertinent literature/research that informed your study
- A discussion of your data collection process, including details about your instruments
- A discussion of your data analysis procedures and how you considered validity and reliability or possible triangulation of the data

- A reporting of the findings of your data analysis
- A discussion of the findings that includes a) your understanding of the findings and how you might engage in change as a result; b) your conclusions and questions that arose from your conclusions; c) a reflection of the process; d) new questions or a reformation of your research questions
- A discussion of actions you will take as a result of the research findings

References

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White, T. G., Graves, M. F., & Slater, W. H. (1990). Growth of reading vocabulary in diverse elementary schools: Decoding and word meaning. *Journal of Educational Psychology*, *82*, 281-290. doi:10.1037/0022-0663.82.2.281

Resources

Opportunities to Publish Your Action Research

The Journal of Teacher Action Research (Current Issue)

Journal of Learning and Literacy Education (Current Issue)

Networks: An Online Journal for Teacher Research (Current Issue)

Profile: Issues in Teachers' Professional Development

Journal of Adult and Adolescent Literacy

English Journal

Voices from the Middle

Opportunities to Present (Conferences, Events, etc.)

National of Teachers of English Annual Conference (NCTE)

NCTE State Associated Conferences

International Literacy Association Annual Conference (ILA)

ILA State Affiliated Conferences

Examples of Teacher Action Research

Benge, C. & Robbins, M.E. (2009). Using keyword mnemonics to develop secondary students' vocabularies: A teacher's action research. *Journal of Language and Literacy Education* [Online], *6*(1),93-104. Available http://www.coa.uga.edu/jolle/2010_1/mneumonics.pdf

Information about Action Research

Action Research Guide for Alberta Teachers

Canadian Journal of Action Research (Current Issue)

Chiseri-Strater, E. & Sunstein, B. S. (2006). What works? A practical guide for teacher research. Portsmouth, NH: Heinemann.

The Creative Educator: Embracing Teacher Action Research

L., Santa, C. M., Short, K. G., & Smith, K. (Eds.). (1993). *Teachers are researchers: Reflection and action*. Newark, DE: International Reading Association.

Pine, G. J. (2009). *Teacher action research: Building knowledge democracies*. Thousand Oaks, CA: Sage.

Young, M. R., Rapp, E., Murphy, J. W. () Action research: enhancing classroom practice and fulfilling educational responsibilities. Journal of Educational Pedagogies.

Books to Support Your Vocabulary Research (linked to Amazon.com)

Baumann, J. F., & Kame'enui, E. J. (Eds.). (2012). *Vocabulary instruction: Research to practice*. New York, NY: Guilford Press.

Beck, I. L., McKeown, M. G., & Kucan, L. (2013). *Bringing words to life: Robust vocabulary instruction*. New York: Guilford.

Beck, I. L., McKeown, M. G., & Kucan, L. (2008). *Creating robust vocabulary: Frequently asked questions & extended examples*. New York: Guilford.

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