Stevens Institute of Technology

School of Business

**AACSB
ASSURANCE OF LEARNING**

**Master of Science in Financial Analytics**

 **(FA)**

**LEARNING GOAL #1**

**Students can communicate effectively in written and oral presentations.**

**Responsibility:** Dragos Bozdog

December 2023

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# 1. INTRODUCTION: LEARNING GOAL #1

Goal: Students can communicate effectively in writing and oral presentations.

*Objective 1: Students will be able to write effectively.*

*Objective 2: Students will be able to deliver presentations effectively.*

A major educational objective of the School of Business education is to ensure that all of our graduates have effective written and oral communications skills.

While many of our students have strong communications skills, other students, especially foreign students, need special training in this area. In the past, all academic programs and individual instructors have made an effort to assess and improve the communications skills of their students. An advantage of the AACSB assessment process is that it helps us take a more organized and uniform approach to achieving this crucial educational objective.

The communications learning goal as described in this report is the same for all undergraduate and graduate programs in the School of Business and is assessed using the same learning objectives, traits and rubrics as described in Sections 2 and 3 of this report.

In spring 2009, the School of Business (at the time named the Howe School) developed a new web-based Writing Resource Center at <http://howe.stevens.edu/academics/aacsb-information/writing-resource-center/>.

This website is intended for use by:

1. Instructors wishing to help students improve their written and oral skills.
2. Students seeking information on Howe School communication skill requirements and the resources that are available at Stevens to help them meet these requirements.
3. Students seeking guidance on issues ranging from basic grammatical skills to the required format of master and PhD theses.

# 2. LEARNING OBJECTIVES AND TRAITS

The following table outlines the specific learning objectives and corresponding traits for the School of Business’s written and oral communications skill assessment:

|  |
| --- |
| **Objective 1:** *Students will be able to write effectively.* |
| **Traits** |   |
| Trait 1: | Logical Flow |
| Trait 2: | Grammar & Sentence Structure |
| Trait 3: | Spelling & Word Choice |
| Trait 4: | Development of Ideas |
| **Objective 2:** *Students will be able to deliver presentations effectively.* |
| **Traits** |   |
| Trait 1: | Organization & Logic |
| Trait 2: | Voice Quality |
| Trait 3: | Physical Presence |
| Trait 4: | Use of Slides to Enhance Communication |
| Trait 5: | Transitions/Time Management/Q&A |

# 3. RUBRICS

|  |
| --- |
| **Writing Rubric***Goal: Students will be able to communicate effectively in writing.* |
| **Trait** | **Poor (0)** | **Good (5)** | **Excellent (10)** | **Score** |
| **Trait 1:****Logical Flow** | Unclear introduction or conclusion. Does not use a sequence of material to lead reader through the paper. Draws illogical conclusions | Develops ideas through effective use of paragraphs, transitions, opening and concluding statements. Generally well structured to suggest connection between sub-topics. | Maintains clear focus, uses structure to build the paper's conclusions. Presents analysis using sequence of ideas, clarity of flow and continuous voice or point of view. |   |
| **Trait 2:****Grammar & Sentence Structure** | Frequently uses inappropriate grammar and incomplete or poorly structured sentences which interfere with comprehension. | Generally complies with standard English grammar and sentence usage. | Sophisticated use of English language, using varied sentence structured, phrasing and cadence. Grammar is error-free |   |
| **Trait 3:****Spelling & Word Choice** | Frequent misspellings. Poor or limited choice of words for expression of ideas. | Has proofread or checked spelling, and uses vocabulary correctly. Minor errors. | Demonstrates good use of words to support written expression of topic. Spelling is error-free. |   |
| **Trait 4:****Development of Ideas** | Many unsupported statements offered. Uses flawed or unclear reasoning. | Most statements supported, ideas explained with examples and written with sufficient explanation. | Shows thoughtful reasoning and explores alternatives. Uses existing, supported ideas to develop well-formed, readable output. |   |
| **Does not meet expectations: 0 – 19; Meets: 20-29; Exceeds: 30-40 Total Score:** |  |
| **Presentation Rubric***Goal: Students will be able to deliver presentations effectively.* |
| **Trait** | **Poor (0)** | **Good (5)** | **Excellent (10)** | **Score** |
| **Trait 1:** **Organization & Logic** | Fails to introduce topic; no evidence of or poor logical flow of topic. | Prepares listeners for sequence and flow of topic. Loses place occasionally but flow and structure are still clear. | Engages listeners with overview, guides listeners through connections between sections, and alerts audience to key details and concepts.  |  |
| **Trait 2:****Voice Quality** | Cannot be heard or understood well due to volume, mumbling, speed, monotone delivery, and/or heavily accented English.  | Clear delivery with well-modulated voice. Displays some confidence and enthusiasm, but may also contain flatter periods or sound overly rehearsed. | Exemplary delivery, with a voice that sounds fully engaged, conveys enthusiasm and confidence, and relates to the audience well.  |  |
| **Trait 3:****Physical Presence** | Turns away from audience or uses distracting gestures, such as pacing or tugging clothing. Speaker seems stiff, awkward or uncomfortable. Little eye contact. | Speaker is relaxed in front of the room and keeps distracting movements and gestures to a minimum. Generally faces audience and makes eye contact. | Speaker’s body language is superb and fully engages the room. Strong, consistent eye contact to the entire audience. Uses confident gestures to underscore key verbal points. |  |
| **Trait 4:****Use of Slides to Enhance Communications** | Misspelled, too busy, too much text, too many slides for allotted time, and/or poor use of graphics like charts.  | Slides are readable, containing a reasonable amount of material per slide. Good use of graphics or illustrations. | Slides are well written/designed, engaging to the audience, and used as support to verbal content presentation. |  |
| **Trait 5:****Transitions****Time Management****Q&A** | Transitions are awkward or non-existent. Speakers go over time limits. Answers are disorganized or non-responsive. | Transitions are smooth. Speakers generally stay within time limits. Speakers respond to questions well and provide sufficient response. | Transitions are professional and very smooth. Speakers respond convincingly and address all aspects of question. |  |
| **Does not meet expectations: 0 – 19; Meets: 20-35; Exceeds: 36-50 Total Score:** |  |

# 4. ASSESSMENT PROCESS

|  |  |  |
| --- | --- | --- |
| **Where & when measured?** | **How measured?** | **Criterion** |
| Assessed in the fall in FA582. Students submit a project proposal to be evaluated by CAL, and then are assessed in their final project presentations. | Student presentations are reviewed in class; student essays are assessed by professionals in CAL by submitting to MGT898. Feedback is provided to each individual student. Sampling: All students in the FA program are assessed. | For both the oral and written test, 80% of students must receive a grade of “A” or “B”. Students receiving “C” or “D” grades are required to take online remedial training. |

The FA program assesses the communication learning skills of all students in *FA 582 Foundations of Financial Data Science*. The instructor in the selected class collects a written report from students as part of the normal coursework. These writing samples are holistically graded by faculty in the College of Arts and Letters. Feedback to students consists of a grade (*0 to 10; 0-3 = Does Not Meet Expectations; 4-7 = Meets Expectations; 8-10 = Exceeds Expectations*) plus a short description of the meaning of each score (see Appendix B). The instructor managing the learning goal receives a list of the students and their scores – which is used for AACSB reporting purposes. The faculty from CAL is then invited back to evaluate the presentations and provide feedback for objective 2, graded similarly.

# 5. RESULTS OF LEARNING GOAL ASSESSMENT - INTRODUCTION

The results of the initial learning goal assessments carried out to date are included below.

**Explanation of Direct Measurements**

Each learning goal has a number of learning objectives, and performance on each objective is measured using a rubric that, in turn, contains a number of desired “traits.” Students are scored individually on each trait.

The grading sheets for each student are used to develop a Summary Results Sheet for each learning goal objective. A selection of these summaries is included below.

The first table in the Summary Results Sheet for a learning objective/trait gives the counts of students falling in each of the three categories:

* Does Not Meet Expectations
* Meets Expectations
* Exceeds Expectations

The right-hand column in the table is used to record the average score of the students on each trait. This table provides an indication of the relative performance of students on each trait.

The second table on each sheet provides the counts of students who fall in each of the above three categories for the overall learning objective.

The person doing the assessment provides explanatory comments and recommendations on the bottom of the Results Summary Sheet. The recommendations improve content or pedagogy changes for the next time the course is given.

**Explanation of Indirect Measurements**

Assessed in the final capstone project in the FA800 Special problems in Financial Analytics class. The communication skills will also be assessed in the exit survey that all students undertake.

Assessment Fall 2021:

NOTICE THAT THE DIRECT ASSESSMENT IS DONE FOR ON CAMPUS; WEBCAMUS AND COMBINED THIS IS NOW A REQUIREMENT FOR AOL

WE WILL START ASSESSMENTS IN FALL OF 2021

## The direct measurement is the written assignment

1. Indirect measurement is use periodically. Assessed in the final capstone project in the FA800 Special problems in Financial Analytics class. The communication skills will also be assessed in the exit survey that all students undertake.

# 6. RESULTS OF ASSESSMENT: FALL 2021

**LEARNING GOAL #1:***Our students will communicate effectively in written and oral communications.*

**LEARNING OBJECTIVE #1:***Students will be able to write effectively.*

**ASSESSMENT DATE:***Dec 2021*

**ASSESSOR:***Pelphrey, Minsloff, Osborne*

**NUMBER OF STUDENTS & COURSE:***8 Students – BIA 650, MGT 609, MGT 610, FA 582, FE 620, MGT 635*

|  |  |  |
| --- | --- | --- |
|  | **Number of Students** |  |
| **Learning Goal Traits** | **Not Meet Expectations** | **Meets Expectations** | **Exceeds Expectations** | **Average Grade** |
| 1: Logical flow | **1** | **5** | **2** | **6.8** |
| 2: Grammar & Sentence Structure | **0** | **7** | **1** | **6.1** |
| 3: Spelling & word choice | **0** | **6** | **2** | **6.3** |
| 4: Development of ideas | **0** | **5** | **3** | **6.9** |
| **Average Grade (Out of 10) =** | **6.5** |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Not Meet Expectations** | **Meets Expectations** | **Exceeds Expectations** |
| **Total Students by Category***(Based on average score across all traits)* | **1** | **5** | **2** |

**COMMENTS:**

*The vast majority of students in this program who participated in the writing assessment in Fall 2021 met or exceeded expectations. This is on par with how these students scored in previous assessments. Scores were generally consistent across the four Learning Goals, but there were slight increases in Goals 1 and 4, which rate the writer’s overall ability to convey their ideas in an orderly, logical way. Goals 2 and 3, which assess more word- and sentence-level writing issues, was slightly weaker, and is likely attributable to this being a very international cohort.*

**REMEDIAL ACTIONS:**

*Writers are strongly encouraged to seek assistance from the Writing & Communication Center on campus to refine and improve their proofreading abilities. Recognizing common errors is the first (and most crucial) step to addressing them. Faculty are encouraged to allow students extra class time to submit their documents for peer review. Wherever possible, instructors should give out samples of documents (both academic and professional) to model professional-level writing for all students.*

**LEARNING OBJECTIVE #2:***Students will be able to deliver presentations effectively.*

**ASSESSMENT DATE:***Dec 2021*

**ASSESSOR:***Pelphrey, Minsloff, Middleton, Balog*

**NUMBER OF STUDENTS & COURSE:***12 Students – MGT 609, FA 582, FE 620*

|  |  |  |
| --- | --- | --- |
|  | **Number of Students** |  |
| **Learning Goal Traits** | **Not Meet Expectations** | **Meets Expectations** | **Exceeds Expectations** | **Average Grade** |
| 1: Organization & Logic | **0** | **6** | **6** | **6.3** |
| 2: Voice Quality | **0** | **10** | **2** | **6.1** |
| 3: Physical Presence | **1** | **11** | **0** | **5.0** |
| 4: Use of Slides to Enhance Comm | **0** | **12** | **0** | **5.4** |
| 5: Transitions, Time Mgt, Q&A | **0** | **11** | **1** | **6.4** |
| **Average Grade (Out of 10) =** | **5.8** |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Not Meet Expectations** | **Meets Expectations** | **Exceeds Expectations** |
| **Total Students by Category***(Based on average score across all traits)* | **0** | **9** | **3** |

**COMMENTS:**

*Students in this program easily met or exceeded expectations in the ability deliver effective presentations. Organization and logic were generally strong, and information was delivered in a way that was both clear and impactful. The use of smooth transitions and time management were also strong. Overall, areas relating to the speaker’s physical presence and voice quality were the weakest, but still effective. This is an element that can be taught, but is really only internalized by repeated exposure to public speaking. Slide creation was generally strong, but many presentations still suffered from cramped data and small text, which made it a bit hard on the audience.*

**REMEDIAL ACTIONS:**

*Faculty should give the students more opportunity to speak in front of the class, in order to gain experience and confidence. Faculty should also consider giving out style templates with minimum text size, recommended fonts, and examples of clear, uncluttered layouts. Students tend to copy what they see in class, so faculty should take more care in creating their own PowerPoint decks and be sure they are modeling best practices. Students can also be encouraged to visit the Writing & Communication Center for extra help developing slides and practicing their oral delivery.*

# 7. RESULTS OF ASSESSMENT: FALL 2022

**LEARNING GOAL #1:***Our students will communicate effectively in written and oral communications.*

**LEARNING OBJECTIVE #1:***Students will be able to write effectively.*

**ASSESSMENT DATE:***Dec 2022*

**ASSESSOR:***Pelphrey, Minsloff*

**NUMBER OF STUDENTS & COURSE:***16 Students – BIA 650, MGT 609, MGT 635, FA 582, FE 620*

|  |  |  |
| --- | --- | --- |
|  | **Number of Students** |  |
| **Learning Goal Traits** | **Not Meet Expectations** | **Meets Expectations** | **Exceeds Expectations** | **Average Grade** |
| 1: Logical flow | **0** | **8** | **8** | **7.4** |
| 2: Grammar & Sentence Structure | **0** | **8** | **8** | **7.2** |
| 3: Spelling & word choice | **0** | **6** | **10** | **7.5** |
| 4: Development of ideas | **0** | **10** | **6** | **7.4** |
| **Average Grade (Out of 10) =** | **7.4** |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Not Meet Expectations** | **Meets Expectations** | **Exceeds Expectations** |
| **Total Students by Category***(Based on average score across all traits)* | **0** | **8** | **8** |

**COMMENTS:**

*An overwhelming majority of students in the graduate program met or exceeded expectations in their written communication. Overall scores were slightly better than in previous semesters. Organization of ideas and supporting arguments continue to be strong. Sentence-level mechanics varied widely across some classes, which more likely than not was a function of the complexity level of the prompt. But overall, grammar and word choice to help convey complex ideas was strong and slightly improved over the prior year.*

**REMEDIAL ACTIONS:**

*We are entering a new era of online tools and resources to help students with their writing. ChatGPT can be accessed to help correct grammar and demonstrate proper syntax and style. Instructors should be careful to assign prompts that require some personal or experiential component from the students to help limit the ways that AI can be utilized for written assignments. As always, we encourage all students to visit the Writing & Communications Center for personal feedback and assistance with outlining, writing and proofreading.*

**LEARNING OBJECTIVE #2:***Students will be able to deliver presentations effectively.*

**ASSESSMENT DATE:***Dec 2022*

**ASSESSOR:***Minsloff, Middleton, Balog, Stein*

**NUMBER OF STUDENTS & COURSE:***14 Students – BIA 650, MGT 609, FA 582, FE 620, EMT 696*

|  |  |  |
| --- | --- | --- |
|  | **Number of Students** |  |
| **Learning Goal Traits** | **Not Meet Expectations** | **Meets Expectations** | **Exceeds Expectations** | **Average Grade** |
| 1: Organization & Logic | **0** | **0** | **14** | **8.4** |
| 2: Voice Quality | **1** | **11** | **2** | **6.1** |
| 3: Physical Presence | **1** | **9** | **4** | **5.6** |
| 4: Use of Slides to Enhance Comm | **0** | **14** | **0** | **5.8** |
| 5: Transitions, Time Mgt, Q&A | **0** | **7** | **7** | **7.1** |
| **Average Grade (Out of 10) =** | **6.6** |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Not Meet Expectations** | **Meets Expectations** | **Exceeds Expectations** |
| **Total Students by Category***(Based on average score across all traits)* | **0** | **8** | **6** |

**COMMENTS:**

*Students in this program continue to do well with the structural and organizational aspects of presenting. Delivery quality varied much more widely from student to student, which reflects different levels of experience as well as language challenges. Quality of slides also varied widely from class to class and from student to student. Instructors should do more to encourage students to break from the mold and not simply try to recreate the classroom examples. This often leads to slides with too much data in fonts that are too small to easily read.*

**REMEDIAL ACTIONS:**

*Public speaking should be encouraged at all stages of the academic journey. Online learning represents a particular challenge, and instructors should get the students speaking whenever possible. Presentations delivered online are useful (and represent the general direction of the business world) but students have to learn to speak to an audience in front of them and all of the (potential) anxiety and body-language challenges that go along with that. Faculty should continue to model good presentation practices and encourage students to present multiple times in class, not just as a final project. The Writing & Communications Center is also available to help students with developing and rehearsing their presentations.*

# 8. RESULTS OF ASSESSMENT: FALL 2023

**LEARNING GOAL #1:***Our students will communicate effectively in written and oral communications.*

**LEARNING OBJECTIVE #1:***Students will be able to write effectively.*

**ASSESSMENT DATE:***December 2023*

**ASSESSOR:***Pelphrey, Minsloff, Flouton, Penny*

**NUMBER OF STUDENTS & COURSE:***22 Students – BIA 650, FA 582, FE 620, MGT 609, MGT 635*

|  |  |  |
| --- | --- | --- |
|  | **Number of Students** |  |
| **Learning Goal Traits** | **Not Meet Expectations** | **Meets Expectations** | **Exceeds Expectations** | **Average Grade** |
| 1: Logical flow | **4** | **9** | **9** | **6.6** |
| 2: Grammar & Sentence Structure | **2** | **11** | **9** | **6.9** |
| 3: Spelling & word choice | **1** | **12** | **9** | **7.0** |
| 4: Development of ideas | **4** | **9** | **9** | **6.4** |
| **Average Grade (Out of 10) =** | **6.7** |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Not Meet Expectations** | **Meets Expectations** | **Exceeds Expectations** |
| **Total Students by Category***(Based on average score across all traits)* | **4** | **9** | **9** |

**COMMENTS:**

*The large majority of graduate students in this program met or exceeded expectations in their written communication. Overall scores were similar to prior semesters. Students continue to write in clearly organized sentences and make an attempt to support their arguments with evidence. Grammar and sentence structure varied greatly from student to student, and likely reflects different comfort and experience with the English language, and possibly the use of AI to edit and smooth out surface-level issues.*

**REMEDIAL ACTIONS:**

*The use of AI and online tools continue to expand and we strongly suspect it’s being utilized to some degree across all courses and sections. It can be a powerful tool to identify writing problems and correct grammar, but students should be cautioned against relying on it too much. Faculty should also be attempting to revise their prompts to include more personal experience and analysis, which would force students to rely less on AI. As always, we strongly encourage all students to utilize the resources of the Writing & Communications Center for personal feedback and writing assistance.*

**LEARNING OBJECTIVE #2:***Students will be able to deliver presentations effectively.*

**ASSESSMENT DATE:***December 2023*

**ASSESSOR:***Balog, Minsloff, Stein*

**NUMBER OF STUDENTS & COURSE:***20 Students – BIA 650, FA 582, FE 620, MGT 609, MGT 696*

|  |  |  |
| --- | --- | --- |
|  | **Number of Students** |  |
| **Learning Goal Traits** | **Not Meet Expectations** | **Meets Expectations** | **Exceeds Expectations** | **Average Grade** |
| 1: Organization & Logic | **0** | **2** | **18** | **8.9** |
| 2: Voice Quality | **0** | **1** | **19** | **8.5** |
| 3: Physical Presence | **0** | **5** | **15** | **8.2** |
| 4: Use of Slides to Enhance Comm | **0** | **15** | **5** | **6.6** |
| 5: Transitions, Time Mgt, Q&A | **0** | **0** | **15** | **8.7** |
| **Average Grade (Out of 10) =** | **8.2** |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Not Meet Expectations** | **Meets Expectations** | **Exceeds Expectations** |
| **Total Students by Category***(Based on average score across all traits)* | **0** | **5** | **15** |

**COMMENTS:**

*Students in this program generally do a very good job organizing their information and creating a clear and compelling presentation. Slide quality, while strong overall, varies from group to group, and suffers when students try to pack too much information on a single slide. Physical aspects of presenting also vary from student to student, often reflecting different levels of experience and comfort with the language and public speaking. Overall, the slide decks do reflect an attitude of safety and conformity, which is understandable in an academic environment. However, faculty could do more to encourage more unique and engaging presentations.*

**REMEDIAL ACTIONS:**

*Public speaking is a critical skill for students to learn, and faculty should do all they can to get students out of their chairs and speaking to their classes, both formally and informally. Any public speaking is good experience. Faculty should also do their best to model good presentation practices, both in their own public speaking and the clarity of their slide decks. Faculty teaching online classes should also be aware that online presenting, while useful, is not a substitute for speaking to a room full of people. The Writing & Communications Center is also a good resource for students for assistance with creating and delivering their presentations.*

# 9. Outcomes from Previous Assessments:

The following table shows the average scores on each goal objective.

|  |  |  |
| --- | --- | --- |
|  | Objective 1Written Communication | Objective 2Oral Communication |
| Fall 2021 | 6.5 | 5.8 |
| Fall 2022 | 7.4 | 6.6 |
| Fall 2023 | 6.7 | 8.2 |

# 10. Close Loop Process – Continuous Improvement Record

Assurance of Learning

Assessment/Outcome Analysis

Close Loop Process - Continuous Improvement Record

**Program:** Master of Science in Financial Analytics

**Goal 1:** Students can communicate effectively in written and oral communications.

**Goal Owner:** Andrew Stein and Dragos Bozdog

**Where Measured:** Students are assessed in the fall in the required course:

FA582 Foundations of Financial Data Science

**How Measured:** Student presentations are video-taped, and student essays are assessed for writing skills. Feedback is provided to each individual student.

**Closing the Loop: Actions taken on specific objectives**

|  |  |
| --- | --- |
| **Objective 1** | *Students will be able to write effectively.* |
| **When Assessed:** | *Fall 2021* |
| **Remedial****Action** | *Writers are strongly encouraged to seek assistance from the Writing & Communication Center on campus to refine and improve their proofreading abilities. Recognizing common errors is the first (and most crucial) step to addressing them. Faculty are encouraged to allow students extra class time to submit their documents for peer review. Wherever possible, instructors should give out samples of documents (both academic and professional) to model professional-level writing for all students.* |
| **Outcome from previous assessment** |  |
| **Objective 2** | *Students will be able to deliver presentations effectively.* |
| **When Assessed:** | *Fall 2021* |
| **Remedial****Action** | *Faculty should give the students more opportunity to speak in front of the class, in order to gain experience and confidence. Faculty should also consider giving out style templates with minimum text size, recommended fonts, and examples of clear, uncluttered layouts. Students tend to copy what they see in class, so faculty should take more care in creating their own PowerPoint decks and be sure they are modeling best practices. Students can also be encouraged to visit the Writing & Communication Center for extra help developing slides and practicing their oral delivery* |
| **Outcome from previous assessment** |  |