

An Approach for Developing and Implementing Writing Skills in Construction Project Administration: The Purdue University Model

Christopher S. Ray
Purdue University
West Lafayette, Indiana

This paper explains how the Purdue University Department of Building Construction Management is attempting to develop and implement general writing skills into its Construction Project Administration course. By requiring students to practice writing skills relevant to entry-level skills expected upon entry into the construction market, students' writing skills should improve, and students should actively seek ways to enhance their knowledge of Construction Project Administration.

Key Words: Writing Skills, Project Administration, Entry Level Skills

Introduction

A widely accepted premise that construction education graduates possess inadequate writing skills for entry into the business community was noted by Wright in 1987. Improving communication skills, particularly writing skills, is paramount to success in the industry. As indicated in the Associated General Contractors Construction (AGC) Education Committee Academic Competencies Task Force Report Executive Summary, *The realities of the construction profession are that reading and writing are foundations of performance.* (AGC, 1995) Without adequate performance in this basic competency, graduates entering the job market will be at a significant disadvantage.

Reading and writing skills need more emphasis in the Building Construction Management curriculum. In order to enhance writing skills, students need to practice writing. Not only do students need to practice writing, they need to practice writing within the subject matter being taught. It is imperative that students realize writing is critical to successful project management, and the ability to write clearly, completely, concisely, and accurately is a skill requiring significant practice.

Background

The Construction Project Administration course is one of the required courses within the Building Construction Management curriculum at Purdue University. Students taking this course are normally at the 7th- or 8th- semester level. The course is currently taught on a semester basis, with classes being held twice per week for 75 minutes per session.

The course objectives are to present to the student a study and analysis of construction procedures and administrative functions common in the commercial construction industry. Students are required to become familiar with the basic industry administrative functions and practices as delineated and required by standard contract documents

Based on the AGC Construction Education Committee Academic Competencies Task Force Report, it was decided this Construction Project Administration course would be studied and modified to incorporate written communications.

Problem Statement

Understanding that writing skill can be developed through instruction and practice, how do we improve student-writing skills within the Building Construction Management program at Purdue University?

Strategy of Approach

The strategy used to improve student-writing skills will be to incorporate the following into the Construction Project Administration course currently offered within the department:

1. Provide guidance and instruction in basic writing and grammar skills,
2. Require the students to write,
3. Integrate writing material relevant to course content and student interest.

Provide Guidance and Instruction in Basic Writing and Grammar Skills

An integral part of written communications is the understanding and application of grammar and usage. By incorporating the use of the Purdue University Writing Lab and the On-line Writing Lab with the written requirements of the course, students will be able to enhance their writing abilities. The primary use of the Writing Lab will be to develop and assist the students in developing those writing and grammar skills suggested by Harris (1997). The Harris writing and grammar skills to be developed are as follows:

- The Writing Process,
- Sentence development,
- Parts of Sentences
- Punctuation,
- Mechanics and Spelling.

Require the Students to Write

In order to improve writing, the students need to practice writing. Within the Construction Project Administration course, the students will be required to write several types of documents. Four primary written documents will be required. These are as follows:

- Request for Information (RFI)
- Technical Letters
- Project Meeting Minutes
- Technical Topic Summary Report

Integrate Writing Material Relevant to Course Content and Student Interest

As indicated by Maher (1990), within the contract are numerous content areas for writing assignments. As an example, the roles and obligations of the contractor pursuant to AIA Document A201 account for approximately 90 various issues that need to be addressed by the contractor. Requiring written assignments on several of these issues will allow the students the opportunity to become familiar with the AIA documents as well as to improve writing about the relevant material contained in the contract documents.

Another excellent source of construction-related issues and problems is *The Construction Contractor* published by Federal Publications, Inc. This publication provides construction contract decisions issued by the federal court system, state courts, administrative boards, and several governmental authorities. By offering summaries of these cases from the plaintiff and defendant positions, each case is presented as a real-world situation to the students. During this exercise, the students are required to *take a stance and defend it* in writing. During this exercise, the students begin to understand the very real necessity of being able to communicate clearly, concisely, completely, and accurately.

Procedures and Conditions

The following procedure will be implemented and incorporated into the Construction Project Administration course at Purdue University. These procedures and conditions are to be used as guidelines for enhancing the students' writing skills.

Providing Guidance and Instruction in Basic Writing and Grammar Skills

During the first three weeks of class, the Purdue University Writing Lab will conduct five help sessions within the classroom on grammar and writing skills. In general, these help sessions will be review periods for the students. In many instances, the students have not been exposed to formal grammar and usage for many years, and providing a quick review allows them the opportunity to re-familiarize themselves with the material in a short time.

During these in-class sessions, basic instruction will be provided regarding the writing process, sentence development, and parts of sentences, punctuation, mechanics, and spelling.

During these five sessions, ten-minute quizzes will be administered to the students. Once the class has completed the quiz (see Appendix A), the writing lab instructor discusses the correct answers for immediate feedback and provides examples of how the material covered is applied to basic writing development and usage.

Requiring the Student to Write

Requiring the students to write critically about information relevant to the course content is essential to improving writing skills and learning the subject matter. As mentioned earlier, four primary vehicles by which the students are required to write within the Construction Project Administration course are requests for information, technical letters, project meeting minutes, and technical topic summary reports.

Request for Information

The Request for Information (RFI) is a typical construction document normally issued by the general contractor to the architect and engineer requesting clarification or additional instruction on some issue about the specific project. (See Appendix B)

Each student will be required to prepare a Request for Information based on material read for the particular class session. By requiring the student to prepare an RFI, basic writing skills are being developed. Writing the RFI also requires the students to think about the material within the assigned reading.

An additional significant benefit to the student RFI assignment is that it allows the instructor the opportunity to initiate the discussion method in class based on questions presented in the RFIs. In a sense, the student will be participating and contributing to the development of the discussion for the day.

Technical Letters

During the semester, the students will be required to write several two-page technical letters based on a topic developed by the instructor. These letters provide the students the opportunity to critically think about specific issues related to the course content. A sample of the Technical Letter Topic is in Appendix C.

Technical letters will be developed over four consecutive class periods.

During the first class session, the technical letter topic is provided to the students. At this time, the instructor will provide a brief overview of the situation.

By the beginning of the second-class session, the students are required to turn in an outline of their technical letter. By preparing an outline, the students are starting to develop the thought process for solving the problem, as well as developing the process for writing the actual letter.

Additionally during this session, the instructor will provide further clarification on the technical letter topic allowing the students the opportunity to confirm or question the topic.

By the beginning of the third class session, the students will be required to provide a rough draft of the letter to the course instructor.

Prior to turning in the final letter at the beginning of the fourth class session, the students will be required to take their rough drafts to the Writing Lab in teams of three for a peer review session, and for additional guidance by the Writing Lab instructors when needed. In the writing lab, rough drafts are exchanged among the peer group for review and discussion.

The peer review provides the students the opportunity to critically review each other's letters, both for content and grammar. Since the students generally possess the same construction knowledge base, many of the questions the students ask concern the content. This relationship and peer review session allows the students to ask the *What are you really trying to say?* questions without the fear of looking incompetent to the instructor or other students.

As a service offered by the Purdue University Writing Lab, a form is prepared by the Writing Lab instructor indicating when the students were in the lab and the instruction provided, and a copy is provided to the instructor. By reviewing these forms, the instructor can identify any common problems students are having, and provide additional instruction to remedy the problem area.

At the beginning of the fourth class session, the student will be required to turn in the final letter, the original outline, and any markup copies of the letter drafted during the previous three class sessions. At this time, the instructor will review the documents and provide written feedback to the students.

Project Meeting Minutes

Each student will be required to prepare formal meeting minutes based on guidelines provided by the instructor at the beginning of the semester. The students will be required to record (in writing) minutes of two class lecture sessions, prepare formal minutes, and provide a copy of the formal meeting minutes to the instructor by the beginning of the next class session. The instructor then provides copies for distribution to the entire class during the following class session.

The primary objectives of this writing assignment are for the students to develop note-taking and critical-listening skills, and skill in developing procedures for presenting minutes in a clear and concise manner.

While the student is recording the class minutes, the instructor will ask for occasional readings of a prior discussion the student has recorded in the previous few minutes of that meeting. This will ensure that the student is following the prescribed guidelines and is attempting to complete the assignment.

Technical Topic Summary Report

Each student will be required to prepare a three- to five-page Summary Report based on a technical topic of interest selected by the student. This writing assignment takes the format of an executive summary report.

The objective of this writing assignment will be to allow the students to practice summarizing a significant amount of information into a clear, complete, concise, and accurate document to be presented to senior management.

Prior to beginning this assignment, the students will be required to write a letter requesting authorization to use a specific topic for the executive summary. Upon approval by the instructor, the students will be provided a general guideline for the executive summary. As with the technical letters, the student will be encouraged to utilize the services of the Writing Lab.

Integrating Writing Material Relevant to Course Content and Student Interest

As indicated by Maher (1990), having the students write *on* the terms, conditions, roles and obligation of the contractor under AIA Document A201 presents many applications for writing. In many instances, the student may need to document specific requirements pursuant to the contract documents. At other times, terms and conditions of the contract document may need to be clarified or discussed. Both of these *writings* may be relevant and necessary for completion of the contract conditions.

The use of legal cases presents another opportunity for the students to write about material relevant to the class. *The Construction Contractor* by Federal Publications, Inc., presents cases decided by various courts and boards. By the instructor modifying these cases to present a specific view being presented in class, the students have the opportunity to critically think and write about the topic. Additionally, once the students have completed the assignment, the actual case may be discussed in class for immediate feedback to the students.

Expectations

Knowing that students' writing skills need improvement and acknowledging that these skills can be improved are the first steps towards resolving the problem. Requiring students to write and to write on relevant material are further steps towards improving writing skills.

Once the students realize that significant writing will be required in the course and that significant effort on their part will be required to become more competent writers, the instructor will be better able to guide the students to proper writing. By reviewing and editing the students' writing assignments through a peer review process, a Writing Lab process, and a final instructor review, it is expected that the students will write more successfully.

By utilizing the services of the Writing Lab for review of grammar and syntax, the faculty member will not be expected to critically review and grade these issues. The instructor's time can be concentrated on reviewing content and teaching the subject matter.

By (1) attempting to develop and implement general writing skills requirements into the Construction Project Administration course, (2) requiring students to practice writing skills relevant to the entry-level skills expected upon entry into the construction market, (3) allowing students the opportunity to interact with other students confronted with the same writing problems, and (4) interacting with Writing Lab personnel, students should improve overall awareness of the importance of quality writing.

Summary

The importance of possessing competent writing skills for the successful completion of projects is paramount to the construction industry. Employers demand that entry-level employees effectively write as topics relate to specific conditions of the contract. By integrating this writing emphasis into specific application courses in the university setting, the student will not only become a better writer, but also will be a more informed construction professional.

By providing guidance in basic writing and grammar skills, requiring the students to write, and requiring them to write on topics relevant to the course content and student interest, the students are provided the opportunity to improve and enhance their writing ability. However, it is the individual student who must make the effort to become proficient in construction writing and documentation.

References

- Associated General Contractors of America Final Report. *Academic Competencies Task Force. AGC Construction Education Committee*, 1995.
- Elliott, R. (1997), *Painless Grammar*. New York: Barron's Educational Series, Inc.
- Harris, M. (1997), *Prentice Hall Reference Guide to Grammar and Usage* (3rd Ed.). New Jersey: Simon & Schuster.
- Maher, R.P. (1990). *A Need for Teaching Writing Skills in Construction Education*. Proceedings of the 26th Annual Conference of the Associated Schools of Construction. Pp. 41-43.
- Wright, E.H. (1987). *Total Integrated Across Curriculum Writing*. Proceedings of the 23rd Annual Conference of the Associated Schools of Construction. Pp.91-94.

Appendix A

Sample Grammar Quiz (Elliott, 1997)

Find the mistakes in these sentences and correct them.

1. Don't even think of trying to buy beer (It's against the law.) before you're 21 years old.
2. It is dangerous (potentially deadly)! to drink and drive.
3. There is only one thing I need to be happy (or I should say really happy:) cash.
4. I am excited (really excited!) about the project.
5. I want three things on this project, productivity, safety, and positive cash flow.

Appendix B

Sample Request for Information

Dear Mr. Ray: D.A. Roberts, Inc.
400 Northwestern Avenue. West Lafayette, IN 47906

February 24, 1998

C.S. Ray & Associates, Inc.
1414 Knoy Hall of Technology
Suite 435
West Lafayette, IN 47907

Re: Request for Information #13
Substitution of Securities for Retainage

Our company is experiencing difficulty understanding the concept in Section 3.10.6 of the text. It discusses exchanging retainage for securities.

The text discussed this topic in minor detail. However, after reading this section we are still unsure of this term. Our main question is if the security is in the possession of the owner, can the actual security holder reinvest the money into another security of equal or greater value?

At our next meeting, would you please debrief our staff in further detail concerning this concept. If you have any questions, please feel free to contact me at your earliest convenience.

Sincerely,

Dave A. Roberts
President

Appendix C

Technical Letter Topic and Description

Technical Letter #5

The soil on which the contractor built the owner's warehouse was not stable enough to support the weight of the building, which began to sink during construction. The Contractor attempted to fix the problem by jacking it up and trying to stabilize its pier supports, but the house continued to sink. Thereafter, portions of the walls and floors buckled, and a pipe burst, causing extensive water damage to the interior.

State law provides that an architect or contractor is liable to the owner of the building if the building "should fall to ruin" because of bad workmanship within 10 years after construction. Although soil defects are not mentioned in the statute, the courts have extended it to cover defects that were or should have been apparent to the architect or contractor.

Who should pay for the damaged building? Defend and explain your answer.

This letter is due by 5:00 PM, Thursday, March 26, 1998.

The inside heading is addressed to Mr. Christopher S. Ray at the address noted on the technical letter format originally handed out in class. Line spacing of the letter shall be 1-1/2 spacing.

Provide the following:

1. Introductory paragraph.
2. A paragraph describing the situation.
3. One or two paragraphs defending and explaining your position.
4. A brief summary paragraph.