Effective research is the cornerstone of informed decision-making in the Army profession. It transforms information into knowledge, helping leaders make choices in complex situations. (U.S. Army photo by Sgt. 1st Class Justin P. Morelli)

From Data to Wisdom:

Navigating Research in the Army Profession

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Introduction

Effective research is the cornerstone of informed decision-making in the Army profession. The work bridges data, information, and knowledge to empower leaders (Department of the Army, 2019).

One of the challenges of being an academic student is starting the writing process with a quality research plan. Many students struggle to decide where to start. Exploring the research process reveals how the thinking and choices involved support writing.

The Command and General Staff College Writing Guide, ST 22-2, provides a writing process anyone can follow. After selecting a topic and creating a plan, students must begin their research. This challenge can seem overwhelming before they even start writing (Lythgoe et al., 2024, p. 7).

Figure 1 — Research and the writing process (Lythgoe et al., 2024, p. 7)

Understanding the Purpose of Research

Research helps individuals or teams better understand a topic. Similarly, when leaders face complex challenges, quality research provides them with evidence-based insights and information critical to addressing the issue at hand. Therefore, when they are charged with producing strategies, solving problems, or allocating resources, accurate research results in accurate decisions.

Army Doctrine Publication 6-0 provides

Figure 2 — Achieving understanding (Department of the Army, 2019)

a starting point for research to reach an understanding of any given problem or operation. Situational understanding, or understanding overall, is the result of analyzing and applying judgment, intuition, and experience to information, allowing one to recognize patterns between elements of a topic.

Data refers to the raw or unprocessed observations collected by any entity, which can come from a variety of sources (including human observation, reports, or databases). Once a leader or researcher has processed and organized the raw data, it becomes valuable information through:

1. Removing noise or data that lacks relevance.
2. Extracting important details.

If done well, this process sets the stage for a much deeper and more accurate analysis (Department of the Army, 2019, paras. 2-13 to 2-20).

The next step is to study, analyze, and explore this information for connections and impacts on the problem or operation. This process transforms information into knowledge, which exists in two forms: tacit and explicit.

Tacit knowledge is the intangible, personal wisdom accumulated through experiences and interactions. Because it resides solely within an individual, it can be difficult to document. However, despite its illusive nature, tacit knowledge is critical to making decisions.

In contrast, explicit knowledge is tangible and can be documented and shared through digital or physical means. We often describe such knowledge through clear definitions, procedures, orders, or doctrine. Explicit knowledge often serves as the foundation for training, standardization, and effective communication.

Ultimately, the process of gaining a better understanding helps to unify data, information, and knowledge and enables informed decision-making in complex situations (Department of the Army, 2019, paras. 2-13 to 2-20).

Selecting a Topic: The Basics

Selecting a research topic is perhaps the most critical step in the research process and can be a valuable first lesson for young students or junior leaders. The main topic or central theme may be given to you by a supervisor, it may be a problem you or your Soldiers face, an operation in which you may participate, or an assignment prompt from an instructor.

However, if the topic is undetermined, your best choice may be to look inward and pull from your personal or professional interests. Starting with ideas that are intrinsic to you may improve the outcome of your research. If you are considering writing for the purpose of developing the Army profession and are not sure where to start, here are some practical examples of research ideas you might consider:

1. **Leadership Techniques:**
   a. Investigate effective leadership styles and their impact on team performance.
   b. Analyze case studies of successful leaders and their decision-making processes.
2. **Military History:**
   a. Explore specific battles, campaigns, or military innovations.
   b. Investigate lessons learned from historical military leaders.
   c. Examine the evolution of military tactics and their relevance today.
3. **NCO Development:**
   a. Explore NCO professional development programs.
   b. Assess the role of NCOs in shaping organizational culture.
   c. Investigate mentoring and coaching practices for NCOs.

Remember, the key is to choose a topic that aligns with your interest and expected outcomes or desired end state. You may also want to explore practical applications and consider how your research can enhance your development or improve your organization.

Step-by-Step Research Process

1. Define Your Objective

After selecting your research topic, the next step is to clarify the purpose of your research. If you are writing a paper or preparing a presentation, you need to consider your overall goal.

Argumentative research focuses on presenting one or more perspectives on an issue. Your task is to take a clear stance and persuade your audience to support your evidence-based argument. This type of research aims to engage and convince readers (Surdzial, 2019).
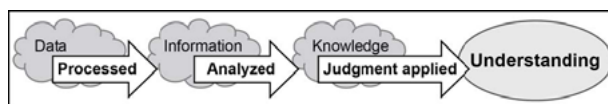
Expository research builds knowledge about a selected topic. Your purpose here is to communicate information clearly and objectively. Think of expository research as simply illuminating or highlighting the subject matter for your audience without taking a specific stance (Surdzial, 2019).

Analytical research examines existing research from various sources, and your role is to critically examine these findings, draw your conclusions, and present them. This type of research emphasizes your ability to synthesize and interpret existing knowledge (Surdzial, 2019).

After defining your purpose, you must develop research questions to guide you. It may become easier to come up with them after you identify what you know and don't know about your topic. Your research questions should be open-ended and probing, such as *why? how?* and *what if?*

2. Locate Information

Before collecting data for exploration and processing, you should organize and record where to find relevant data sources for analysis. Helpful resources include:

- **Google Scholar**
  https://scholar.google.com/intl/en/scholar/help.html
  General academic research
- **JSTOR**
  https://about.jstor.org/whats-in-jstor
  Access to scholarly articles

- **DTIC (Defense Technical Information Center)**
  https://discover.dtic.mil
  Military-focused research
- **U.S. Army Heritage and Education Center**
  https://usawc.libguides.com/current/resources
  Research tools, both public and military links
- **Army University Press**
  https://www.armyupress.army.mil
  The Army's premier multimedia organization with publication platforms and educational services

Citation software can save writers time by producing footnotes and bibliographies with a few clicks. Some to consider include:

- **Zotero**
  https://www.zotero.org
- **EndNote**
  https://endnote.com
- **PERRLA**
  https://www.perrla.com/#/how-it-works
- **Mendeley**
  https://www.mendeley.com

It can be difficult to sort and distinguish relevant and credible sources of information from large quantities of search results. However, many databases allow you to refine your search by filtering the results by date range or source (e.g., expert publications or scholarly and peer-reviewed journals). Use Table 4 in the material that follows to search for and evaluate credible sources.
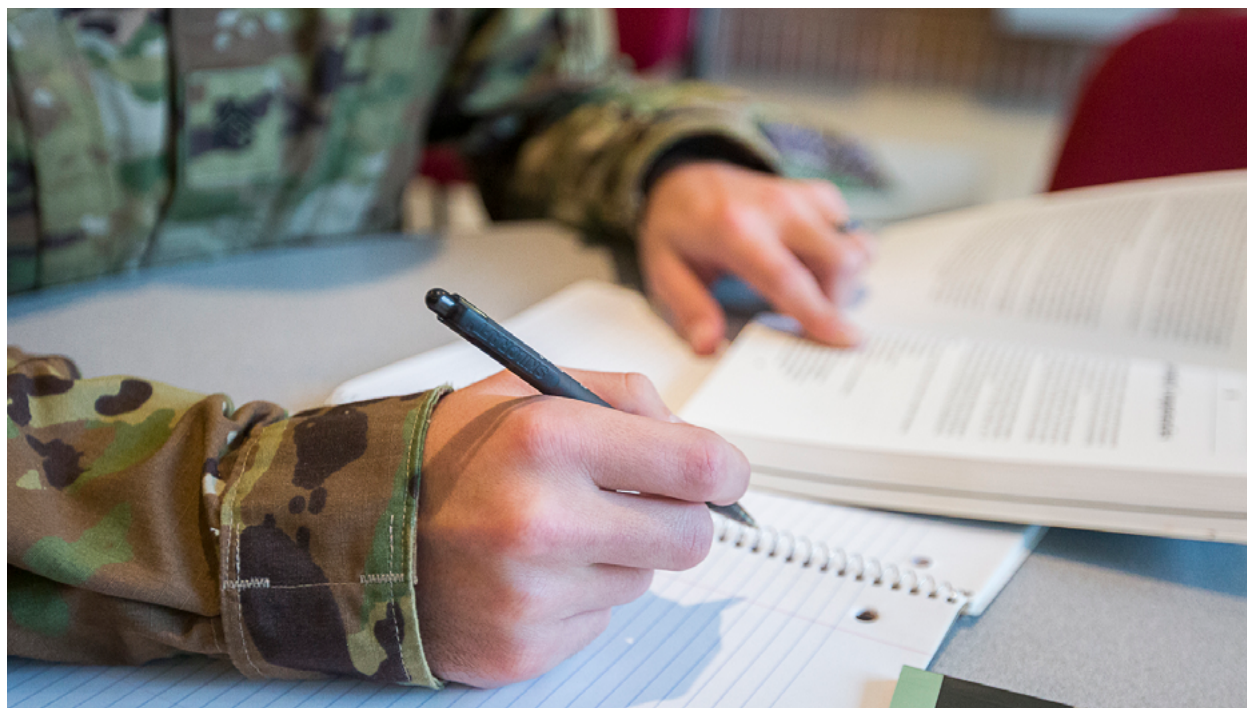
When engaging with scholarly material, especially as a military professional, it is essential to approach it with a critical mindset that includes analyzing policy and expert sources. (U.S. Army photo by Nell King)

Table 4. Sources of evidence.

Low ⟵		Credibility		⟶ High
• Non-expert editorials • Predatory (pay-to-publish) journals • Personal websites and blogs • Partisan, tabloid, and entertainment media	• Advocacy group literature • Wikipedia • Self-published books	• High quality news media • Non-scholarly trade journals • General news media • General audience books	• Books from experts (non-academic presses) • US gov't publications • Military doctrine • Expert talks	• Peer reviewed journals • Books from academic presses • Expert-reviewed encyclopedias
Adapted from: Univ. of Colorado, "Public Administration Research"; Univ of Arizona, "What is a Scholarly source."				

Table 4 — Sources of Evidence (Lythgoe et al., 2024, p. 10)

3. Evaluate Your Sources

The Command and General Staff College's *Professional Writing Guide* aims to guide students toward scholarly sources. In it, Lythgoe et al. (2024) suggest that "effective arguments require convincing evidence from trustworthy, objective sources. Scholarly works written and peer-reviewed by experts make the strongest evidence (Table 4, shown on this page). Avoid noncredible sources that lack expert authorship" (Lythgoe et al., 2024, p. 10).

4. Conduct In-Depth Research

When engaging with scholarly material, especially as a military professional, you must approach it with a critical mindset that includes analyzing policy and expert sources. Thinking critically is about engaging with your topic thoughtfully, not simply being dismissive (Paul & Elder, 2006). Here are some approaches to take:

a. Consider authors' experience, affiliations, potential bias, and their stated mission.
b. Find multiple perspectives on the same topic and evaluate each separately. Compare authors and sources and assess their similarities, differences, assumptions, fallacies, and gaps in their arguments and evidence.
c. Evaluate whether authors' reasoning is logical, evidence-based, or highly opinionated and biased.
d. Identify gaps and unanswered questions and follow those gaps as you continue your investigation.

5. Write

Take notes to organize ideas and insights. Begin paraphrasing ideas to allow your writing to take shape in your voice. Brainstorming (https://writingprocess.mit.edu/process/step-1-generate-ideas/instructions/brainstorming) can help generate new ideas that may develop from your research. Mind mapping (https://writingprocess.mit.edu/process/step-1-generate-ideas/instructions/idea-mapweb) may help you organize and find relationships between new ideas from brainstorming and develop an outline (Grunwald, n.d.).

As the *Professional Writing Guide* notes:

> *"Outlines help writers visualize an essay's organization and flow. As writers research a topic, it can be useful to organize the research in an essay outline. Writers can then use the outline as a guide when drafting."*
> *(Lythgoe et al., 2024, p. 11)*

In research writing, use direct quotations when the original wording and format are critical to your argument or when it adds credibility to your statements. You should summarize and paraphrase when you want to capture the main ideas from a source without including every detail or when you want to incorporate the source's content while maintaining your voice.

6. Cite

Citing sources is essential for several reasons. Credit attribution acknowledges the original creators or researchers whose work you use. Proper citations enhance the credibility of your arguments. Citations provide evidence of your research and support your claims.

Finally, by citing, you contribute to ongoing scholarly conversations (Lythgoe et al., 2024, p. 7). Properly citing is not just about avoiding plagiarism. It's a way to engage with the academic or professional community and move the discussion forward.

Call to Action

In a post for the Harding Project Substack, Tyson Crosby mentions military periodicals as he advocates for reading among Soldiers (Crosby, 2024). In another post, Zachary Szewczyk also directs readers toward military journals — citing them as a place to publish (Szewczyk, 2024). Similarly, Brennan Deveraux — writing for U.S. Army War College Publications — refers to the Army's renewal of professional dialogue and the call to write "for your branch

magazines and professional bulletins" (Deveraux, 2024).

These publications and publishers include the *NCO Journal* and the Army University Press, which provide a platform for Soldiers and leaders to share innovative insights, observations, acquired knowledge, and practical advice.

1. **Implement Best Practices:** Junior leaders can learn from existing best practices shared in the journals. By applying these insights, they contribute to the ongoing dialogue and improve their leadership skills.

2. **Share Insights with Peers:** Writing is a collaborative effort. Junior leaders should actively participate in professional discourse by submitting articles, sharing experiences, and engaging with peers. This approach strengthens the collective knowledge base.

3. **Continuously Learn and Adapt:** Professional discourse is not static; it evolves. Junior leaders should stay informed, read articles, and adapt their practices based on new information. By doing so, they contribute to the dynamic conversation within the military community.

Remember, writing is a powerful tool for influencing change at the small unit level, and every voice matters. The Chief of Staff of the Army and the Sergeant Major of the Army have empowered leaders to actively engage in professional discourse and contribute to the growth of the Army profession (George et al., 2023). ∎

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