

## Syllabus

### Course Overview

In this course, you will explore action research in theory and practice as a form of inquiry and self-reflection to inform and improve your teaching. Examining relevant issues in your own educational setting, you will develop a plan to study and implement meaningful, practical, and research-based answers. As part of an action research plan that will be implemented in the capstone course, you will also design data collection, analysis, and reporting practices.

### Course Competencies

(Read Only)

To successfully complete this course, you will be expected to:

- 1 Evaluate action research theories and designs.
- 2 Reflect on educational issues in one's own professional setting using both critical and creative thinking skills.
- 3 Develop an action research plan that uses effective classroom data collection and analysis strategies to inform instructional practice.
- 4 Apply critical evaluation tools to assess the value of education and learning research.

### Course Prerequisites

*There are no prerequisites for this course.*

## Syllabus >> Course Materials

### Required

The materials listed below are required to complete the learning activities in this course.

#### Integrated Materials

Many of your required books are available via the VitalSource Bookshelf link in the courseroom, located in your Course Tools. Registered learners in a Resource Kit program can access these materials using the courseroom link on the Friday before the course start date. Some materials are available only in hard-copy format or by using an access code. For these materials, you will receive an email with further instructions for access. Visit the [Course Materials](#) page on Campus for more information.

##### Book

Leedy, P. D., & Ormrod, J. E. (2019). *Practical research: Planning and design* (12th ed.). New York, NY: Pearson. ISBN: 9780134775654.

Mertler, C. A. (2017). *Action research: Improving schools and empowering educators: A reflective practice approach* (5th ed.). Thousand Oaks, CA: Sage. ISBN: 9781483389059.

##### Library

The following required readings are provided in the Capella University Library or linked directly in this course. To find specific readings by journal or book title, use [Journal and Book Locator](#). Refer to the [Journal and Book Locator library guide](#) to learn how to use this tool.

- Fengfeng, K., & Abras, T. (2013). [Games for engaged learning of middle school children with special learning needs](#). *British Journal of Educational Technology*, 44(2), 225–242.
- Jefferson, R. N. (2014). [Action research: Theory and applications](#). *New Review of Academic Librarianship*, 20(2), 91–116.
- Katigbak, C., Foley, M., Robert, L., & Hutchinson, M. K. (2016). [Experiences and lessons learned in using community-based participatory research to recruit Asian American immigrant research participants](#). *Journal of Nursing Scholarship*, 48(2), 210–218.
- Lankau, L. (2015). [Connection + collaboration = successful integration of technology in a large high school](#). *Knowledge Quest*, 44(2), 66–73.
- Mulford, B. (2006). [Leading change for student achievement](#). *Journal of Educational Change*, 7(1/2), 47–58.
- Rojon, C., & Saunders, M. N. K. (2012). [Formulating a convincing rationale for a research study](#). *Coaching: An International Journal of Theory, Research and Practice*, 5(1), 55–61.
- Thompson, G. (2014). [4 keys to designing the classroom of the future](#). *T H E Journal*, 41(9), 18–22.

#### External Resource

Please note that URLs change frequently. While the URLs were current when this course was designed, some may no longer be valid. If you cannot access a specific link, contact your instructor for an alternative URL. Permissions for the following links have been either granted or deemed appropriate for educational use at the time of course publication.

- Harris, D. (2013). [Data for dummies: 6 data-analysis tools anyone can use](#). Retrieved from <https://www.gigaom.com/2013/01/31/data-for-dummies-5-data-analysis-tools-anyone-can-use/>
- National Association for the Education of Young Children. (2009). [Where we stand: On responding to linguistic and cultural diversity \[PDF\]](#). Retrieved from <http://www.naeyc.org/files/naeyc/file/positions/diversity.pdf>
- National Association for the Education of Young Children. (n.d.). [Technology and interactive media as tools in early childhood programs serving children from birth through age 8 \[PDF\]](#) Retrieved from: [https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/topics/PS\\_technology\\_WEB.pdf](https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/topics/PS_technology_WEB.pdf)

### Suggested

### Optional

The following optional materials are offered to provide you with a better understanding of the topics in this course. These materials are not required to complete the course.

### Library

The following optional readings may be available in the Capella University Library. To find specific readings by journal or book title, use [Journal and Book Locator](#). Refer to the [Journal and Book Locator library guide](#) to learn how to use this tool. If the full text is not available, you may be able to request a copy through the [Interlibrary Loan](#) service.

- Farrell, J. B., & Weitman, C. J. (2007). Action research fosters empowerment and learning communities. *Delta Kappa Gamma Bulletin*, 73(3), 36–45.

### External Resource

Please note that URLs change frequently. While the URLs were current when this course was designed, some may no longer be valid. If you cannot access a specific link, contact your instructor for an alternative URL. Permissions for the following links have been either granted or deemed appropriate for educational use at the time of course publication.

- U.S. Department of Education. (n.d.). [Family Educational Rights and Privacy Act \(FERPA\)](https://www.ed.gov/policy/gen/guid/fpco/ferpa/index.html) <https://www.ed.gov/policy/gen/guid/fpco/ferpa/index.html>
- U.S. Department of Health & Human Services. (n.d.). [Summary of the HIPAA privacy rule](https://www.hhs.gov/hipaa/for-professionals/privacy/laws-regulations/index.html) <https://www.hhs.gov/hipaa/for-professionals/privacy/laws-regulations/index.html>

## Unit 1 >> Action Research Introduction

### Introduction

Action research involves educators in the process of examining their own practice and taking actions to improve what is happening in their learning environment. Teacher-researchers participate in and provide inputs to the research process (Strambler & McKown, 2013). Casey (2013) contends that it is the direct involvement in the research process of those who will develop new policies and practices that separates teacher action research from other forms of research. Hence, action research is not something that is done to teachers; it is something that is embedded in teachers' daily practice. Zeichner (2003) adds that teacher action research often has a profound impact on teacher-researchers, in many cases transforming the teachers' classroom and school. Teachers become more self-directed and confident. They become more aware of their practices and classroom events. Giles, Wilson, and Elias (2010) maintain that action research strengthens a school's (or other learning institution's) professional learning community because it places emphasis on student learning as well as collaboration and reflection on pedagogical practices among educators.

According to Mills (2014):

Action research is any systematic inquiry, conducted by teacher-researchers, principals, school counselors, or other stakeholders in the teaching/learning environment to gather information about the ways that their particular schools function, how they teach, and how well their students learn. This information is gathered with the goals of gaining insight, developing reflective practice, effecting positive changes in the school environment (and on educational practices in general), and improving student outcomes and the lives of those involved. (p. 8)

Action research is conducted to improve practice or policy, and it is driven by questions posed by teachers and other stakeholders in the education community. Like any problem-solving endeavor that takes place in a dynamic environment, it is an ongoing, creative activity. Action research allows teachers and other stakeholders to reflect, consider options, and implement and evaluate potential solutions. According to the Alberta Teachers' Association (2000), action research is a valuable form of inquiry for educators because it is practical, participative, empowering, interpretive, tentative (there are no right or wrong answers), and critical. Action research can lead to professional development, greater teacher autonomy, educational change, enhanced self-awareness, improved practice, and new learning. Educators who engage in action research begin to understand themselves better as teachers and make better decisions as a consequence.

In this course, you will be focusing on learning about action research and mapping out a project that you will actually implement in the next course (ED5980 or ED5950). You will use the Digital Action Research Plan media component for both the courses, and in there you will find prompts and guidelines that will help you build your project. It will be important to keep adding to this interactive document as you go along, so that you can gradually build the project into a thoughtful and cohesive action research study.

### References

Alberta Teachers' Association. (2000). Action research guide for Alberta teachers. Retrieved from <http://www.teachers.ab.ca/SiteCollectionDocuments/ATA/Publications/Professional-Development/ActionResearch.pdf>

Casey, A. (2013). Seeing the trees, not just the wood: Steps and not just journeys in teacher action research. *Educational Action Research*, 21(2), 147–163.

Giles, C., Wilson, J. & Elias, M. (2010). Sustaining teachers' growth and renewal through action research, induction programs, and collaboration. *Teacher Education Quarterly*, 37(1), 91–108.

Mills, G. (2014). *Action research: A guide for the teacher researcher* (5th ed.). Upper Saddle River, NJ: Pearson.

Strambler, M., & McKown, C. (2013). Promoting student engagement through evidence-based action research with teachers. *Journal of Educational and Psychological Consultation*, 23(2), 87–114.

Zeichner, K. (2003). Teacher research as professional development for P-12 educators in the USA. *Educational Action Research*, 11(2), 301–326.

#### Course Resources

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#### Digital Action Research Plan

### Learning Activities

#### u01s1 - Studies

### Readings

Use your *Practical Research: Planning and Design* text to complete the following:

- Read Chapter 2, "The Problem: The Heart of the Research Process," pages 30–57.
  - This chapter describes how to identify a researchable problem and discusses why the problem is an integral component to guiding your inquiry.

Use your *Action Research: Improving Schools and Empowering Educators* text to complete the following:

- Read Chapter 1, "Introduction to Action Research," pages 2–32.
  - This chapter describes what action research is, compares it to traditional forms of educational research, discusses why it is important for educators to become involved in action research, and provides examples of its application.

### Multimedia

- Click **Action Research Planning Process** to see an overview of the action research cycle.
  - You will refer to the information in this interactive diagram throughout this course. To save this information as an excellent resource for future reference, click **Transcript** and copy and paste the text into a Word document.

#### Course Resources

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#### Action Research Planning Process

#### u01s1 - Learning Components

- Identify goals and capacities of action research.
- Explore instructional problems in the context of educational settings.

#### u01s2 - Digital Action Research Plan

### Multimedia

In this course, you will create an action research plan, which you will carry out as a course project in ED5980 or ED5950.

To help create the action research plan, you will use the interactive Digital Action Research Plan, which provides a place for you to record your work as you go through the steps in the action research cycle. You will be completing the first four sections in this course and will work through the remaining sections in ED5980 or ED5950.

- Click **Digital Action Research Plan** to view the interactive media piece and familiarize yourself with the different steps.

#### Course Resources

### u01s3 - Your Online ePortfolio

Online ePortfolios serve two key purposes: 1) to support learning and reflection, and 2) to be used as a showcase tool. Your learning journey can be documented, and ePortfolios contribute to lifelong learning and growth through reflection and sharing. ePortfolios can also be shared with employers and peers to present artifacts that demonstrate your accomplishments at Capella.

## Using ePortfolio to Prepare for Your Capstone

Your program may culminate in a capstone course. At that time, you may be required to show evidence of your learning throughout the program by referring to multiple assessments that you have created. You will be telling a story about your learning throughout the program using artifacts you have collected during many of these courses.

## Using ePortfolio to Build Your Career

As you are preparing to tell your story in the professional world, leverage your ePortfolio artifacts to demonstrate the knowledge and competencies you have gained through your program in professional conversations, performance reviews, and interviews.

To do that, reflect on the knowledge and skills you have gained from your courses and the elements you have put in your portfolio, along with how you have already applied these things to your professional life or how you might apply them in the future.

Next, create your story or talking points to tell your professional story.

## Saving Your Documents to ePortfolio

You will need a place to store your documents in an organized fashion so that you can access them at a later date. Do not rely on the courseroom to store your assignments as you will lose access to the courseroom after you have completed the course. Capella uses a cloud-based portfolio platform to facilitate your organization of the artifacts you create throughout your program.

To make an online ePortfolio useful, it is essential that it is clearly organized and that important files of any format are accessible. Read the [Online ePortfolio Guidelines \[PDF\]](#) to ensure you set up your online portfolio correctly. For more information on ePortfolio, visit [ePortfolio](#) page.

## Privacy Statement

Capella complies with privacy laws designed to protect the privacy of personal information. While you may voluntarily share your own information publicly, you are obligated to protect the personal information of others that may be associated with your academic or professional development. Before sharing information and material in any ePortfolio that is set up to be shared externally to your program at Capella, please consider privacy obligations in relation to protected populations who may be included or referenced in your academic or clinical work. Refer to the [Family Educational Rights and Privacy Act \(FERPA\)](#) and the [Health Insurance Portability and Accountability Act \(HIPAA\)](#) if you have specific questions or concerns about your choices.

### u01d1 - Action Research Experience

In this discussion, share your experience with action research. Consider the following questions:

- If you have engaged in action research in the past, what, in particular, went well?
- What could have gone better?
- What did not work at all?

Considering your upcoming action research plan in this course:

- What aspects of your professional practice are you currently interested in developing?
- What are the potential limitations or challenges in engaging in action research in your professional setting?
- What types of support or guidance do you anticipate needing as you engage in action research?

## Response Guidelines

Respond to at least one other learner by doing one of the following:

- Ask a probing question.
- Offer a suggestion.
- Elaborate on a particular point with an example.
- Provide an alternative opinion.

As a general reminder, your initial posting to a discussion should be approximately 300 words, and your responses to other learners should be within 150–200 words. Respond to the initial post of at least one other learner in each discussion unless otherwise noted.

Course Resources

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### Graduate Discussion Participation Scoring Guide

#### u01d1 - Learning Components

- Identify goals and capacities of action research.
- Explore instructional problems in the context of educational settings.

#### u01d2 - New Learning About Action Research

Consider this unit's readings. Share the three most significant new things you have learned about action research. As you do so, address the following questions:

- Why are these things you have learned the most significant?
- How will this new knowledge impact your action research experience?
- What do you wish you had learned about but did not get the opportunity to learn?
- How might you acquire that needed knowledge?

## Response Guidelines

Respond to at least one other learner by doing one of the following:

- Ask a probing question.
- Offer a suggestion.
- Elaborate on a particular point with an example.
- Provide an alternative opinion.

As a general reminder, your initial posting to a discussion should be 300 words, and your responses to other learners should be within 150–200 words. Respond to the initial post of at least one other learner in each discussion unless otherwise noted.

Course Resources

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### Graduate Discussion Participation Scoring Guide

#### u01d2 - Learning Components

- Identify goals and capacities of action research.
- Explore instructional problems in the context of educational settings.

## Unit 2 >> Analyzing the Situation in Terms of Student Achievement

### Introduction

This course focuses on action research as a means of examining and improving student achievement. Before embarking on such a research study, it is necessary to craft a definition of student achievement that will serve as the objective of the inquiry process. A definition of student achievement such as

high scores on standardized tests will engender a study that may differ significantly from one whose working definition of student achievement revolves around innovative thinking and problem solving. And the choice of definition may rely on an educator's area of subject expertise. The teacher of a subject that is not assessed in high-stakes testing may not choose those test results as an indicator of student achievement.

Once the teacher-researcher has decided on the definition of student achievement that will serve the study, various aspects of that broad topic must be considered and a specific research focus must be chosen. Most frequently, the teacher-researcher will implement an intervention in the learning environment—a new approach to teaching or assessment—and then analyze its impact on the achievement of students in that class. Alternatively, the teacher-researcher will collaborate with colleagues or other stakeholders to implement an intervention at the school level and then analyze its impact on student achievement across the school.

In this unit, you will examine the professional literature on critical issues in student achievement. This will help you to narrow your interest and select a topic that will serve as the focus of your action research.

## Learning Activities

### u02s1 - Studies

## Readings

Use your *Action Research: Improving Schools and Empowering Educators* text to complete the following:

- Read Chapter 2, "Overview of the Action Research Process," pages 34–50.
  - This chapter describes the nine steps of the action research cycle and explains how this type of research methodology can be conducted.

For an interesting perspective on the relationship between teacher leadership and student achievement, use the Capella University Library to read the following:

- Mulford, B. (2006). [Leading change for student achievement](#). *Journal of Educational Change*, 7(1/2), 47–58.

### u02s1 - Learning Components

- Consider diverse perspectives on instructional problems.
- Understand the process of designing action research plans.

### u02s2 - Assignment Preparation

In preparation for your first assignment in Unit 4, go to the **Identify the Problem** section of the Digital Action Research Plan media piece, and read the information on the type of problem you will need to identify for your action research plan. Then, complete the Identify the Problem section within the interactive template by doing the following:

1. Provide a brief introduction of the study (context and rationale).
2. Describe the study setting and explain why the setting was chosen for the study.
3. Describe the instructional problem.

#### Course Resources

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[Digital Action Research Plan](#) | [Transcript](#)

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[Action Research Planning Process](#) | [Transcript](#)

### u02d1 - Potential Topics for Action Research

In this discussion, present your ideas and rationale toward a possible topic for an action research study that focuses on student achievement and learning improvement. Remember to ground your rationale in what is already known about the topic (prior research). How will your idea directly improve learning and achievement for the students you plan to work with?

## Response Guidelines

Respond to at least one other learner by providing the following:

- 2+2 feedback, two compliments and two suggestions about the proposed research topic.
- A rationale for the study.

As a general reminder, your initial posting to a discussion should be 200–300 words, and your responses to other learners should be within 150–200 words. Respond to the initial post of at least one other learner in each discussion unless otherwise noted.

Course Resources

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Graduate Discussion Participation Scoring Guide

u02d1 - Learning Components

- Understand the effect of research on all stakeholders.
- Identify available data that can contribute to designing a study.

### u02d2 - Supporting a Research Topic

Search the Capella University Library for an empirical article you will use to support your action research topic, and provide a link to the article in this discussion. Describe how you found this article, which database you used in the Capella University Library, and what search terms you used to find it. How are you using this article to guide your topic development?

## Response Guidelines

Respond to at least two of your peers giving feedback on their article choices. Brainstorm effective ways to find empirical articles and search terms plus ways to expand topic development.

As a general reminder, your initial posting to a discussion should be 200–300 words, and your responses to other learners should be within 150–200 words.

Course Resources

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Graduate Discussion Participation Scoring Guide

[Capella University Library](#)

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[Library Research Guide: Reviewing the Literature for Education Action Research](#)

u02d2 - Learning Components

- Analyze theories and scholarly studies to inform research decisions.

## Unit 3 >> Action Research Theories and Evaluation Tools

### Introduction

*For apart from inquiry, apart from the praxis, individuals cannot be truly human. Knowledge emerges only through invention and re-invention, through the restless, impatient, continuing, hopeful inquiry human beings pursue in the world, with the world, and with each other.*

— **Paulo Freire, Pedagogy of the Oppressed**

In this unit, we will explore the varying theories that guide action research and tools that can be used to help us evaluate the process and learning changes. Action research is an active and engaged process that grew out of multiple theories and disciplines. Kurt Lewin (a German-American social psychologist) is often credited with the original term from his 1946 paper titled "Action Research and Minority Problems." Through the decades, disciplines from sociology to business to psychology and, of course, education, have all adopted action research and fine tuned it to the current

ideological beliefs of the field. Here are some theorists who have created their own perspectives, and still more are listed in detail in Chapter 1 of the *Action Research: Improving Schools and Empowering Educators* text.

- Paulo Freire: Participatory Action Research (PAR).
- Chris Argyris: Action Science.
- John Heron: Cooperative Inquiry.
- William Barry: Living Educational Theory (LET).

All of these approaches offer a slightly different perspective toward collecting data and how to view the world of research. For novice researchers, an understanding that there are deeper nuances to the approach is sufficient, though. What you will need to be aware of are the ways that your own study can differ from others. You will need to understand if it is participatory research or not and whether it will be controlled and measured quantitatively or observed and discussed qualitatively. Having an understanding of what it is you want to do or know helps drive these decisions, but you will also need to know how you will measure the changes. Qualitative data analysis requires an evaluation of narrative data through coding and then categorizing data in order to identify patterns and themes. Quantitative data, on the other hand, entails evaluation of numerical data, typically through statistical analysis. On some occasions, we simply want to do a descriptive analysis and simply analyze data via the mean, median, and mode. Other times, we must run statistical tests to find answers and to determine if those findings are significant (not due to chance). So, it is important that you choose appropriate tools that will help you collect these data. You may choose existing surveys or instruments, checklists, or knowledge quizzes or exams, or you may choose to create your own tools to measure these. If you are doing qualitative research, you will want to develop individual interview questions, focus group questions, observation sheets, or ways to capture data from content analysis of records or other existing documents (this data could be qualitative or quantitative).

However, whatever approach you decide to choose, it is important to spend some time thinking through the entire process to make sure it aligns well with the study. Imagine a string hanging from your doorway. Now, visualize each section of your study hanging on that string with each flowing into the next; this is what is meant by alignment. The topic aligns with the problem and the approach used fits the problem, eventually leading to the research questions. The sample must be appropriate for the research question, and the methods used to capture the data must allow you to collect the type of data necessary to answer the questions. Keep self-checking this process by visualizing this string to ensure all of your pieces align. Of course, putting everything into your Digital Action Research Plan also helps with alignment.

## Learning Activities

### u03s1 - Studies

## Readings

Use your *Practical Research: Planning and Design* text to complete the following:

- Read Chapter 1, "The Nature and Tools of Research," pages 1–29.
  - This chapter lays out the nature of true research and describes the general tools that make it possible.

Use your *Action Research: Improving Schools and Empowering Educators* text to complete the following:

- Review Chapter 1, "Introduction to Action Research," pages 2–32.

Use the Capella University Library to read the following:

- Jefferson, R. N. (2014). Action research: Theory and applications. *New Review of Academic Librarianship*, 20(2), 91–116.

### u03s1 - Learning Components

- Identify goals and capacities of action research.

### u03s2 - Assignment Preparation

In preparation for your first assignment in Unit 4, go to the Digital Action Research Plan media piece and continue the completion of the **Identify the Problem** section by including the following:

- Describe the purpose of the proposed study.
- Identify and describe who might benefit from the findings of the study and why.
- Describe the baseline data and information you have gathered to inform the development of the study.
- Describe the impact of diversity on the problem.

[Action Research Planning Process](#) | [Transcript](#)

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[Digital Action Research Plan](#) | [Transcript](#)

### u03d1 - Action Research Theory Comparisons

Review the action research theories listed in Chapter 1 of *Action Research: Improving Schools and Empowering Educators* text, or locate other theories within action research, and then compare and contrast two of them. What are the similarities and differences between them? How do you think each of the two you chose would be most appropriate for your own planned research study?

## Response Guidelines

Respond to at least one other learner by doing one of the following:

- Ask a probing question.
- Offer a suggestion.
- Elaborate on a particular point with an example.
- Provide an alternative opinion.

As a general reminder, your initial posting to a discussion should be 200–300 words, and your responses to other learners should be within 150–200 words. Respond to the initial post of at least one other learner in each discussion unless otherwise noted.

Graduate Discussion Participation Scoring Guide

### u03d1 - Learning Components

- Analyze theories and scholarly studies to inform research decisions.

### u03d2 - Methodology

Describe qualitative, quantitative, and mixed methods approaches of data collection. Next, briefly describe your own study topic and then outline how each of the three approaches could be used for your own work. This entails listing specific ways of collecting data for each of the three main approaches. You may consider putting this information into a table and inserting this into the discussion to help you organize your thoughts.

## Response Guidelines

Respond to at least one other learner by doing one of the following:

- Ask a probing question.
- Offer a suggestion.
- Elaborate on a particular point with an example.
- Provide an alternative opinion.

As a general reminder, your initial posting to a discussion should be 200–300 words, and your responses to other learners should be within 150–200 words. Respond to the initial post of at least one other learner in each discussion unless otherwise noted.

Graduate Discussion Participation Scoring Guide

- Identify data collection methods and instruments.

## Unit 4 >> Evaluating Existing Research to Guide Planning

### Introduction

Identifying a topic and creating a research plan takes careful thought and planning. While the first step of selecting a topic may come from situations or problems you have seen in your classroom or educational organization, the next step of research planning involves using the library databases and delving into what is already known on the topic. Doing research is akin to building a Lego brick house. Each new brick needs to overlap a couple of blocks below it in order to grow and have strength. If we pile up stacks of blocks that do not overlap with each other, then the walls will be weak. Research is very similar because each new study needs to be grounded in what is already known on the topic. Doing this ensures the new study adds to the body of knowledge in the content area in a way that is academically viable and strong.

Hopefully by this stage you have identified a problem that you wish to research, but you may be feeling a little overwhelmed by all the tasks. Do not worry. Research can seem intense at first, but if you break it up into smaller chunks and address each piece as you go along, then the work is manageable. Use the Digital Action Research Plan to capture your ideas as you move through this course and ED5980 or ED5950. Below is an example of how a study might be framed and organized. Of course, yours will have greater depth in the sections, but this is a good example of how a study builds up and the type of information needed in the varying sections. As you read through this, think about how it is built on the foundations (blocks) of prior studies and how it will increase knowledge (grow the wall) of the content area. Reflect on how your own study will do likewise, and capture this in your Digital Action Research Plan.

## Identify the Problem

### Context and Rationale

Elena teaches the third grade. In the second semester of school, she noticed that many of her students have not mastered multiplication facts. She knows that this will cause problems later when she begins teaching multiplication of larger numbers and division.

### Setting

The setting for this action research is Elena's third-grade classroom. She has 23 students—12 girls and 11 boys. Three of the students have identified learning disabilities and two of the students are English language learners.

### Description of the Instructional Problem

The problem to be addressed is that most students in Elena's classroom have not demonstrated mastery of basic multiplication facts. Only about one-third of the students have demonstrated proficiency in this skill. Two of the students with learning disabilities and one of the students who is an English language learner have not mastered the necessary math facts.

### Purpose of the Study

The purpose of this action research plan is to increase the proficiency of students in basic multiplication facts.

### Who Benefits?

The main beneficiaries of the study are the student participants. If the intervention is successful, the students will improve their proficiency of multiplication facts, which will allow them to solve complex problems more accurately. A second set of beneficiaries are other teachers in Elena's school. Based on the findings of her action research, Elena can make recommendations to other teachers in her professional learning community about how to help students master multiplication facts.

### Baseline Data

In the latest quiz on basic multiplication facts from 0s to 12s, only seven students scored more than 80 percent, eight students scored between 60 and 80 percent, and seven students scored lower than 60 percent.

### Research Support

The cognitive theory of multimedia learning (Learning Theories, n.d.) indicates that learners have two channels for processing information—an auditory channel and a visual channel—and that each channel alone has limited capacity. Another element of this theory is that learning is an active process that involves filtering, selecting, organizing, and integrating information. All of the elements of this theory support the intervention idea of using math fact apps to improve students' proficiency.

Ok and Bryant (2016) studied the use of iPad math fact apps with students in fifth grade who had learning disabilities. The students' proficiency improved, but the math facts were limited to 4s and 8s, considered the most difficult facts. Bryant et al. (2015) studied the use of teacher-mediated interventions, technology-mediated interventions, and a combination of the two in student learning of math facts. They found no consistent approach that was more effective than the other.

#### References

- Bryant, B., Ok, M., Kang, E., Kim, M., Lang, R., Bryant, D., & Pfannestiel, K. (2015). Performance of fourth grade students with learning disabilities on multiplication facts, comparing teacher-mediated and technology-mediated interventions: A preliminary investigation. *Journal of Behavioral Education*, 24(2), 255–272.
- Learning Theories. (n.d.). Cognitive theory of multimedia learning (Mayer). Retrieved from <https://www.learning-theories.com/cognitive-theory-of-multimedia-learning-mayer.html>
- Ok, M., & Bryant, D. P. (2016). Effects of a strategic intervention with iPad practice on the multiplication fact performance of fifth grade students with learning disabilities. *Learning Disability Quarterly*, 39(3), 146–158.

#### Course Resources

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#### Digital Action Research Plan

### Learning Activities

#### u04s1 - Studies

### Readings

Use your *Action Research: Improving Schools and Empowering Educators* text to complete the following:

- Read Chapter 3, "Planning for Action Research," pages 52–83.
  - This chapter describes the process of identifying and narrowing the focus of a research topic, as well as the importance of gathering preliminary information related to the topic and conducting a literature review.
- Read Chapter 4, "Developing a Research Plan," pages 86–121.
  - This chapter describes research questions and hypotheses, basic qualitative and quantitative research design, and ethical considerations when conducting action research.

Use the Capella University Library to read the following:

- Tomal, D. R. (1999). Solving problems through action research. *School Administrator*, 56(1), 41.

### Optional Readings

You may choose to read the following article, which may be available in the Capella University Library:

- Farrell, J. B., & Weitman, C. J. (2007). Action research fosters empowerment and learning communities. *Delta Kappa Gamma Bulletin*, 73(3), 36–45.

#### u04s1 - Learning Components

- Analyze theories and scholarly studies to inform research decisions.
- Formulate research questions.
- Identify available data that can contribute to designing a study.
- Explore ethical dimensions in action research studies.

#### u04a1 - Diagnosing the Problem

As you are thinking of the ways in which action research can be used in your educational setting, investigate and diagnose the problem you plan to study for your action research plan. Action research has four stages—planning, acting, developing, and reflecting. For this assignment, write a 3–5 page

scholarly paper focusing solely on the first step of the planning stage: identifying the problem. Refer to the interactive Digital Action Research Plan, in which you have been collecting information, and use it as the basis of your paper.

## Instructions

The requirements for your assignment are as follows. Be sure to include a cover page and a reference page (not included in final page count) and adhere to the APA formatting guidelines:

1. Provide a brief introduction of the study.
2. Describe the study setting and explain why the setting was chosen for this study.
3. Describe the problem, including the impact of diversity on the problem.
4. Describe the purpose of the proposed study.
5. Identify and describe who might benefit from the findings of the study and why.
6. Describe the baseline data and information you have gathered to inform the development of the study.
7. Review at least three peer-reviewed scholarly articles related to your proposed topic. These articles must have been published within the last five years. Please be sure to identify at least one theoretical or conceptual framework to support your study. Additionally, identify the gaps in the literature. Use the current APA formatting guidelines to cite your resources.

## Additional Requirements

The assignment you submit is expected to meet the following requirements:

- **Written communication:** Written communication is free of errors that detract from the overall message.
- **APA formatting:** Resources, citations, title page, running head, and reference page are all formatted according to the current APA style and formatting standards.
- **Cited resources:** Three to five scholarly sources. All literature cited should be current, published within the past five years.
- **Length of paper:** 3–5 double-spaced pages (plus a cover page and a reference page).
- **Font and font size:** Times New Roman, 12 point.

### Course Resources

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[Digital Action Research Plan](#) | [Transcript](#)

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[Action Research Planning Process](#) | [Transcript](#)

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[APA Style and Format](#)

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[Library Research Guide: Reviewing the Literature for Education Action Research](#)

### u04d1 - Defining the Action Research Plan

In education, we know that some problems can be addressed through common sense solutions, whereas other problems require a greater in-depth analysis and a more systematic approach. In cases where the problems are more complex and simple solutions are not an option, then action research can be a great option. However there are challenges in working with human subjects and so prior to engaging in the study we need to gather information that will help the process.

For this discussion, address the following:

- Identify an organizational issue (school, classroom, district, or other type of organization).
- Identify one method that you believe would be feasible for gathering data from human subjects.
- Describe some of the challenges you might encounter in gathering data in this manner.
- Identify strategies you could use to overcome those challenges and successfully gather meaningful data to inform the problem.

## Response Guidelines

Respond to at least one other learner by providing the following:

- 2+2 feedback, two compliments and two suggestions about the organizational issue, method for gathering data, and ways to address potential challenges.

As a general reminder, your initial posting to a discussion should be 200–300 words, and your responses to other learners should be within 150–200 words. Respond to the initial post of at least one other learner in each discussion unless otherwise noted.

#### Course Resources

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#### Graduate Discussion Participation Scoring Guide

#### u04d1 - Learning Components

- Identify data collection methods and instruments.

### Unit 5 >> Planning for Inquiry

#### Introduction

Mills (2014) notes that action research begins with the definition of an area of focus and the formulation of an explicit question or problem to investigate. This problem could involve teaching or learning and be based on a teacher-researcher's classroom practice. But, action research might also be focused on broader issues related to school policy. In either case, it is critical that the topic of the study be something that falls within the teacher-researcher's sphere of influence. It cannot only be something that the teacher-researcher would like to change or improve; it must be something that the teacher-researcher has the power to influence. Mills (2014) suggests that the teacher-researcher begin with reflection on his or her own beliefs and philosophies in order to grasp a better understanding of the theories that undergird the issues being considered for study. If the research intends to focus on school policy, it will be important to investigate how things arrived at their current state. The studies in this unit will guide you in the development of a research focus, the writing of a research question or questions, and the planning of the overall action research process.

According to Smith (2014), a good action research question should be "meaningful, compelling, and important to you as a teacher-researcher. It should engage your passion, energy, and commitment" (p. 239). It must also be "manageable and within your sphere of influence," and it "benefits your students by informing your teaching and the curriculum, by providing new insights about students and their learning, by broadening and deepening your perspectives, or by improving practice" (Smith, 2014, p. 239). A good research question does not lead to a yes or no answer; it leads to action (Reason, 2008). Fischer (2009) suggests two approaches to homing in on a research question. The first approach is to reflect on your current or future teaching situation:

- As you think about your students and teaching, what seems to be working well and what would you like to improve?
- What strategies might you use to help students learn more effectively?
- What ideas may be useful to help students build a classroom climate for learning?
- What would you like to know more about when it comes to teaching your grade or subject area?
- What intrigues you about your classroom or teaching? (p. 27)

Fischer (2009) also suggests that the teacher-researcher formulate "what if" type questions, such as:

- What if students in the 7th grade worked once a week with students in the 1st grade?
- What if science and art were integrated subjects?
- What if we had no ability groupings for ELA? (p. 27)

#### References

- Fischer, J. (2009). Action research rationale and planning: Developing a framework for teacher inquiry. In G. Burnaford (Ed.), *Teachers doing research: The power of action through inquiry* (pp. 29–48). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Mills, G. (2014). *Action research: A guide for the teacher researcher* (5th ed.). Upper Saddle River, NJ: Pearson.
- Reason, P. (2008). *The Sage handbook of action research: Participative inquiry and practice* (2nd ed.). London, UK: Sage Publications.
- Smith, P. (Ed.). (2014). *Action research: A guide for the teacher researcher* (5th ed.). New York, NY: Pearson Education.

#### Learning Activities

#### u05s1 - Studies

### Reading

Use your *Practical Research: Planning and Design* text to complete the following:

- Read Chapter 4, "Planning Your Research Project," pages 82–124.

#### u05s1 - Learning Components

- Formulate research questions.
- Understand the process of designing action research plans.

#### u05s2 - Gathering Information Preparation

In preparation for your second assignment, due in Unit 6, read and complete the **Gather Information** section in the Digital Action Research Plan media piece. This includes deciding on some of the structural aspects of the study such as:

- Topic.
- Purpose.
- Research questions.
- Participants.
- Instruments.

#### Course Resources

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[Action Research Planning Process](#) | [Transcript](#)

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[Digital Action Research Plan](#) | [Transcript](#)

#### u05d1 - Problem Statement and Research Question

Using your identified research problem, describe how you would develop both a problem statement and a research question to help guide your action research plan. Within your initial post be sure to do the following:

- Create a problem statement that describes the need for conducting the action research in your professional setting. You may expand upon what you have written as the purpose of the action research study.
- Create a research question that guides the inquiry (for example, what is the impact of \_\_\_\_\_ on fifth graders' reading fluency levels?).

### Response Guidelines

Provide feedback to at least one of your classmates in 100–150 words minimum. You may choose to ask a clarifying question, challenge aspects of your classmate's problem statement or research question, offer additional insights for expanding the research, or provide references to previously published research to inform the inquiry.

#### Course Resources

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Graduate Discussion Participation Scoring Guide

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[Action Research Planning Process](#) | [Transcript](#)

#### u05d1 - Learning Components

- Formulate research questions.
- Explore instructional problems in the context of educational settings.

#### u05d2 - Action Research Timeline

A good research project takes planning and organizing, so it will be important for you to develop a timeline of what will happen and when. Make a table of projected steps you will need to plan for and when each will happen based on the knowledge that you will be implementing this research in the quarter following this course. Attach your table to your discussion post. You will need to implement your identified actions and collect data over about three weeks, so account for that in your timeline. An example of a research planning sheet is given in Chapter 4 of the *Action Research: Improving Schools and Empowering Educators* textbook.

## Response Guidelines

Compare and contrast your own schedule to those of your peers, at least two of them. Give constructive advice as to how steps can be completed in a timely manner.

As a general reminder, your initial posting to a discussion should be within 200–300 words, and your responses to other learners should be within 150–200 words.

Course Resources

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Graduate Discussion Participation Scoring Guide

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[Action Research Planning Process](#) | [Transcript](#)

u05d2 - Learning Components

- Understand the process of designing action research plans.

## Unit 6 >> Key Questions to Ask

### Introduction

In this unit, you will be pinning down more aspects of your research plan. Remember to capture much of this in the Digital Action Research Plan interactive media piece, as the steps outlined there will guide you. Some of the items you will be identifying include technology that might be used within your study or for analyzing the data. You may wonder if a specific software can be integrated into lesson plans or if smartboards can help special needs learners or perhaps if digital journaling would work well for youth coaching activities. There are myriad ways that we are looking at using technology within learning because certainly our student audience had adopted technology with excitement. Marc Prensky (2001) suggests that older adults are considered "Digital Immigrants," while those who grew up with technology are "Digital Natives" (pp. 1–2). This younger group is comprised of native speakers of the digital language of computers, video games, and the online world. Immigrants, according to Prensky, never lose their accent or foot in the past and, therefore, using technology remains similar to learning a new language rather than being fully ingrained. Prensky also states that if Digital Immigrant educators really want to reach Digital Natives, they will have to change their ideas about technology and adapt their teaching to incorporate it.

Below is another example of the type of information you will be describing in your research plan and how you can go about implementing it. The example also shows how you might integrate technology in your work.

## Gather Information

### Topic and Purpose

The topic of this action research is the lack of proficiency in multiplication facts in a third-grade classroom. The purpose of this action research plan is to increase the students' proficiency in basic multiplication facts.

### Research Question

What is the effect of the use of multiplication fact apps on student proficiency with solving multiplication facts?

### Participants

The population for this action research project are third-grade students at Elena's school. Elena used a convenience sample for her action research project—the 23 students in her class.

## Instrument for Data Collection

The instrument that will be used for data collection is a multiplication fact quiz. It includes 91 facts, which is all of the multiplication facts (0s through 12s). Although the criteria for reliability and validity are not formally established, the test should have high validity, as it measures what it is designed to measure (math fact knowledge). Reliability could be established by creating and administering an alternate form of the test (rearranging the items).

## Alternative Ways for Data Collection

Data could be collected through student work samples that require students to demonstrate their knowledge of multiplication facts. Data could also be collected through other quizzes that require students to apply their knowledge of multiplication facts to solve problems.

## Technology That Can Be Used

iPad apps will be used as the intervention in this action research plan. Students will be able to choose from Operation Math, Quick Math, Meerkat Math, and Math Flash Cards apps to practice their multiplication facts.

## How Diversity Impacts the Problem

In Elena's classroom, three students have learning disabilities and two students are English language learners. Both of these sub-groups of students may have difficulty with acquiring automaticity of multiplication facts. In addition, some students do not have access to an iPad at home, so they have fewer opportunities to practice multiplication facts outside of the classroom.

## Known Risks

One potential risk is that some students may not be able to use the app easily and that may make them uncomfortable. In that case, alternative interventions such as flash cards and card games will be used.

## Vision of Desired Change

Elena hopes that using the iPad apps intervention will result in the students' increased proficiency in multiplication facts. Currently, seven students have demonstrated greater than 80 percent proficiency. Her goal is that after the intervention 15 students will demonstrate greater than 80 percent proficiency. This will allow for more seamless solving of problems that involve multiplication of single-digit numbers.

## Reference

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5), 1–6.

## Learning Activities

### u06s1 - Studies

## Readings

Use the Capella University Library to read the following:

- Rojon, C., & Saunders, M. N. K. (2012). Formulating a convincing rationale for a research study. *Coaching: An International Journal of Theory, Research and Practice*, 5(1), 55–61.
- Fengfeng, K., & Abras, T. (2013). Games for engaged learning of middle school children with special learning needs. *British Journal of Educational Technology*, 44(2), 225–242.
- Thompson, G. (2014). 4 keys to designing the classroom of the future. *T H E Journal*, 41(9), 18–22.

### u06s1 - Learning Components

- Understand the process of designing action research plans.
- Explore how technologies can be utilized in action research study design.

### u06a1 - Gathering Information

For this assignment, start to narrow down some of your ideas and think about how you will carry out the proposed research.

## Instructions

Address the following items in a 3–5 page scholarly paper that includes three to five citations and is formatted according to the current APA style and format:

1. Restate your topic with an introduction and purpose of the study (from the prior assignment).
2. Outline the research questions being asked; be thoughtful of whether these are qualitative or quantitative and how they directly tie to your study purpose.
3. Describe your population and the chosen sample and sampling approach. With whom will you be collaborating?
4. Discuss the instruments or assessment tools you will use to collect data and how will they be shown to be valid and reliable.
5. Discuss some alternative ways of capturing this information. Include at least one method other than what you have planned. This could either be through a qualitative interview instead of a survey (or vice versa) or different instruments. Justify your chosen approach using citation support and through comparison of other methods.
6. Describe how technology will be integrated to enhance the research. Will you use technology in the application or assessment and potential outcomes?
7. Describe the role diversity plays in the problem and how your research and intended changes will improve learning for diverse student populations.
8. Determine the known risks or unintended consequences of the study. How can you be sure to address ethical considerations and protect your sample from any harm?
9. And finally, looking at the purpose of the study, think about what your desired change is. What is your vision of how the situation should look after you implement your changes?

## Additional Requirements

The assignment you submit is expected to meet the following requirements:

- **Written communication:** Written communication is free of errors that detract from the overall message.
- **APA formatting:** Resources, citations, title page, running head, and reference page are all formatted according to the current APA style and formatting standards.
- **Cited resources:** Three to five scholarly sources. All literature cited should be current, published within the past five years.
- **Length of paper:** 3–5 double-spaced pages (plus a cover page and a reference page).
- **Font and font size:** Times New Roman, 12 point.

Course Resources

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[Action Research Planning Process](#) | [Transcript](#)

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[Digital Action Research Plan](#) | [Transcript](#)

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[Library Research Guide: Reviewing the Literature for Education Action Research](#)

### u06d1 - Technology and Learning

Describe your current teaching location (or desired one), and identify the types of technology currently used to aid learning. What additional technology could you introduce to these students, and how would you use it to improve learning in a specific content area?

## Response Guidelines

Compare and contrast your own technology suggestions with those of two other learners. Provide suggestions as to other tools they could introduce in addition to the ones mentioned.

As a general reminder, your initial posting to a discussion should be within 200–300 words, and your responses to other learners should be within 150–200 words.

Course Resources

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[Graduate Discussion Participation Scoring Guide](#)

#### u06d1 - Learning Components

- Explore how technologies can be utilized in action research study design.

#### u06d2 - Technology Integration

Technology integration can be useful to enhance learning, but we must also be aware of how it impacts all students in our classes, including those who have differing learning styles and abilities. Provide an example of how you would adapt learning with technology to be inclusive of students with varying disabilities. Describe how you may capture this within an action research study.

## Response Guidelines

Respond to at least one other learner by doing one of the following:

- Ask a probing question.
- Offer a suggestion.
- Elaborate on a particular point with an example.
- Provide an alternative opinion.

As a general reminder, your initial posting to a discussion should be approximately 300 words, and your responses to other learners should be within 150–200 words. Respond to the initial post of at least one other learner in each discussion unless otherwise noted.

#### Course Resources

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#### Graduate Discussion Participation Scoring Guide

#### u06d2 - Learning Components

- Consider diverse perspectives on instructional problems.
- Explore how technologies can be utilized in action research study design.

## Unit 7 >> Ethics and Diversity

### Introduction

## Ethical Considerations for Your Action Research Project

In the action research project that you will undertake for this course and ED5980 or ED5950, you will be collecting data from human participants. Typically, research with human participants requires review and approval by an Institutional Review Board (IRB) whose purpose is to ensure the protection of the participants and their records. However, your action research project is considered a course activity rather than research and does not involve the collection of private or sensitive data. As a result, your project does not require IRB review.

### Why IRB Review is Not Required for Your Action Research Project

There are two reasons why IRB review is not required for your action research project:

- Your project is considered a course activity and does not meet the federal definition of research. In particular, your plan is not intended to be generalizable or broadly shared.
- Your project will involve a limited range of data collection activities that do not present significant participant risk.

### Definition of Research

The Federal Policy for the Protection of Human Subjects (Common Rule, n.d.) defines research as "a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge" (Section 46.102 Definitions, part c). Producing research that contributes to generalizable knowledge means that you collect data with the intent to make a contribution to the knowledge base in your discipline. This means your research can be generalized and that you intend to share your research by publishing your findings in journals or presenting at conferences. While your action research plan is an important means for you to develop and demonstrate your competency and may have value for you and your stakeholders, it does not meet the federal definition of research. You are undertaking this project solely for the purpose of your competency development and the fulfillment of the requirements of this course. You are not permitted to publish or present the work outside of the procedures

outlined in this course, except with approval by Capella's IRB through a formal review process. In ED5980 or ED5950, you will be recording a presentation of your project that you will share with your course colleagues. This is the only wider audience you will be able to present your findings to.

### Acceptable Data Collection Activities for the Action Research Project

Your projects should not include the collection of sensitive or personal information or information that would otherwise put participants at risk. Additionally, any data you collect must be recorded anonymously (that is, with no name, social security number, or any other information that can be linked to a participant). Consult the list below for information about the data collection activities that are permissible.

#### Data Collection Activities That Do Not Require IRB Approval and Are Permissible

The following data collection activities do not require IRB approval:

- Research about educational testing (unless an inadvertent disclosure of identifiable data would create the potential for harm).
- Observation of public behavior in which the researchers do not participate in the activities being observed. For example, playground activities.
- Research involving the collection or study of existing data or records if the data are publicly available. For example, aggregate system-wide data about student or school performance, or data recorded without involving any contact with people.
- Data collection that is not intended to be disseminated with a wider audience. You do not intend to present or publish the work outside the requirements of this course.

#### Data Collection Activities That Require IRB Approval and Are Not Permissible

- Research involving surveys or interviews that are intended to be shared through publication or presentation.
- Observation of public behavior when the researcher participates in the activities being observed.
- Collection of identifiable data from human participants.
- Collection of data involving more than minimal risk to participants or including sensitive or personal information or topics.

## Ethical Considerations for Your Role as an Educational Professional

Although your action research project does not involve research with human participants, it is important that you understand the requirements for conducting such research. As an educational professional, it is also important that you understand specific concerns relating to human participant research in educational settings.

### Protections for Human Research Participants

In the 1970s, the United States developed regulations aimed at protecting human participants in research. The regulations required institutions (educational, medical, corporate, and non-profit) to establish IRBs to ensure research involving human subjects included adequate safeguards to protect participant rights and minimize potential risks. The regulations are founded on three key principles outlined in The Belmont Report (1979):

- **Beneficence:** To maximize benefits for science, humanity, and research participants and to avoid or minimize risk or harm.
- **Respect:** To protect the autonomy and privacy rights of participants.
- **Justice:** To ensure the fair distribution of the costs and benefits of research among persons and groups.

### Human Participant Research in Education Settings

There are particular ethical implications in the collection of data involving human participants in educational settings. In addition to ensuring that research meets regulatory requirements, researchers must also abide by the policies of the institutions where they conduct the research. Schools and educational institutions often have policies and procedures in place to protect the rights and safety of students and their records. This may include, for example, the requirement that researchers undergo a background check. Schools and educational institutions also have procedures for ensuring compliance with Department of Education regulations, the most important of which is FERPA (n.d.), which protects the privacy of student educational records.

Students may be especially vulnerable to risks associated with data collection. Researchers must pay close attention to ensuring the privacy of students and their records, obtaining student assent and parental permission, ensuring that students do not feel pressured to participate and that the decision is voluntary. Teachers and administrators may also be vulnerable if the data collected could have an impact on their reputation, position, or employment.

### Capella University's IRB Requirements

Capella University's IRB oversees all research involving human participants conducted by Capella learners, faculty, and staff. In other words, all research involving human participants at Capella must be reviewed by Capella's IRB. At Capella, even research that is considered "exempt" according to the regulations undergoes review by the IRB, since the IRB must validate that the research is indeed exempt. At Capella, exempt research is not exempt from initial review by the IRB—it is simply exempt from ongoing review. Exempt research includes, among other categories, research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (a) research on regular and special education instructional strategies and (b) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods. When conducting research, it is important to consult institutional practices along with the federal regulations, since many institutions do require review of studies that meet the exemption criteria.

## References

U.S. Department of Education. (n.d.). Family Educational Rights and Privacy Act (FERPA). Retrieved from <http://ed.gov/policy/gen/guid/fpco/ferpa/index.html>

U.S. Department of Health and Human Services. (n.d.). Federal policy for the protection of human subjects (common rule). Retrieved from <http://www.hhs.gov/ohrp/humansubjects/commonrule/>

U.S. Department of Health and Human Services. (1979, April 18). *The Belmont Report*. Retrieved from <http://www.hhs.gov/ohrp/regulations-and-policy/belmont-report/index.html>

## Learning Activities

### u07s1 - Studies

## Readings

Use the Capella University Library to read the following:

- Fengfeng, K., & Abras, T. (2013). Games for engaged learning of middle school children with special learning needs. *British Journal of Educational Technology*, 44(2), 225–242.

Use the following Internet resource for some ideas of how to implement appropriate technology and to address diversity:

- National Association for the Education of Young Children. (2009). Where we stand: On responding to linguistic and cultural diversity [PDF]. Retrieved from <http://www.naeyc.org/files/naeyc/file/positions/diversity.pdf>
- National Association for the Education of Young Children. (n.d.). Technology and interactive media as tools in early childhood programs serving children from birth through age 8 [PDF]. Retrieved from: [https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/topics/PS\\_technology\\_WEB.pdf](https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/topics/PS_technology_WEB.pdf)

### u07s1 - Learning Components

- Consider diverse perspectives on instructional problems.
- Explore how technologies can be utilized in action research study design.

### u07s2 - Literature Review Preparation

In preparation for your assignment in Unit 8, read and complete the **Review Related Literature** section in the Digital Action Research Plan. You will need to add in the articles you have already been collecting about your topic plus additional ones that directly address the problem. Remember, articles must have been published within the last five years and must be research studies (empirical work). You can find these kinds of journals and articles in the Capella University Library. As you search the databases, you can set search requirements with specific dates and type of articles, which will help you narrow down the choices.

You will post a draft of your literature review to the second discussion in this unit. Use the feedback you will receive to finalize your draft prior to submitting for grading in the Unit 8 assignment.

## Course Resources

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[Action Research Planning Process](#) | [Transcript](#)

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[Digital Action Research Plan](#) | [Transcript](#)

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### u07d1 - Role of Diversity

Describe the role diversity plays in your action research problem and how your study and proposed ensuing changes will improve learning for diverse student populations. Remember that diversity encompasses multiple areas including race, LGBT, economic status, and learning differences. Specifically address the following:

1. Curriculum.
2. Instruction.
3. Assessment strategies.

## Response Guidelines

Compare and contrast your work with at least one other learner.

As a general reminder, your initial posting to a discussion should be within 200–300 words, and your responses to other learners should be within 150–200 words. Respond to the initial post of at least one other learner in each discussion unless otherwise noted.

### Course Resources

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#### Graduate Discussion Participation Scoring Guide

#### u07d1 - Learning Components

- Identify ways in which action research design can impact diverse populations.
- Explore ethical dimensions in action research studies.

#### u07d2 - Literature Review for Peer Review

Post a draft of your literature review to this discussion for peer review. Select a classmate on whose literature review you will provide constructive feedback.

## Response Guidelines

Respond to your partner by providing 2+2 feedback, two compliments and two suggestions, on his or her literature review draft.

### Course Resources

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#### Graduate Discussion Participation Scoring Guide

#### [Writing a Literature Review \[PDF\]](#)

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#### [Library Research Guide: Reviewing the Literature for Education Action Research](#)

#### u07d2 - Learning Components

- Develop scholarly writing practices.

## Unit 8 >> The Literature Review

### Introduction

A review of the professional literature is a part of any research project. First, you will conduct a literature review to be sure that you have a thorough understanding of the topic. A well-written literature review demonstrates that you have a working knowledge of the topic; if you want your research to be taken seriously, this is critically important. Another aim of a literature review is to delineate any background theories and to locate whatever scholarly research has been conducted on your topic so that you can compare your ideas to those already proposed by experts in the field. You may have some great ideas for how to address the problem you have defined. Your action research study may even be driven by a critique of existing findings. For your findings to be taken seriously, you must discuss them within the context of the professional literature that pertains to your topic. As you read through the

literature, you will undoubtedly find conflicting views or results among researchers, and it is important that you point out these differences and evaluate why there are discrepancies among findings, as well as how and why your perspectives align or do not align.

Finally, a literature review supports the rationale for your study. Perhaps there is a gap in the research or your critical analysis of the research that has already been done convinces you that more investigation or a different approach is warranted. Your study needs to be deemed necessary for your findings to be taken seriously; the rationale for that necessity arises from your literature review.

It is imperative that you use only scholarly sources for your literature review. A scholarly source is one that has been peer reviewed. This review endows the source with the approval of a body of experts in the field related to the study. You do not want to base decisions about your action research project on a parenting magazine, however interesting or reasonable or well regarded it is. Remember that you are a scholar, part of a community of scholars whose ideas and findings will provide the backdrop for your research efforts.

## The Nature of the Literature Review

Once you have clarified the focus, defined the problem, and framed the scope of the research, you will engage in a thorough review of the relevant literature. The literature review serves several purposes. It tells the reader of your study what others have concluded about your topic. The most important purpose may be that it assists you in narrowing your inquiry topic. As you search the literature on your chosen topic, you may find that others have done studies similar to the one you are planning. This tells you that you ought to find some aspect of the topic that has not yet been studied or you ought to find a method of studying the topic that differs from the existing studies.

Because of this, you may change the focus of your inquiry throughout this course. That is a positive thing, and not something negative. Changing your focus is a natural part of inquiry and results in a better, more useful study. Do not be discouraged because you have invested your time into a path that eventually will lead to an issue that cannot be researched or one that has been researched ad nauseam.

Only when you are certain that you have decided on a unique approach to your topic should you begin to gather the evidence in the literature that will show that your inquiry is necessary. Remember that a literature review is not a sequence of journal article reviews. It is a cohesive narrative, written from your own perspective, with sources cited that support or challenge your views. Challenge is an important consideration. To cite sources that disagree with your perspectives and then present a well-reasoned argument against those opposing views makes for a stronger literature review.

Try this: Write an outline of the ideas on your topic expressed by other authors who have studied the problem. How do their ideas compare to your own? Are you interested in arriving at results that are different from those authors? Do you think a different methodology would result in greater validity? Do you want to apply the ideas to a different population? Narrowing and focusing your topic will definitely make for a more valid and feasible study.

### Learning Activities

#### u08s1 - Studies

## Readings

Explore the following Capella University online resources to prepare your literature review, due in this unit:

- [Literature Review.](#)
- [Writing a Literature Review.](#)
- [Reviewing the Literature.](#)
- [Finding Resources for Your Literature Review.](#)

#### u08s1 - Learning Components

- Develop scholarly writing practices.

#### u08s2 - Looking Ahead

## Readings

You will have a lot of course work to complete in the next units. Get an early start by completing the following textbook reading.

Use your *Action Research: Improving Schools and Empowering Educators* text to complete the following:

- Read Chapter 5, "Collecting Data," pages 129–169.
  - This gives an overview of the types of data, including qualitative and quantitative approaches.

- Identify data collection methods and instruments.

### u08a1 - Generating Alternatives (Literature Review)

For this assignment, research best practices related to your proposed topic and develop a literature review using scholarly, peer-reviewed articles. The purpose of this review is to identify research-based strategies and practices in the literature that can be used as solutions for addressing a problem or an issue related to the proposed topic for your study in your classroom or professional setting. This assignment will allow you to consider strategies that you might implement later in your action research plan. For more information, refer to the Review Related Literature section of the Digital Action Research Plan media piece, where you have been collecting information.

## Instructions

The requirements for your Unit 8 written assignment are as follows:

1. Locate a minimum of eight articles and online resources related to best practices for your proposed topic. These articles must have been published within the last five years. The majority of these resources must be empirical articles. An empirical article is one in which the author has conducted a study about a particular instructional practice and is reporting the results.
2. Organize your literature review into sections that present themes or identify trends, including learning theories, theoretical or conceptual frameworks, instructional strategies, and trends related to your proposed topic. These are just examples.
3. Your literature review should be 5–7 pages, written in APA format using in-text citations, with at least eight corresponding references.

## Additional Requirements

The assignment you submit is expected to meet the following requirements:

- **Written communication:** Written communication is free of errors that detract from the overall message.
- **APA formatting:** Resources, citations, title page, running head, and reference page are all formatted according to the current APA style and formatting standards.
- **Cited resources:** Minimum of eight scholarly sources. All literature cited should be current, published within the past five years.
- **Length of paper:** 5–7 double-spaced pages (plus a cover page and a reference page).
- **Font and font size:** Times New Roman, 12 point.

### Course Resources

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[Action Research Planning Process](#) | [Transcript](#)

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[Digital Action Research Plan](#) | [Transcript](#)

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[Library Research Guide: Reviewing the Literature for Education Action Research](#)

### u08d1 - Literature Review

Share one of the empirical research articles you located for your literature review assignment by providing the link to the article in this discussion. Summarize the article research by stating:

- Topic.
- Purpose.
- Research questions.
- Participants and sample.
- Methodology used.
- Basic findings.

Conclude with a brief statement as to how this research article is helpful in guiding you and providing information for your own action research study.

## Response Guidelines

Respond to at least one other learner by doing one of the following:

1. Ask a probing question.
2. Offer a suggestion.
3. Elaborate on a particular point with an example.
4. Provide an alternative opinion.

As a general reminder, your initial posting to a discussion should be approximately 300 words, and your responses to other learners should be within 150–200 words. Respond to the initial post of at least one other learner in each discussion unless otherwise noted.

### Course Resources

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Graduate Discussion Participation Scoring Guide

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[Library Research Guide: Reviewing the Literature for Education Action Research](#)

### u08d1 - Learning Components

- Analyze theories and scholarly studies to inform research decisions.

## Unit 9 >> Data Collection, Analysis, and Technology

### Introduction

Action research is unique in that it is usually participatory; that is, the researcher is immersed in the research setting and most likely knows the research participants. This raises questions of possible bias: bias in how the study is structured, how and what data are collected, and how findings are interpreted. The data collection phase of the action research process represents the point at which the researcher interacts most intimately with the research participants; this is also a good point to consider the ethical implications of action research.

Once collected, data must be organized and interpreted in the context of understanding and insights about the data and the study setting. This process of analysis, in which researchers synthesize information, apply their informed judgment, and weigh the merits of next steps, produces reasoned conclusions that can be translated into actionable knowledge. An action research project is either a quantitative study (that is, the data are numerical or can be reduced to numerical data) or a qualitative study (that is, the data are not quantifiable or the researcher has chosen not to quantify it). Quantitative data are analyzed with statistics.

Some of the common steps in data analysis and interpretation include:

- Describing the data that have been collected.
- Identifying the criteria that will be used to evaluate the data.
- Identifying the themes that emerge from the data.
- Coding data (the process of finding patterns and meaning in the data).
- Identifying further questions that emerge from the data or that have not been sufficiently answered by the data that have been collected.
- Interpreting findings and implications that might be drawn from the analysis.
- Analyzing the significance of the findings in the research setting.
- Connecting the findings to personal experience.
- Connecting the findings to the professional literature.
- Using statistics (for example, descriptive, comparative, correlational, ranking), if appropriate, to clarify findings.

You are not tasked to collect and analyze your data until ED5980 or ED5950; however, you should start learning about these aspects of the action research process, as they will guide you in your plan development.

One important principle of data collection is that the data you collect should address the research questions you have posed. Even though you will not be collecting data in this course, you will do so for the next one, and it is important for you to align your problem, research questions, and plans for data collection and analysis.

### Learning Activities

### u09s1 - Studies

## Data Analysis and the Research Question

The type of data analysis that you conduct depends on the nature of the data you collect and that, in turn, depends on your research question. If you are studying change in learning scores, then you will be collecting quantitative data and conducting quantitative analysis. If you are studying student perceptions of bullying, then you will be collecting qualitative data and conducting qualitative analysis. The readings in this study will give you an understanding of how analysis works and how to interpret the results of the analysis. You will not be collecting or analyzing the data until the next course (ED5980 or ED5950), but you must have a solid plan in place, as you will be implementing this soon. The purpose of this unit is to enable you to understand the analysis process as a means for drawing conclusions from your study in order to plan further actions.

## Readings

Use your *Action Research: Improving Schools and Empowering Educators* text to complete the following:

- Read Chapter 6, "Analyzing Data," pages 170–216.
  - This chapter is helpful in analyzing the data you will be collecting.
  - Use the Planning Template starting on page 305 to plan your data analysis.

Use the Internet to read the following:

- Harris, D. (2013). [Data for dummies: 6 data-analysis tools anyone can use](https://gigaom.com/2013/01/31/data-for-dummies-5-data-analysis-tools-anyone-can-use/). Retrieved from <https://gigaom.com/2013/01/31/data-for-dummies-5-data-analysis-tools-anyone-can-use/>

### u09s1 - Learning Components

- Describe methods of data analysis.

### u09s2 - Action Research PowerPoint Preparation

In preparation for your final assignment, the PowerPoint presentation, work on completing the **Develop a Research Plan** section of the Digital Action Research Plan media piece. Capture the information that will be needed not only for your final assignment but for you to actually start with initiating the project in the next capstone course. This includes all the data collection plans plus a general overview of how you will analyze the data. (You will focus more heavily on this during the next course, but you should have a general awareness of approaches and the ones that will best match your work.)

#### Course Resources

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[Digital Action Research Plan](#) | [Transcript](#)

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[Action Research Planning Process](#) | [Transcript](#)

### u09d1 - Data Collection

Provide a rationale for your proposed data collection process. In what ways are these data best matched to your research question? In what ways do you think the analysis of these data would impact student achievement in your classroom or in your educational environment?

## Response Guidelines

Respond to one of your peers by providing 2+2 feedback, two compliments and two suggestions, about the proposed data collection process.

As a general reminder, your initial posting to a discussion should be within 200–300 words, and your responses to other learners should be within 150–200 words. Respond to the initial post of at least one other learner in each discussion unless otherwise noted.

#### Course Resources

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Graduate Discussion Participation Scoring Guide

#### u09d1 - Learning Components

- Identify data collection methods and instruments.
- Describe methods of data analysis.

#### u09d2 - Data Analysis and Technology

In this discussion, consider the use of technology to support data analysis. How would you use technology in the analysis of your data? Why have you chosen this approach? Note that your comments may be informational for the data analysis proposals of other learners in the course, so please be specific and comprehensive in your response.

### Response Guidelines

Respond to at least two other learners:

1. Ask a probing question.
2. Offer a suggestion.
3. Elaborate on a particular point with an example.
4. Provide an alternative opinion.

As a general reminder, your initial posting to a discussion should be within 200–300 words, and your responses to other learners should be within 150–200 words.

#### Course Resources

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#### Graduate Discussion Participation Scoring Guide

#### u09d2 - Learning Components

- Explore how technologies can be utilized in action research study design.
- Describe methods of data analysis.

### Unit 10 >> Community

#### Introduction

Action research is about taking action on systematically collected and analyzed data. Action planning can occur at different levels within a school or organization, depending on the scope of the research. Mills (2014) contends that action planning is an attempt to answer the question "based on what I have learned from my research, what should I do now?" (p. 176). The answer to this question should consider who is impacted by the research findings, who has a right to know about those findings, and what forum is best for the dissemination of the information. Action planning is also a time for reflection. It presents an opportunity for the teacher-researchers to identify their individual and collective professional learnings and determine the most appropriate steps to be followed next.

In this unit, you will consider the knowledge you have gained from the course, synthesize what you have learned about action research, and discuss how your ideas may or may not promote change and improvement in learning.

Additionally, continue to work on your Digital Action Research Plan and your readings. You will continue to interact with this media piece during your next course (ED5980 or ED5950), where you will implement your plan, collect and analyze the data, and then communicate findings via a written report and a recorded presentation. You will be implementing the data in Unit 1, so make sure you are prepped and ready to go by then. Good luck, and have fun!

#### Reference

Mills, G. (2014). *Action research: A guide for the teacher researcher* (5th ed.). Upper Saddle River, NJ: Pearson.

#### Learning Activities

#### u10s1 - Studies

## Readings

Use the Capella University Library to read the following:

- Lankau, L. (2015). Connection + collaboration = successful integration of technology in a large high school. *Knowledge Quest*, 44(2), 66–73.
- Katigbak, C., Foley, M., Robert, L., & Hutchinson, M. K. (2016). Experiences and lessons learned in using community-based participatory research to recruit Asian American immigrant research participants. *Journal of Nursing Scholarship*, 48(2), 210–218.
  - As you read this article, pay attention to the nuances involved in recruiting Asian-American immigrants to a research study. While this article is about recruiting for a medical study, similar problems can occur in educational settings.

### u10s1 - Learning Components

- Consider diverse perspectives on instructional problems.
- Understand the effect of research on all stakeholders.
- Identify ways in which action research design can impact diverse populations.

### u10a1 - Action Research Plan (PowerPoint)

This assignment is the last step in the planning stage of action research and is where you will pull all the information you have collected together into a comprehensive research plan. Using the earlier assignments and the Digital Action Research Plan, develop a PowerPoint presentation of 14–17 slides with the intended audience being educational administrators or leaders in the community who may be impacted or influenced by your study.

## Instructions

The PowerPoint must include the following slides, with key information mentioned on the slides and supporting information (including citations) in the notes area:

1. Cover slide: The slide includes the name and number of the course, name of the project, submission date, name of the learner, and contact information.
2. Introduction slide: The slide provides a brief introduction to the study, describes the study setting, and explains why the setting was chosen for this study. This is the "elevator" speech of the study and captures an overview in one small paragraph.
3. Scenario slide: One slide that details the problem to be studied, describes the purpose of the proposed study, and explains who might benefit from the findings of the study and why. This includes the key questions to be asked.
4. Analysis of the situation: A section of two to three slides that describes what you have discovered about the topic to inform the study design. What key concepts and studies are relevant to the study?
  1. Complete a review of at least three related peer-reviewed research articles on the topic to be studied.
  2. Identify what has been studied on the topic you plan to study and what has not been studied or studied very little. In addition, identify areas where findings are not in agreement with the topic you are going to study. Identify the leading theory you have found.
5. Diversity: One slide that directly addresses embedded diversity issues within the study topic and how this research could be used to enhance learning for students of all cultural backgrounds and learning needs.
6. Implementation and design: A section of three to four slides that describes how data will be collected.
  1. Describe the population and the sample from which the data will be collected and provide a rationale for selecting the population and the sample.
  2. Describe what instruments will be used to collect data and how they will be shown to be valid and reliable.
  3. Describe how data will be physically collected using a step-by-step approach (a blueprint of what you will be doing).
  4. Include rationale for what technology will be integrated to enhance the research; this could be via the application or assessment and potential outcomes.
7. Timeline: One slide that shows the projected time estimated for the pretest, application, and post-test of the study (note that 3 weeks is the maximum time).
8. Ethics: One slide that names the primary stakeholders involved in gaining access to the study and the ethical considerations needed.
9. Data analysis: A section of one to two slides that describes how data will be analyzed and processed to generate findings in order to inform decision-making and practice.
10. Summary: One slide that sums up the study and addresses the following questions:
  1. How will you know if the changes resulted in improvement?
  2. How will these changes impact instruction?
11. References: This section should list, in APA format, the scholarly references used in creating the plan, especially with regard to the review of the literature.

## Additional Requirements

The assignment you submit is expected to meet the following requirements:

- **Written communication:** Written communication is free of errors that detract from the overall message.
- **APA formatting:** Resources, citations, and references page are formatted according to the current APA style and formatting standards.
- **Length of presentation:** 14–17 slides.

Course Resources

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[Action Research Planning Process](#) | [Transcript](#)

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[Digital Action Research Plan](#) | [Transcript](#)

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[PowerPoint Presentations Library Guide](#)

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[Guidelines for Effective PowerPoint Presentations \[PPTX\]](#)

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### u10d1 - Action Research Methodology

Reflect on the process of putting together your action research plan.

- What are the key things you have learned about methodology in action research?
- What are the key concerns you have about implementing the plan?
- How do you believe you will fully know if the changes result in improvement?

## Response Guidelines

Respond to at least one other learner by comparing your own key learning areas and concerns with theirs.

As a general reminder, your initial posting to a discussion should be within 200–300 words, and your responses to other learners should be within 150–200 words. Respond to the initial post of at least one other learner in each discussion unless otherwise noted.

Course Resources

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[Graduate Discussion Participation Scoring Guide](#)

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### u10d1 - Learning Components

- Understand the process of designing action research plans.

### u10d2 - Stakeholders

Continue to collect information in your Digital Action Research Plan during the break so that you will be ready to jump right into implementing your study in ED5980 or ED5950. Share the steps you are taking to work with the stakeholders at your institution who will be involved in your study. This could be parents, students, or administrators—anyone you need to get approvals from or prepare in some way to be engaged in your work. What successes and stumbling blocks are you running into, and how have you addressed these? Refer to the two articles you read in this unit's study for any suggestions to overcoming potential hurdles.

## Response Guidelines

Respond to at least one other learner by comparing your stakeholders' engagement with theirs. Offer suggestions to help them overcome any problems.

As a general reminder, your initial posting to a discussion should be within 200–300 words, and your responses to other learners should be within 150–200 words. Respond to the initial post of at least one other learner in each discussion unless otherwise noted.

## Course Resources

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[Graduate Discussion Participation Scoring Guide](#)

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[Action Research Planning Process](#) | [Transcript](#)

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[Digital Action Research Plan](#) | [Transcript](#)

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[Connection + Collaboration = Successful Integration of Technology in a Large High School](#)

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[Experiences and Lessons Learned in Using Community-Based Participatory Research to Recruit Asian American Immigrant Research Participants](#)

## u10d2 - Learning Components

- Consider diverse perspectives on instructional problems.
- Understand the effect of research on all stakeholders.