

**Classroom Innovations: A Study of Writing Tool Kits in an Online Graduate Course**

Julie N. Adkins and Jackie W. Kyger

College of Arts and Sciences, University of Arizona Global Campus

**Author Note**

This article is from the University of Arizona Global Campus 2024 Teaching and Learning Conference (TLC) proceedings, held on November 5-7, 2024.

Correspondence concerning this article should be addressed to the authors at the following email addresses:

Julie Adkins email: [Julieann.Adkins@uagc.edu](mailto:Julieann.Adkins@uagc.edu)

Jackie Kyger email: [Jackie.Kyger@uagc.edu](mailto:Jackie.Kyger@uagc.edu)

**Abstract**

Writer's Tool Kits (WTK) are structured resources designed to enhance students' academic writing skills and are increasingly utilized in higher education to support learning outcomes. This study examines the effect of Writer's Tool Kits (WTK) versus Non-Writer's Tool Kits (N-WTK) on student progression rates in an online graduate course. The study evaluated whether incorporating weekly WTKs, focused on academic writing, significantly affected progression rates compared to courses without WTKs. Using a two-proportion  $z$  test, data from 172 students across 16 courses showed no significant difference in progression rates between WTK (83%) and N-WTK (81%) groups. Results suggest WTKs have minimal impact on progression rates. Future research should explore qualitative student feedback, undergraduate-level effects, and demographic influences on progression rates.

*Keywords:* open enrollment, writing toolkit, academic writing, online learning, teaching strategies, graduate-level

**Classroom Innovations: A Study of Writing Tool Kits in an Online Graduate Course**

The purpose of this study was to examine existing data to determine if a significant difference existed between the progression rate of courses that integrated a Writer's Tool Kit (WTK) approach versus courses that integrated a Non-Writer's Tool Kit (N-WTK) approach.

Each week, a new WTK was provided that focused on writing awareness specific to that week's written assignment. The WTK was included as part of the weekly assignment instructions for students. The following are the WTK weekly focus:

- Week 1 WTK: Graduate Writing Expectation
- Week 2 WTK: Your Academic Voice
- Week 3 WTK: The Importance of APA Format
- Week 4 WTK: Back to Basics: Proofreading, Grammarly, and Outlining
- Week 5 WTK: Integrating Research
- Week 6 WTK: Revise, Edit, & Proofread (again), and Getting Help

A WTK is a more focused approach to include and direct students toward resources provided by the online university's writing center and library.

This study evaluated the student progression rate central score of the WTK group and the student progression rate central score of the N-WTK group. The student population for this research consisted of graduate students from their entry point course in the graduate course program of study.

The study utilized scientific investigations of quantitative data analysis properties and their relationships. A two-proportion  $z$  test was used to assess differences in the central scores between those courses with (WTK) and those without (N-WTK) and their effect on progression

rates. Knowledge gained from this research may provide insightful information about WTK and N-WTK approaches as they serve Open Enrollment Students (OES).

In higher education, particularly in graduate-level online courses, students often face challenges in maintaining academic progression due to the demands of writing assignments, especially when they are not fully prepared for the standards of academic writing skills. Given that many graduate students face writing-related challenges that can hinder their academic progress, it is essential to investigate whether these structured interventions, such as a WTK, can improve their outcomes. Despite the availability of resources to support writing development, many students struggle with applying academic writing standards at an open-admission university since there is typically no writing readiness assessment to identify students who may need more scaffolded support upon entering the graduate program. The integration of Writer's Tool Kits (WTK) with structured weekly resources focusing on various aspects of academic writing has been proposed as a potential solution. However, there is a gap in the existing literature regarding whether the use of WTKs truly affects progression rates compared to traditional approaches that do not incorporate such resources (Non-Writer's Tool Kits, or N-WTK). This research provides insights into the effectiveness of WTKs in influencing student progression in graduate-level online courses at an open-admission university.

### **Significance of the Research**

Graduate students often face challenges adapting to the rigorous academic writing expectations of higher education. Many students, especially those in online environments, struggle with developing a consistent scholarly voice, which is essential for their success. While universities offer various writing resources, there is limited research on how specific tools, like Writer's Tool Kits (WTK), impact students' course progression. This study addresses the gap in

understanding whether WTKs, which provide structured guidance on writing skills, can improve student outcomes compared to traditional methods that do not include these focused resources.

The need for this research arises from the growing emphasis on online learning and the diverse writing needs of graduate students at an open-admission university. With increasing numbers of students pursuing graduate education online, understanding how to best support their writing development is critical for promoting their academic success, especially when writing readiness levels are not assessed prior to program entry. This lack of assessment of academic writing readiness prior to enrollment can lead to student frustration, negatively impacting retention and persistence. Focused supports such as a WTK could provide the necessary scaffolding students need to be adequately prepared to successfully complete written assignments.

By examining the effect of WTKs on progression rates, this research aims to provide insights that could inform the design of more effective writing support strategies, helping students navigate the challenges of graduate-level writing and enhance their scholarly communication skills.

### **Literature Review**

It is essential to recognize that college students enter academic programs with varying writing readiness levels based on their prior education and experiences. According to Ross and the National Journal (2014), some students enter academic programs with writing skills comparable to those of elementary school students and are inadequately prepared to meet academic writing demands. This lack of academic writing preparation contributes to lower retention and graduation rates as these students struggle with basic writing tasks (Lyons & Elmedni, 2015). The struggle turns into student frustration and lack of confidence.

A decade later, Yongyan (2024) continues to address writing challenges, focusing on master-level postgraduate professional development programs. The study at a Hong Kong university analyzed 132 assignment prompts from a Master of Education program, revealing that 75% of assignments integrate academic and professional writing (Yongyan, 2024). Since a significant amount of graduate writing will require students to integrate academic and professional writing skills proficiently, it highlights the necessity for writing toolkits that address academic and professional writing challenges that provide additional scaffolding to support graduate students' academic success. This affirms our study's goal to enhance these tools for online graduate courses.

Open admissions policies in colleges and universities increase access to higher education but can also lead to challenges for underprepared students, resulting in lower retention and graduation rates (Scherer & Anson, 2014; Williams & Wendler, 2020). At the graduate level, students are not assessed for their academic writing skills to determine readiness levels, and no current remedial support is available to help students complete their degrees, as many open-admission universities lack the resource allocation to provide more personalized attention to support and develop student academic writing skills.

Powell (2009) emphasizes that remediation and basic writing should be viewed through the lens of retention, advocating for support beyond initial access to promote academic persistence. This insight is crucial for our study, as it highlights the need for writing toolkits that facilitate not just entry but also continued success throughout online graduate courses as they support students' diverse learning needs related to writing skills. Integrating writing toolkits aligns with the broader goal of fostering a supporting learning environment that nurtures academic growth and persistence.

Summers (2016) investigates how the Graduate Writing Center (GWC) at UCLA uses a mix of conventional and unconventional "expertise-based tools" to support graduate students' discipline-specific writing. This research is relevant as it informs the design of writing toolkits by demonstrating how a blend of traditional and modern support methods can create a nurturing environment that enhances students' writing skills and academic success. In online settings, such an approach can be particularly beneficial by offering flexible, accessible, and personalized resources that cater to the diverse needs of students, ultimately promoting engagement, confidence, and academic achievement.

Webb-Sunderhaus (2010) calls for a comprehensive approach to student success in basic writing at open-admission institutions, stressing that access alone does not guarantee success. This research stresses the importance of addressing both intellectual and social factors that help build student confidence in writing abilities. This perspective is critical for our study as we develop writing toolkits that support both immediate writing needs and long-term academic achievement.

While open admissions universities provide greater access to students who wish to further their careers or improve their economic status, a greater focus on adequately preparing students to meet the demands of academic writing is needed. Many students enter higher education with varying levels of proficiency in writing, which can affect their confidence and ability to succeed in coursework. By properly scaffolding academic writing skills, students are less likely to withdraw from their courses. This study aims to determine if integrating a Writer's Toolkit in an introductory graduate course can effectively improve student retention. The Writer's Toolkit exposed students to the various elements of academic writing skills and the plethora of tools available through the university's writing center that may have gone unnoticed by students. By

providing these tools, we hoped to create a supportive learning environment that empowers students to enhance their writing abilities and persist in their academic journey.

### **Methodology**

This study was conducted at an open admissions online university that serves a diverse student population, many of whom are enrolled in graduate-level programs. Given the growing number of students pursuing graduate education online, it is crucial to explore effective methods for supporting their writing development. The decision to focus on Writer's Tool Kits (WTK) as a potential writing support intervention stems from the need to understand whether structured resources can positively impact student progression, particularly in an online environment. This research is designed to fill a gap in the literature by comparing student progression rates in courses that incorporate WTKs with those that do not. The choice of a quantitative approach was driven by the desire to gather measurable, objective data that would allow for clear comparisons between these two student groups. By utilizing pre-existing data from the university's Office of Institutional Effectiveness, the study aimed to evaluate real-world student outcomes in a practical, scalable way, providing valuable insights for future instructional practices in online graduate courses. The quantitative research data were taken from anonymous aggregated files over one year as provided by the University's Office of Institutional Effectiveness department. One group of data was from a sample subjected to WTK over a six-month time frame, and the other group was from a sample that was not subjected to the WTK over a six-month time frame.

This study evaluated the student progression rate central score of the WTK group and the student progression rate central score of the N-WTK group. The student population for this research consisted of graduate students from their entry point course in the graduate course program of study.



To research the progression rate rates between students experiencing WTK and students experiencing N-WTK, a two-proportion  $z$  test was conducted to determine if any significant difference existed. The Office of Institutional Effectiveness department at the online university electronically collected data. This information was then provided in the form of a spreadsheet.

The study utilized scientific investigations of quantitative data analysis properties and their relationships. A two-proportion  $z$  test was used to assess differences in the central scores between those courses with (WTK) and those without (N-WTK) and their effect on progression rates. The two-proportion  $z$  test was utilized because it is a useful statistical tool when comparing the proportions of a binary outcome in two independent groups (WTK vs. N-WTK) to understand if there is a statistically significant difference between them. Knowledge gained from this research may provide insightful information about WTK and N-WTK approaches as they serve Open Enrollment Students (OES).

### **Procedures**

Permission to utilize the data was sought and approved through the university's Committee of Institutional Research and Effectiveness. All data for the study were provided as anonymous aggregated data. One set of data was from courses that provided the WTK. The other set of data was from N-WTK courses. The data were from students enrolled in the entry point graduate course. The data for the study were taken from approximately 16 courses to include 172 students.

### **Research Question**

Is there a significant difference between the average student progression rate of the WTK group and the average student progression rate of the N-WTK group?

### Null Hypotheses

$H_1$ —There is no statistically significant difference between the average student Progression rate of the WTK group and the average student Progression rate of the N-WTK group.

### Data Analysis

The goal of this research was to examine existing data on whether there was a significant difference in the WTK on progression rate. The analysis of a two-proportion  $z$  test was used to determine if there was a significant difference between the proportions (percentages) of the two groups. In simpler terms, it is like comparing two slices of pie to see if one slice is significantly bigger than the other based on the data we have collected.

A two-proportion  $z$  test was used to assess differences in the central scores between courses with (WTK) and those without (N-WTK), as well as their effect on progression rate. To determine if the difference in progression rates before and after improvements was statistically significant, a hypothesis test was utilized for the difference in proportions, using a two-proportion  $z$  test:

#### 1. State the hypotheses:

- Null hypothesis ( $H_0$ ):  $p_1 = p_2$   
(The progression rates before and after improvements are the same)
- Alternative hypothesis ( $H_a$ ):  $p_1 \neq p_2$   
(The progression rates before and after improvements are different)

#### 2. Calculate the sample proportions:

- Before improvement  $\hat{p}_1 = \frac{81}{100} = 0.81$
- After Improvement  $\hat{p}_2 = \frac{83}{100} = 0.83$

**3. Calculate the pooled proportion ( $\hat{p}$ ):**

Where  $x_1$  and  $x_2$  are the number of successes, and  $n_1$  and  $n_2$  are the sample sizes.

$$\hat{p} = \frac{x_1 + x_2}{n_1 + n_2}$$

$$x_1 = 0.81 \times 78 = 63.18 \approx 63$$

$$x_2 = 0.83 \times 94 = 78.02 \approx 78$$

$$\hat{p} = \frac{63 + 78}{78 + 94} = \frac{141}{172} \approx 0.8198$$

**4. Calculate the standard error (SE), which is 0.0588:**

$$SE = \sqrt{\hat{p}(1 - \hat{p}) \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}$$

$$SE = \sqrt{0.8198 \times (1 - 0.8198) \left( \frac{1}{78} + \frac{1}{94} \right)}$$

$$SE \approx \sqrt{0.8198 \times 0.1802 (0.01282 + 0.01064)}$$

$$SE \approx \sqrt{0.1477 \times 0.02346} \approx \sqrt{0.00346} \approx 0.0588$$

**5. Calculate the z score, which is 0.34:**

$$z = \frac{\hat{p}_1 - \hat{p}_2}{SE}$$

$$z = \frac{0.81 - 0.83}{0.0588} \approx \frac{-0.02}{0.0588} \approx -0.34$$

**6. Determine the p value, which is 0.734**

Using a z-table or standard normal distribution calculation, the p value for  $z = -0.34$  is approximately 0.734.

For  $z = -0.34$ , the p value (two-tailed) is approximately **0.734**.

**7. Conclusion**

We compared the p value to the significance level (commonly  $\alpha = 0.05$ ). Since **0.734** > **0.05**, it failed to reject the null hypothesis.

### **Limitations of the Study**

The online university serves students across the United States from all walks of life. This study relied on the aggregated data collected from a course assessment survey to determine the differences between WTK and N-WTK learning environments. The results of the research include an analysis of the data collected. The data was available at the course group (case) level and not at the student level; therefore, the accuracy of the findings will depend on the accuracy of the data. Without knowing the academic writing readiness of our students when enrolled in our MAED program, improved retention rates may not be due to the Writer's Toolkit, but rather students who are more prepared and ready for academic writing prior to enrollment into the graduate program.

### **Delimitations of the Study**

The study encompassed students enrolled in an online graduate course without regard to race, gender, age, culture, or religion. The research was conducted using end-of-course data, which is obtained after the final drop date for students who choose to withdraw from their courses. The sample did not include students who registered for the online course but withdrew before the study was conducted. Comparisons of progression data were included in the results. The data that were not relevant to the study were not disclosed.

### **Summary Findings and Recommendations**

Pistone (2010) indicates that students often seek help from writing centers because they feel a lack of "caring" from their professors. The utilization of an in-classroom WTK in this study aimed to create a learning environment focused on a culture of care at the classroom level where students would feel more supported by their professors. While the WTK directed students to the writing center for various writing skills, students had the opportunity to engage in dialogue

with their professor about writing skills as the WTK is tied to various learning activities through the introductory course.

Pantic and Hamilton (2024) highlight that the lack of institutional support and transparent writing practices often compels graduate students to depend heavily on their academic supervisors. This is relevant to the study because it underscores the necessity for effective writing toolkits that can provide students with the guidance and resources typically offered by supervisors. By addressing the gaps left by institutional support, our research aims to develop tools that enhance writing practices and support students more autonomously in an online setting. Based on this analysis, there was an observed increase in progression rates from 81% to 83% when comparing the WTK group with the N-WTK group. Our conclusion is that there is no statistically significant difference in the progression rates before and after the integration of the Writer's Tool Kit. While this study did investigate the effects of a known set of categories, further research is needed and encouraged around scholarly writing at the graduate level. While this study provides valuable insights into the effectiveness of WTKs, it also highlights several areas where further research is needed to deepen our understanding of their potential benefits.

One key area for further investigation is the impact of WTKs on student perceptions, particularly how they influence the overall learning environment and contribute to a culture of caring. Understanding how students perceive these resources could provide more context for their effectiveness and help educators better tailor support to student needs. Additionally, exploring the long-term effects of improved writing proficiency on academic performance across various disciplines could reveal whether the benefits of WTKs extend beyond initial progression rates, potentially influencing overall academic success.

Further qualitative research is also recommended to gain more detailed insights into student experiences with WTKs. This could include interviews or surveys to capture the subjective impact of the Tool Kits on students' confidence, writing skills, and academic growth.

Another important avenue for future research is the application of WTKs at the undergraduate level. While this study focused on graduate students, analyzing the effects of these Tool Kits in undergraduate courses could provide a broader understanding of their effectiveness across different student populations. Moreover, conducting a quantitative investigation into student demographics, including factors such as gender, age, and geography, would help to identify potential disparities in the impact of WTKs and offer valuable information on how these resources may affect diverse student groups.

By expanding research in these areas, future studies can offer a more comprehensive view of how WTKs influence student outcomes and provide actionable recommendations for improving writing support in higher education.

### References

- Lyons, B. P. & Elmedni, B. (2015). Writing skills development for graduate students: Workshop intervention using a student-centered learning approach. *Journal of Education & Social Policy*, 2(1), 38–49. [http://jespnet.com/journals/Vol\\_2\\_No\\_1\\_March\\_2015/5.pdf](http://jespnet.com/journals/Vol_2_No_1_March_2015/5.pdf)
- Pantic, K. & Hamilton, M. (2024). Conducting a systematic literature review in education: A basic approach for graduate students. *Brock Education: A Journal of Educational Research and Practice*, 33(1), 49–65. <https://eric.ed.gov/?id=EJ1417045>
- Pistone, R. (2010). Writing center tutors have the luxury to focus on individual student "care giving" as opposed to formal classroom settings that are less "care" centered. *Canadian Center of Science and Education*, 3(2), 10–12. <https://doi.org/10.5539/elt.v3n2p10>
- Powell, P. R. (2009). Retention and writing instruction: Implications for access and pedagogy. *College Composition and Communication*, 60(4), 664–682. <http://www.jstor.org/stable/40593424>
- Ross, J. & National Journal. (2014, June 23). Is open-access community college a bad idea? *The Atlantic*. <https://www.theatlantic.com/politics/archive/2014/06/is-open-access-community-college-a-bad-idea/431052/>
- Scherer, J. L. & Anson, M. L. (2014). *Community colleges and the access effect: Why open admissions suppresses achievement*. Macmillan
- Summers, S. (2016). Building expertise: The toolkit in UCLA's graduate writing center. *The Writing Center Journal*, 35(2), 117–145. <http://www.jstor.org/stable/43824059>
- Yongyan Li. (2024). Connecting academia with the professional world: Exploring written assignments in a postgraduate professional development program. *Journal of Education and Learning*. 13(2), 94–105. <https://doi.org/10.5539/jel.v13n2p94>

Webb-Sunderhaus, Sara (2010). When access is not enough: Retaining basic writers at an open-admission university. *Journal of Basic Writing (CUNY)*, 29(2). 97–116. <http://orgs.tamu-commerce.edu/cbw/cbw/JBW.html>

Williams, K. M. & Wendler, C. (2020). The open admissions model: An example from the United States. In M. E. Oliveri & C. Wendler (Eds.), *Higher education admissions practices: An international perspective* (pp. 51–75). Cambridge University Press.