# Understanding Students' Written Communication Skills:

# Summary of Evidence from AY 2022-2023

Cal Poly Pomona (CPP) is deeply committed to ensuring an educational experience that fosters student learning and success for every student. As part of that commitment, the Office of Assessment and Program Review leads the assessment of undergraduate learning outcomes each year, focusing on gathering evidence of *Written Communication* in 2023. The evidence is used to understand student learning and experiences concerning their written communication skills. The findings also assist the institution in learning about potential equity gaps, and subsequently identifying additional resources to improve undergraduates' development of written communication skills.

As a General Education (GE) learning outcome at CPP, *Written Communication* is defined as students being able to express ideas with an awareness of audience, purpose, and form. This report summarizes the findings of student achievement regarding *Written Communication* from a combination of direct evidence via written artifacts scored by CPP faculty, and indirect evidence drawn from student responses to related questions on the 2023 National Survey of Student Engagement (NSSE).

## Direct Evidence: Written Communication Rubric

### Methodology

In Spring 2023, faculty teaching senior-level courses from each of the eight colleges were invited to provide the Office of Assessment and Program Review with student work (artifacts) to be scored using the written communication rubric (Appendix A). The rubric was initially developed and approved by the GE Assessment Committee in 2018, and revised and approved by the Academic Assessment Committee in 2022.

A total of 1,460 senior-student work artifacts were collected from various majors in all eight of the colleges. A stratified random sample of 250 artifacts was drawn to reflect CPP's undergraduate population by college, URM status, and first-generation status. Prior to scoring, each student was assigned a unique ID to maximize anonymity. Artifacts were then redacted of information that could be used to identify the student and faculty member (i.e., names, course titles).
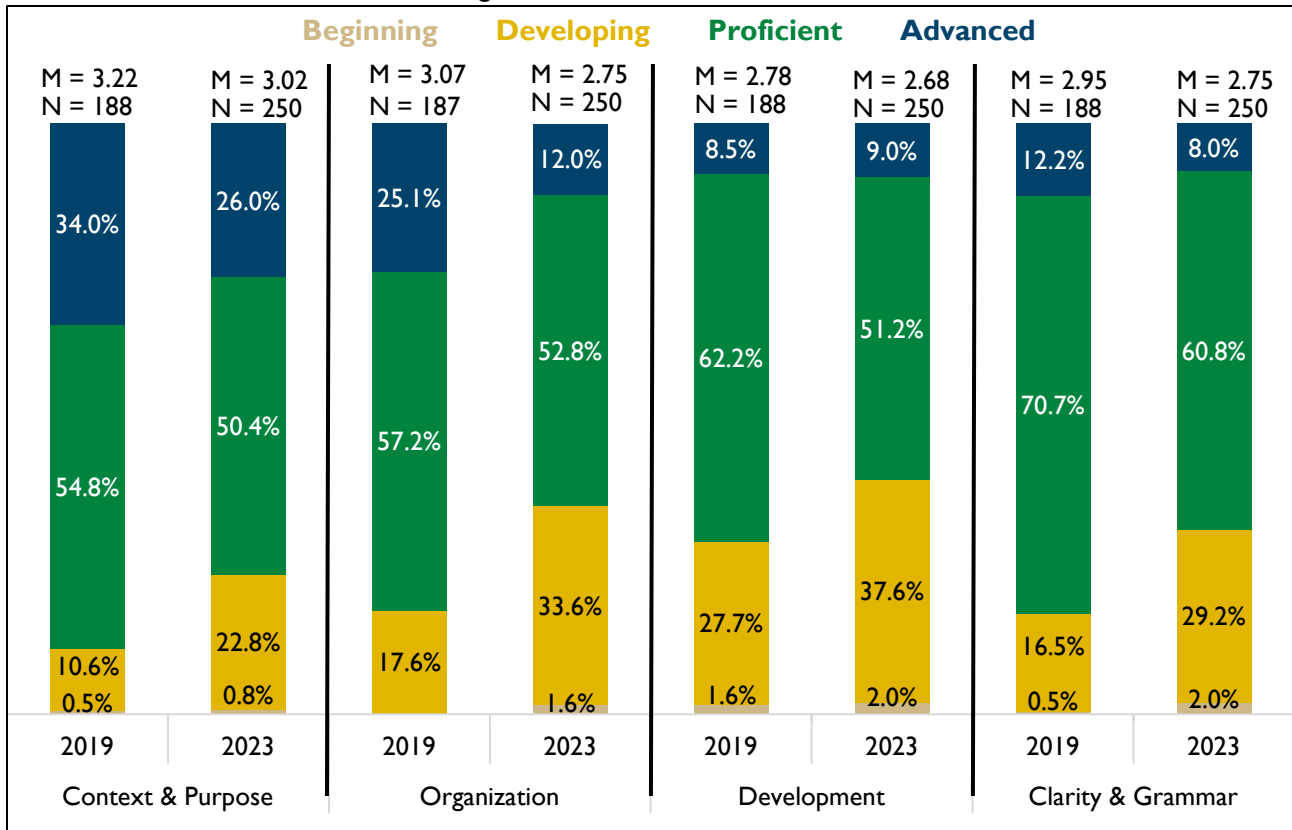
The written artifacts were scored by a group of 15 faculty from six colleges using the written communication rubric. Over a two-day period, faculty participated in a norming session to calibrate the rubric, and then independently read and scored student artifacts. Each artifact was scored by two faculty members, and artifacts with discrepancies greater than two points were scored by a third reviewer. Subsequently, means derived from all scorers for each Rubric criterion were calculated for every student, with values to two decimals, with the latter value rounded down to the nearest whole number. For instance, both 2.5 and 2.7 were rounded down to 2. The rubric defined written communication through four criteria (*Context and Purpose, Organization, Development,* and *Clarity and Grammar*) and four levels of performance (beginning, developing, proficient, and advanced).

### Results

In addition to computing frequencies to obtain percentages for each of the rubric criteria, t-tests were used to compare potential differences in performance based on gender, URM status, first-generation status, and Pell grant status. The chart below displays the overall percentage of students who scored at each level of achievement in each criterion of written communication.

*Written Communication* data were also collected in 2019 using the same methodology as described above. The figure below compares *Written Communication* data collected in 2019 and in 2023. However, it is important to note that the data from 2019 were collected using a different rubric and slightly smaller sample size; thus, direct comparisons of student performance may be limited.

## Written Communication Rubric Scores
### Percentage of Students at each Achievement Level

**Beginning**    **Developing**    **Proficient**    **Advanced**

| | Context & Purpose | | Organization | | Development | | Clarity & Grammar | |
|---|---|---|---|---|---|---|---|---|
| | 2019 | 2023 | 2019 | 2023 | 2019 | 2023 | 2019 | 2023 |
| M | 3.22 | 3.02 | 3.07 | 2.75 | 2.78 | 2.68 | 2.95 | 2.75 |
| N | 188 | 250 | 187 | 250 | 188 | 250 | 188 | 250 |
| Advanced | 34.0% | 26.0% | 25.1% | 12.0% | 8.5% | 9.0% | 12.2% | 8.0% |
| Proficient | 54.8% | 50.4% | 57.2% | 52.8% | 62.2% | 51.2% | 70.7% | 60.8% |
| Developing | 10.6% | 22.8% | 17.6% | 33.6% | 27.7% | 37.6% | 16.5% | 29.2% |
| Beginning | 0.5% | 0.8% | | 1.6% | 1.6% | 2.0% | 0.5% | 2.0% |

Note: In 2019, Clarity & Grammar was referred to as Grammar & Mechanics/Language

### Written Communication by Criterion

It is our goal and expectation that seniors achieve "proficient" and "advanced" levels of written communication by the time they graduate, and our findings show that the majority of CPP seniors achieved the desired level of performance on all of the criteria. The data appear to show that seniors' written communication skills decreased slightly from 2019, apart from *Organization*, where seniors performing at the advanced level dropped by half (25.1% to 12%). However, the distribution of seniors performing at the proficient level across all criteria in 2019 and 2023 appear to vary only slightly. It is worth noting that in 2019 and 2023, CPP seniors performed the strongest on *Context & Purpose*, and the weakest in *Organization*. Defined as how well the writing addresses the audience, purpose, and context of the report, we found that in 2019, 88.8% of seniors demonstrated "proficient" and "advanced" levels of performance, while in 2023, 76.4% of seniors did. The majority of our seniors (82.9% and 68.8%, in 2019 and 2023, respectively) also demonstrated "proficient" and "advanced" levels on *Clarity & Grammar,* where students use grammar tools to communicate.

Although more than 60% of seniors in 2023 achieved the desired level of performance on all rubric criteria, it is important to mention that 39.6% of seniors performed at the "developing" and "beginning" level for *Development*. This marks an increase from 29.3% of seniors in 2019 who did not perform as well on *Development* compared to the other rubric criteria. *Development* is concerned with how well students' writing advances ideas using compelling and relevant narratives.

### Written Communication by Demographic Group

Additional analyses were conducted to compare mean student performance by key demographic characteristics; that is, under-represented minority (URM) status[1], generation status (first-generation and continuing-generation)[2], Pell Grant status, and gender. There were statistically significant differences for gender and URM status in both 2019 and 2023. Additionally, 2023 data also revealed statistically significant difference for generation status.

In 2019 and 2023, there were statistically significant differences among females and males, where females performed better than males in the *Development* of their writing. This is, however, where the similarities between the two different years end. In 2019, there was a statistically significant difference between URM and non-URM seniors regarding the *Organization* of their writing, where non-URM seniors performed better than URM seniors. In 2023, not only did non-URM seniors continue to score higher than URM seniors on *Organization*, but they scored higher on the *Development*, and *Clarity and Grammar* criteria as well. *Organization* had the largest difference, with a 14.6% difference in performance at the "advanced" and "proficient" levels. *Clarity & Grammar* had the second largest difference in performance, with 11.1%, and *Development* had the smallest with a 6.2% difference.

In 2019, there were no statistically significant differences based on generation status, but there were in the 2023 data. Specifically, seniors who were continuing-generation performed better than students who were first-generation regarding the *Organization* of their writing (a 15.7% difference in performance at the "advanced" and "proficient" levels).

The charts in Appendix B display the percentage of seniors by demographic characteristics and their respective performance in each criterion.

### Indirect Evidence: National Survey of Student Engagement (NSSE)

Indirect assessment allows us to infer students' skills and knowledge through methods such as surveys, focus groups, and interviews. CPP uses the National Survey of Student Engagement (NSSE) to better understand student perception of their improvements and confidence levels in relation to key learning outcomes. Considering that CPP seniors achieved desired performance levels in all four written communication criteria, self-reported evidence from NSSE findings can offer valuable additional insight.

### Methodology

As part of CPP's commitment to ensuring educational experiences that foster student learning and success, CPP participated in the NSSE in Spring 2023. With a response rate of 21%, this survey collected information from 1,218 first- and senior-year students regarding their participation in various educational practices. NSSE scores serve as complementary indirect evidence of student learning concerning written communication. In addition, as a national survey, benchmark data from comparative institutions is provided to add more nuanced context.

---

[1] URM status includes students who identify as American Indian/Alaska Native, Black or African American, and Hispanic/Latino.
[2] A continuing-generation college student is defined as an undergraduate who has at least one parent with a bachelor's degree or higher.

**Results**

CPP seniors were asked to reflect on how often their coursework facilitated written communication skills and knowledge. Seniors felt that their coursework emphasized written communication components "Quite a Bit." Although CPP seniors were on par with all of the universities that participated in NSSE, CPP seniors reported their written communication skills and knowledge as statistically lower than their CSU and Master's L peers. Moreover, there was little to no difference between CPP first-year students and seniors.

| How much has your experience at this institution: | | Mean Response | | | |
|---|---|---|---|---|---|
| 1 = Very Little, 2 = Some, 3 = Quite a Bit, 4 = Very Much | | CPP | CSU | Master's L | NSSE |
| Contributed to your knowledge, skills, and personal development in writing clearly and effectively? | FY | 2.9 | 2.8 | 2.9 | 2.8 |
| | SR | 3.0 | 3.1* | 3.1* | 3.0 |

*Please note that these scores are significantly different from the corresponding CPP score, p < .05 with an effect size less than .3 in magnitude.*

### Summary and Discussion

Written communication skills are crucial for all students due to their foundational role for many aspects of everyday life and in the workplace. In fact, written communication remains one of the top-ranked skills required by college graduates to succeed in the workforce, according to AAC&U's 2020 survey of employers[3]. In addition, the National Association of Colleges and Employers (NACE), states that communication (whether written or oral) is among one of the eight career readiness competencies[4]. NACE provides a data snapshot stating that 95.6% of employers cite communication as being the most important competency of the eight. These external reports should be kept in mind, as we unpack the evidence from our Written Communication assessment scores and NSSE findings.

CPP's direct assessment of student work revealed that the majority of our seniors met performance expectations in all four of the criteria used to assess written communication. It was found that 64.8% of seniors demonstrated "proficient" and "advanced" levels of performance for *Organization,* and 60.4% on *Development*. Although these meet the mark, this also means that 35.2% and 39.6% of CPP seniors fell short of this expectation for *Organization* and *Development*, respectively. It should be noted that when examining mean differences based on demographic characteristics (i.e., gender, URM status, and generation status), most of the statistically significant differences were found for these two written communication criteria based on generation status. This raises the question, are we content with this level of performance even though the majority of our students performed at the expected level? If we are not, then it is vital to explore and implement strategies to raise the written communication skills of our graduating seniors, perhaps with a focus on student groups where statistically differences were found.

When comparing how CPP seniors performed on written communication in 2019 and 2023, it appears they performed similarly. However, data from 2019 were collected using a different rubric and slightly smaller sample size; thus, direct comparisons of student performance may be limited. In both years, the majority of seniors met the goal of performing at the "proficient" and "advanced" levels on all of the rubric criteria. In addition, they performed the best on *Context & Purpose*, while also receiving the lowest scores for *Development*. Given the data from 2019 and 2023, CPP seniors struggle the most with *Development*, and thus, should be an area of focus to help students further develop this skill.

Statistically significant differences were found when disaggregating direct assessment data by gender, URM status, and generation status. There were significant differences found based on URM status for *Organization*, *Development*, and *Clarity & Grammer*, with non-URM students demonstrating stronger performance than URM students. First-generation students performed better than students who were continuing-generation on *Organization*. Lastly, female students performed better, and at higher expected levels, than male students on all other rubric criteria, with a statistically significant difference for *Development*.

NSSE findings add further dimension to CPP's direct assessment of written communication. CPP seniors were statistically lower than CSU peers, but on par with the national average regarding the extent to which coursework emphasize key

---

[3] https://dgmg81phhvh63.cloudfront.net/content/user-photos/Research/PDFs/AACUEmployerReport2021.pdf
[4] https://www.naceweb.org/career-readiness/competencies/career-readiness-defined/

written communication skills. Campitelli and Gobet (2011) asserted that repetition of an activity is a necessary contributing factor in improving performance. Although our seniors indicated that their coursework contributed to their written communication knowledge "Quite a Bit", which parallels the students' overall performance at the expected levels, the data also revealed that almost every demographic group can improve the *Development* and *Organization* of their written work.

As we consider these results in light of the elements of an inclusive polytechnic university, it is appropriate to consider the degree to which we incorporate instruction and scaffolding of written communication skills across the curriculum and co-curriculum. For instance, to what extent do we rely on GE courses to teach and expand on students' written communication? How do individual degree programs build on and advance written communication skills in upper-division program courses, particularly in the development and organization of ideas? In addition, do students receive feedback from faculty pertaining to the development and organization of ideas?

## Improving Student Learning

Discussing this report with faculty and/or key staff (e.g., academic advisors, career advisors) in your program may help determine program-level actions needed to improve student achievement in the Written Communication learning outcome. If degree programs have evidence of learning for a related outcome, it may be useful to consider those results as part of discussion to improve student learning.

The following questions may be useful in guiding discussions:

- For which components/criteria of Written Communication do students demonstrate satisfactory levels of achievement? How do students in your program compare?

- For which components/criteria of Written Communication do you feel students need to improve?

- What types of assignments are used in your program to develop student's ability to apply and further develop their written communication skills to become clear and effective writers?

    o Are there ways to include scaffolded assignments where students can actively engage in exercises to further develop their development and organization of ideas?

    o Do you review drafts of the written assignment and provide constructive feedback?

- To what extent is scaffolded feedback on assignments provided? When/where is it needed the most to strengthen student learning in this outcome?

- What are some course or program modifications that may facilitate student learning in the necessary written communication skillset to strengthen the components/criteria you identified as needing improvement? While not an exhaustive list, typical categories of changes made as a result of assessment evidence may include:

    o Curriculum (e.g., adequacy of courses, course sequencing, etc.)

    o Pedagogy (e.g., more assignments where students can build upon their writing abilities, provide scaffolded assignments or prompts to ensure students acquire the skills, dedicate a specific amount of class time to a skill identified as needing improvement, incorporate a class activity to enhance student learning, etc.)

- What recommendations do you have for CPP to improve students' written communication skills?

We recommend keeping a record of the decisions your program makes about the evidence, and the actions taken to improve Written Communication skills. This information may be useful when completing future assessment reports and program review/accreditation self-studies.

# References

Campitelli, G., & Gobet, F. (2011). Deliberate Practice: Necessary But Not Sufficient. *Current Directions in Psychological Science, 20*(5), 280–285. https://doi.org/10.1177/0963721411421922
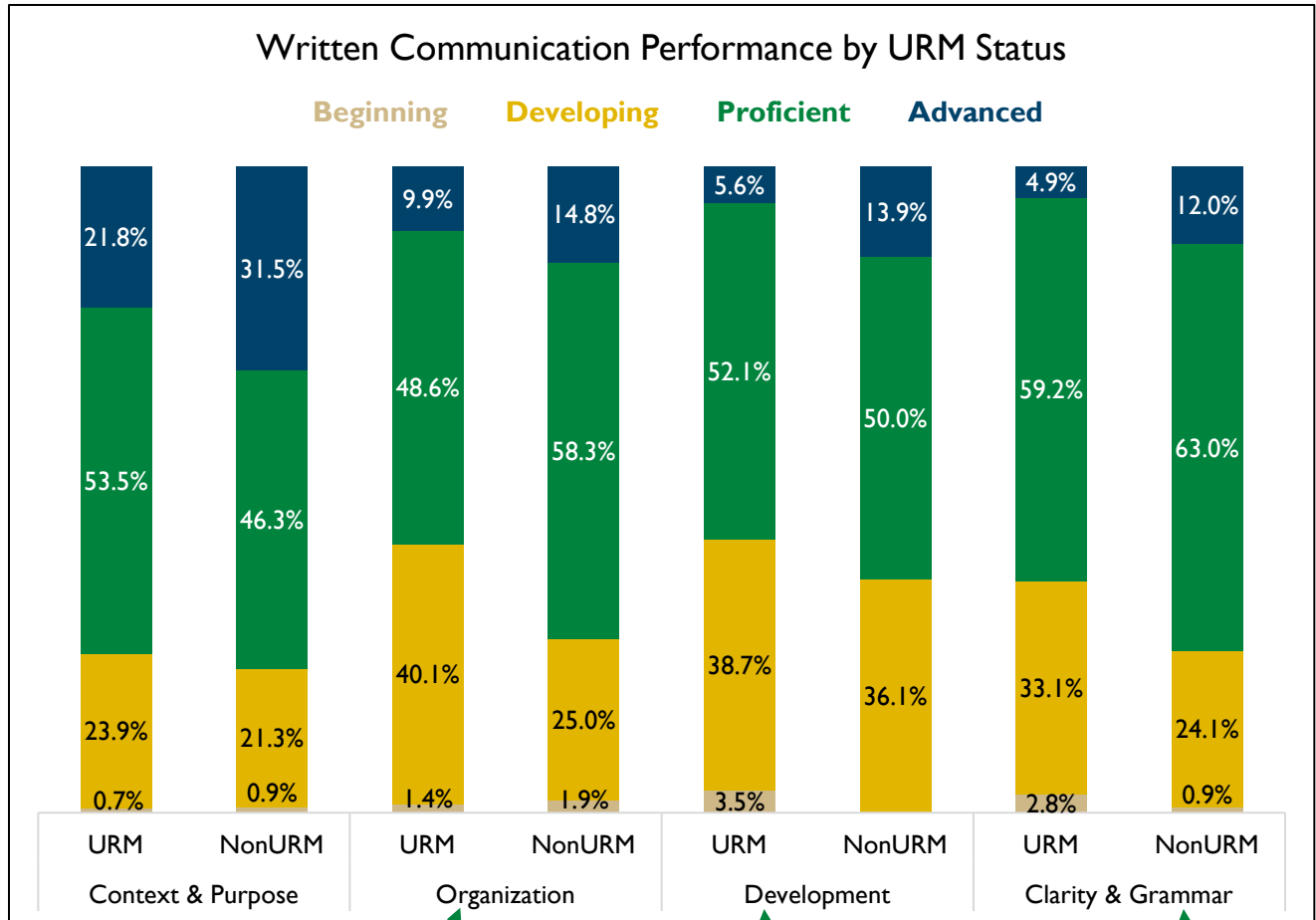
**Appendix A**

**WRITTEN COMMUNICATION (APPROVED BY ACADEMIC ASSESSMENT COMMITTEE)**

**Learning Outcome:** Written Communication: Students will express their ideas through the written word with an awareness of audience, purpose, and form.

| Criteria | Advanced (4) | Proficient (3) | Developing (2) | Beginning (1) |
|---|---|---|---|---|
| **Context and Purpose for Writing** <br> *How well the writing addresses the audience, purpose, and context of the project.* | Demonstrates thorough consideration for the circumstances and audience; clearly addresses the intent of the document. | Demonstrates adequate consideration for the circumstances and audience; addresses the intent of the document. | Demonstrates inconsistent consideration for the circumstances and audience; partially addresses the intent of the document. | Demonstrates minimal consideration for the circumstances and audience; dismisses the intent of the document. |
| **Organization** <br> *How well the writing uses a system to order ideas and concepts. (e.g. transitions, sections, paragraphs, etc.)* | The document is well-structured; smoothly segues from one part to another (e.g., introduction, body, and conclusion) to effectively convey the writer's ideas. | The document is adequately structured but choppy at times with minor impact on the communication of ideas. | The document's structure is awkward, impeding effective communication of ideas. | The document lacks the structure to convey the writer's ideas. |
| **Development** <br> *How well the writing advances ideas using compelling and relevant narratives.* | Advancement and growth of ideas is thoughtful and sophisticated with a wealth of supporting material, smoothly integrated into the document. | Advancement and growth of ideas is adequately supported by appropriate materials, well-integrated into the document. | Advancement and growth of ideas would benefit from detailed and concrete support; integration into the document is choppy. | The narrative is incohesive and incoherent with few supporting details. |
| **Clarity and Grammar** <br> *How well the writing uses grammar tools to communicate.* | Writing poses no obstacles to comprehension, containing few to no errors; displays a mastery level of the written word. | Writing contains some errors but does not impede overall understanding; displays adequate grasp of the written word. | Writing includes sufficient errors to confuse or distract the reader; displays a defined grasp of the written word. | Writing contains many errors; impeding the overall understanding; displays inadequate grasp of the written word. |
| *Optional; recommended for program use* | | | | |
| **Disciplinary Conventions** <br> *How well the writing implements rules, expectations, and formats for writing within disciplinary fields.* | Demonstrates detailed attention to and successful execution of discipline-specific conventions | Demonstrates consistent use of important discipline-specific conventions with minor errors | Demonstrates limited use of discipline-specific conventions; contains inconsistencies or errors | Does not follow discipline-specific conventions; contains significant errors |

**Appendix B**

**Written Communication by URM Status**



## Written Communication Performance by URM Status

**Beginning**  **Developing**  **Proficient**  **Advanced**

| | Context & Purpose | | Organization | | Development | | Clarity & Grammar | |
|---|---|---|---|---|---|---|---|---|
| | URM | NonURM | URM | NonURM | URM | NonURM | URM | NonURM |
| Advanced | 21.8% | 31.5% | 9.9% | 14.8% | 5.6% | 13.9% | 4.9% | 12.0% |
| Proficient | 53.5% | 46.3% | 48.6% | 58.3% | 52.1% | 50.0% | 59.2% | 63.0% |
| Developing | 23.9% | 21.3% | 40.1% | 25.0% | 38.7% | 36.1% | 33.1% | 24.1% |
| Beginning | 0.7% | 0.9% | 1.4% | 1.9% | 3.5% | | 2.8% | 0.9% |

Note: A statistically significant difference was found in the *Organization, Development, and Clarity & Grammar* criteria.

**Organization:** 14.6% difference at the "proficient" and "advanced" levels

**Development:** 6.2% difference at the "proficient" and "advanced" levels

**Clarity & Grammar:** 11.1% difference at the "proficient" and "advanced" levels

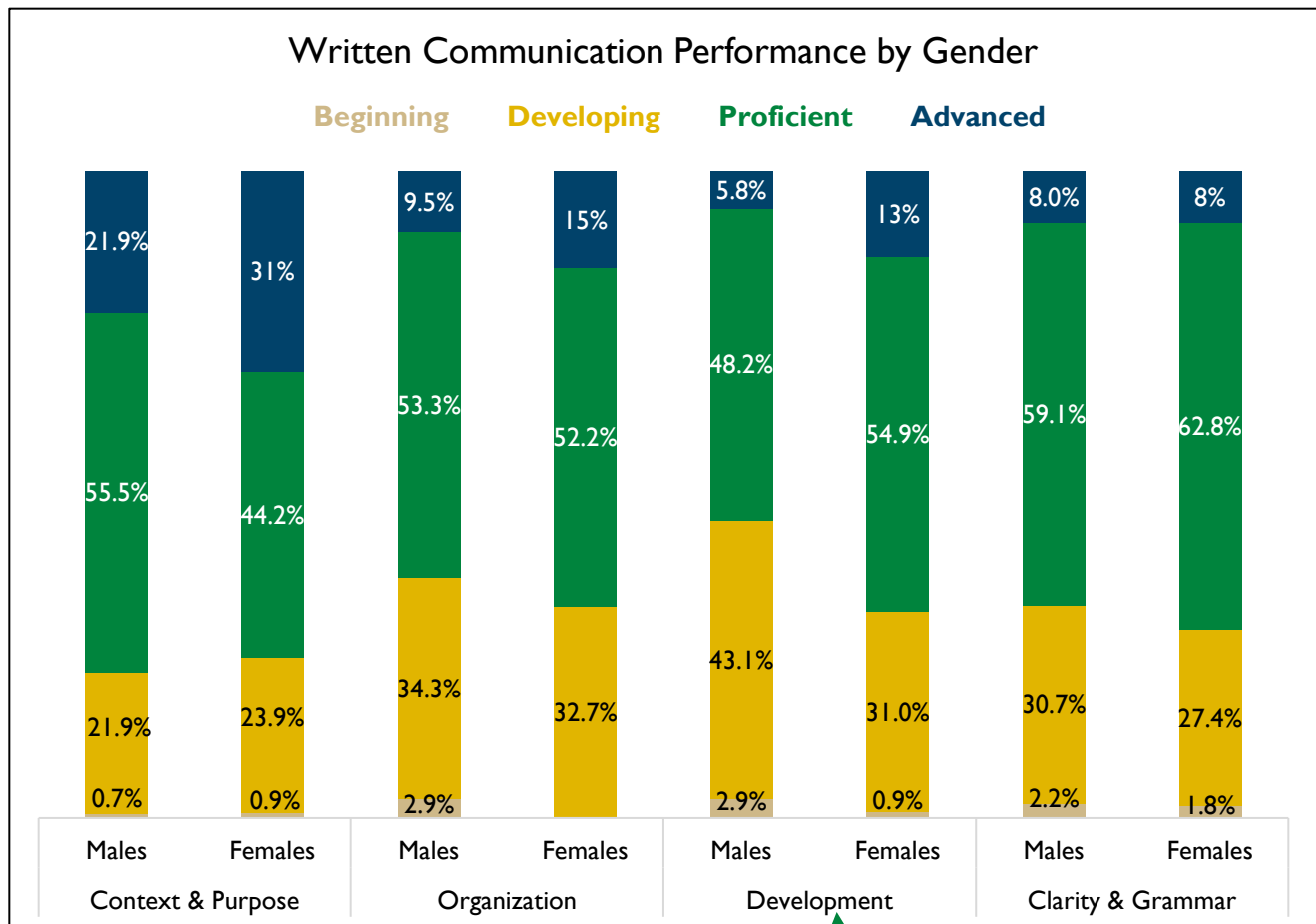**Written Communication by Generation Status**

## Written Communication Performance by Generation Status
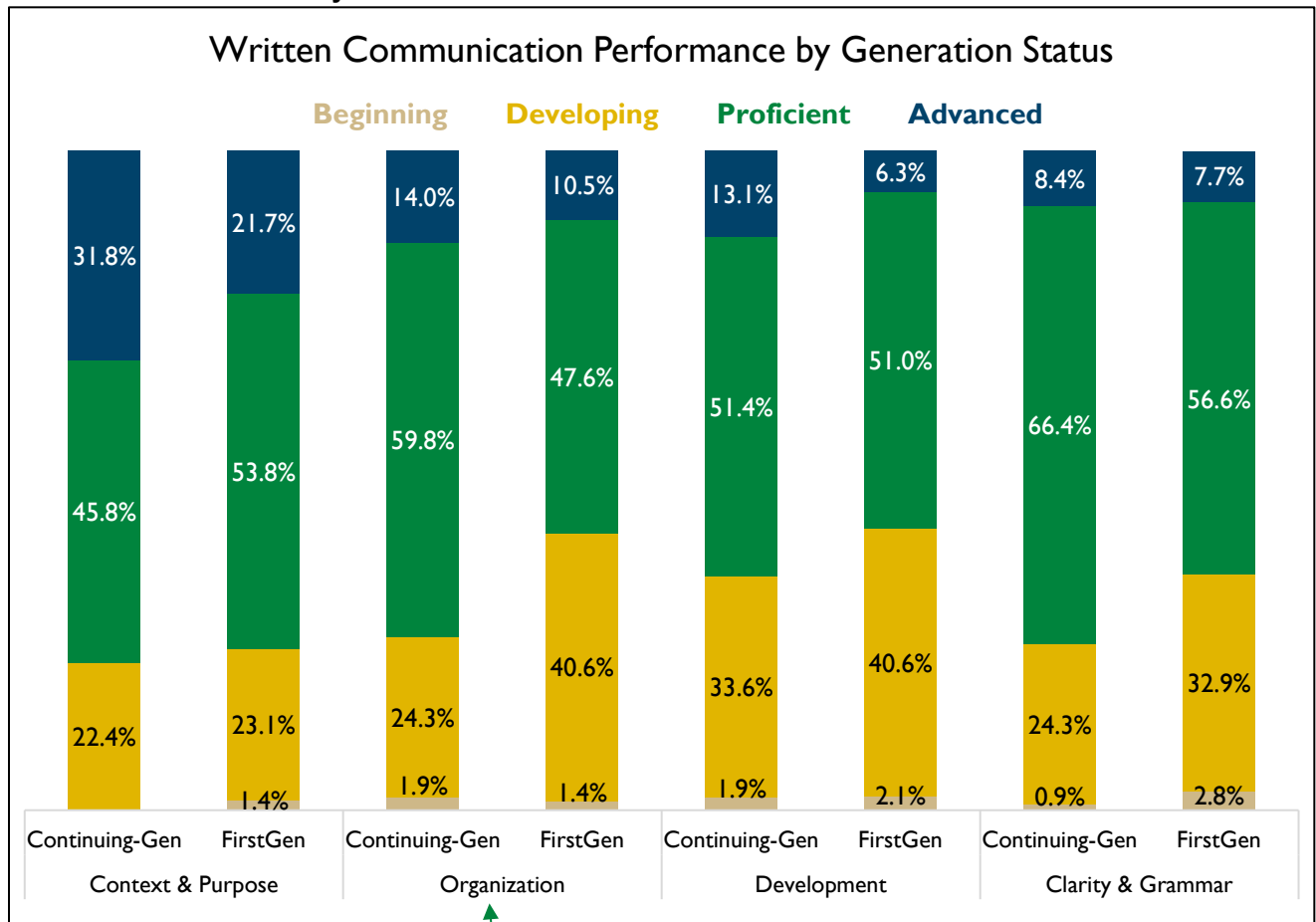


Note: A statistically significant difference was found in the *Organization* criterion.

**Organization:** 15.7% difference at the "proficient" and "advanced" levels

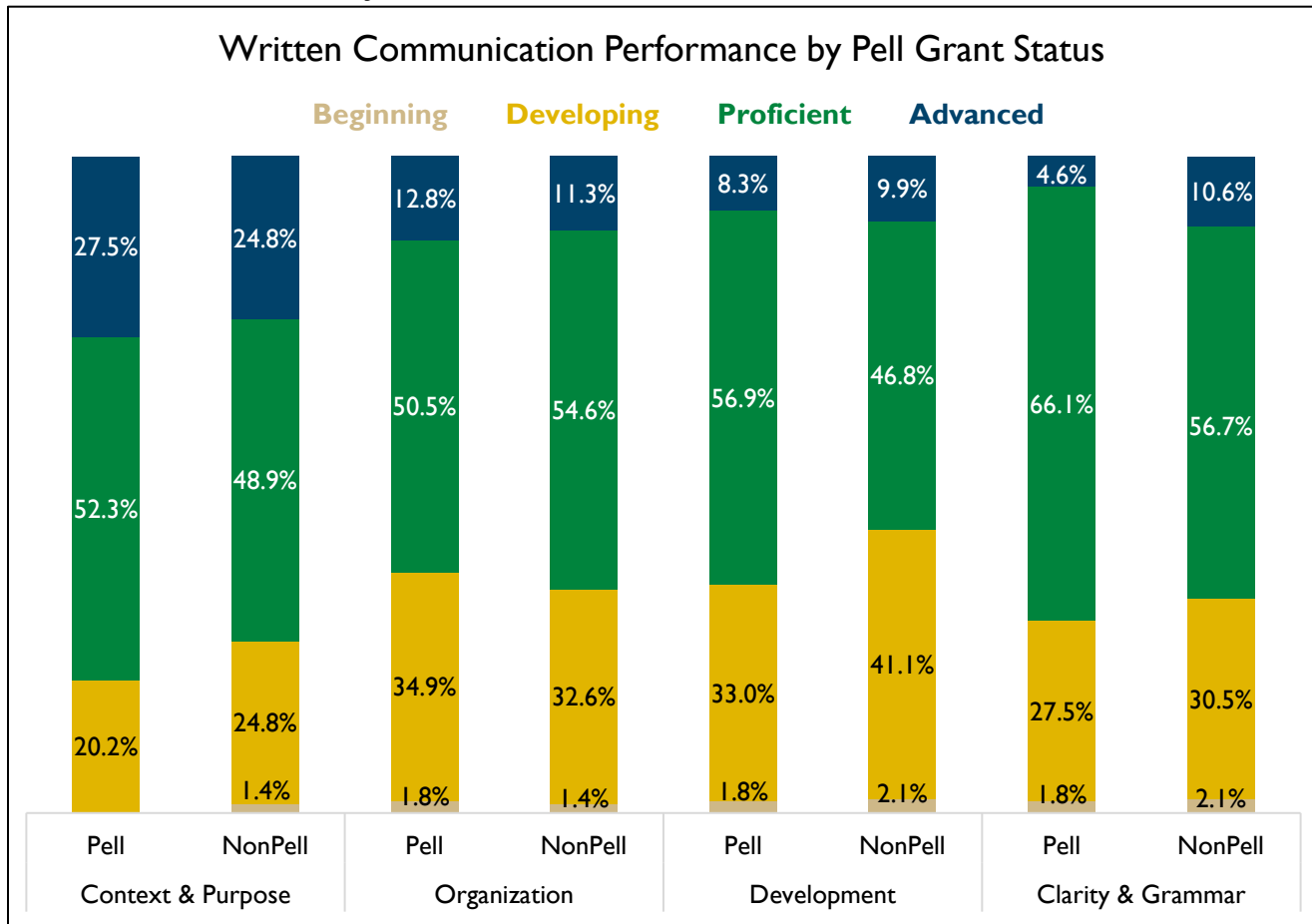**Written Communication by Gender**



Written Communication Performance by Gender

Note: A statistically significant difference was found in the *Development* criterion.

**Development:** 14.2% difference at the "proficient" and "advanced" levels

**Written Communication by Pell Grant Status**

## Written Communication Performance by Pell Grant Status

**Beginning**   **Developing**   **Proficient**   **Advanced**



| | Context & Purpose | | Organization | | Development | | Clarity & Grammar | |
|---|---|---|---|---|---|---|---|---|
| | Pell | NonPell | Pell | NonPell | Pell | NonPell | Pell | NonPell |
| Advanced | 27.5% | 24.8% | 12.8% | 11.3% | 8.3% | 9.9% | 4.6% | 10.6% |
| Proficient | 52.3% | 48.9% | 50.5% | 54.6% | 56.9% | 46.8% | 66.1% | 56.7% |
| Developing | 20.2% | 24.8% | 34.9% | 32.6% | 33.0% | 41.1% | 27.5% | 30.5% |
| Beginning | | 1.4% | 1.8% | 1.4% | 1.8% | 2.1% | 1.8% | 2.1% |

Note: No statistically significant differences were found for any criterion.