

Teaching Academic Writing to Freshmen: An Active Learning Approach

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Abstract

In the quest of pursuing business-writing excellence by its graduates, a technical college in Brazil teaches students to write academic papers since their freshman semester. The specific skills required to develop academic papers are very similar to business-writing competences. The greatest challenge is, by far, to motivate students, who tend to consider academic writing as something too detached from the everyday reality of a technologist. There are other problems, like plagiarism and lack of ability to structure and develop a piece of writing more complex than anything seen previously. Those issues are addressed by: proposing themes of students' interest, like a research on economic prospects of their hometown; having classes of ethics to demonstrate how negative plagiarism is; teaching case study methodology and Toulmin's method of structuring an argument. Students are heavily tutored and there are at least three deliveries before the final paper, but major decisions are assigned to each author, as per the principles of active learning. At the end of the process, a mini-convention, most students show to be happy with the results. Some papers find their way to "adult" conventions and the school board decided that each student must produce at least one paper per semester.

Introduction

Business writing competency includes a set of skills and mindsets like planning, goal setting, problem solving and thoughtful evaluation. Academic writing exercises all those capabilities, plus discipline in writing. Furthermore, since students' ability to write clearly and effectively affects academic performance across the curriculum, there is ample reason to start student academic writing right in the freshman semester, regardless of the challenges involved.

Carolyn O'Hara, in an article published by Harvard Business Review (2014), wrote a set of directions on how to improve business writing. The first advice is to think before writing, not to work out the thoughts as one is writing and to make structured pieced pieces of writing. No need to remind that academic writing is structured almost by definition. Other business-writing directive is to be direct, to the point, no circumventing. An academic article usually states its objective right at the start, and to utter the research question (or questions) is good practice. O'Hara also recommends avoiding jargon therefore selecting words carefully, what is necessary when writing academically. Guidance also includes revising drafts and keep sentences short and to the point.

However, the fact that academic writing provides tools for better business writing does not preclude the need for the learning of academic writing specifics. Hounsell (1988) called for attention to two significant aspects of academic writing by students: the need for students' acculturation regarding academic discourse and the importance of a proper teaching-learning environment approach, with special attention to the importance of the different forms of feedback in enabling quality learning.

Competencies

The tables below, based on a scheme created by Brzovic, Fraser, Loewy and Vogt (2006) show the competencies needed for good business writing and how academic writing fits into Business Communication necessary skills. It is reminded that competencies are behavioral traits (difficult to acquire, effective tools welcome!), while competences are functional /technical traits.

Table 1			
<i>Formal Competencies</i>			
Competency	Basic	Intermediate	Advanced
Written Communication	Create, proofread and edit routine business documents — in response to short, information-based situations — that are clear, courteous, concise and yet both complete and correct, i.e. workplace acceptable. Good academic writing praises conciseness and exactitude.	Compose, revise and edit business documents — in response to topical case studies — that are informative and well organized. Use rhetorical tools to make them at the same time logical and persuasive. The prime objective of an academic paper is to make a point, through an argument organized according to a structure.	Select appropriate rhetorical strategies and communication channels to persuade multiple target audiences to accept a business decision. This would include metadiscourse, not within the scope of freshmen instruction.
Information research	Write a memo report in which information obtained from multiple sources, including electronic databases, is summarized and documented. This is exercised very efficiently in research to develop an academic paper.	Write a persuasive recommendation report in which information gathered from multiple sources, including articles from electronic databases, is selected, documented, analyzed, organized and rhetorically balanced. Academic writing includes using as many data as possible to enhance persuasive capacity.	Write an analytical report on a chosen and narrowed topic: select, document, evaluate, synthesize and communicate complex information retrieved from various sources, including peer-reviewed articles from electronic databases. The more complex the academic paper, the closer the author gets to an advanced business report.

Active Learning

In a seminal paper on Active Learning, Boswell and Eison (1991) state that “students must do more than just listen: They must read, write, discuss, or be engaged in solving problems. Most important, to be actively involved, students must engage in such higher-order thinking tasks as analysis, synthesis, and evaluation.”

Active Learning is a set of strategies designed to involve students in “doing things and thinking about what they are doing.” This translates in an array of practices that can be summarized in three categories: Team Based Learning, Problem Based Learning and Project Based Learning. The development of an academic paper by a group of students uses Team Based learning and Project Based learning.

The Team Based Learning techniques are used, for example, when the students formulate the research questions, the research purpose and the way data will be used to serve the purpose. Teams meet within the class and do not leave until they soundly establish the research bases. Conclusion writing, abstract writing and introduction outlining are also developed as teamwork. In all occasions, the instructor provides on-the-spot guidance.

According to Krajcic and Blumenfeld (2006), “a project-based classroom allows students to investigate questions, propose hypotheses and explanations, discuss their ideas, challenge the ideas of others, and try out new ideas.” The Project Based Learning aspect of the academic paper development challenge comes by selecting themes that are meaningful to students (this will be discussed later in this article) and by making sure that students are “engaged in the inquiry process.”

Problems

Our practice in two community colleges, out of a network of 64 taught us that the greatest challenge is, by far, to motivate the students, followed by the difficulty in having them establish focus on what is being studied and keep such focus. Academic writing seems to most freshmen something detached from reality, full of rules whose point they do not understand. Furthermore, they do not see the relevance of the academic texts they are made to write. Plagiarism is also no less than a plague.

There is also a problem related to intellectual maturity: the students do not know how to put an argument together. Students also tend to write long sentences and to repeat themselves, especially when they do not develop a strong structure, another problem. According to Catt and Gregory (2006), “many students have difficulty achieving *text level* organization: structural weaknesses are evident, with some failure to sustain ideas logically and effectively.”

Another aspect that needs to be addressed is the challenge posed by academic writing to certain common-sense language assumptions. Working in a different context, Scollon and Scollon (1981) brought up the central language concern: after exploring interethnic writing issues in Alaska and Northern Canada, they wrote about the centrality of identity in knowledge construction. In the Brazilian case, there is a cultural tendency to a down-to-earth language approach that is oftentimes incompatible with sound academic writing.

Motivation

In order to tackle the one major problem, which is motivation, out of the several approaches tried, one has produced significantly positive results. The methodology can be summarized in two points: base the papers on a research perceived as meaningful (example: economic prospects of your hometown within the next 20 years) and have the students play an active role, taking their own decisions regarding the research paths and ways while being carefully monitored and duly instructed. The overall structure is based on Project Based Learning — PBL (Bender, 2012). Academic papers are assigned to students in courses both writing-intensive, like Business Communication and research-intensive, like Scientific Methodology. There is a centralized academic paper coordination

to help the instructors, since the activity is essentially multidisciplinary, involving at the same time research and writing.

The students are assigned themes, carefully selected to be meaningful to them. Before theme assignment, a brief background questionnaire is applied in order for the instructor to devise student profiles (like hometown, personal interests and expectations). The themes are picked without prejudice. For example, if a student is particularly interested in sports, a typical theme would be the feasibility of organizing an amateur soccer tournament between a few neighboring cities. A student that jokingly presented “women” as his main interest was given as assignment the production of an academic paper on how respecting women increases a man’s possibilities of success in life. Pairs or triples of students with similar backgrounds and interests can form teams, as per their will. There are two kinds of motivation: curiosity itself, induced by the theme selected, and preparation for the professional life, the subject of meticulously designed pep talk showing the students how important is to get to the job market duly prepared.

The Example Research and Paper

The paper taken here as an example had as theme to find the most effective feasible action to help a city in the area where the college is located to become a logistic hub and thereby attract businesses and generate jobs. The city has been a railroad hub between the 1890s and the mid-1960s, and experienced some decay after the major rail line was discontinued. It is still well located in the way between producing and consuming areas. Lately, efforts to improve the business atmosphere are concentrated in attracting retail buyers from neighboring cities to local shops. Nevertheless, local politicians and business leaders still talk about logistics, without performing any effective action.

Addressing Plagiarism

Plagiarism has been addressed along two lines: investigation and discussion. Each piece of writing by the students is verified through at least two plagiarism checkers and, if found, exposed. Specific classes on ethics discuss plagiarism as fraud.

At the beginning of the effort, one class on ethics was given and they quickly became two. Ethical issues are brought in the light of both utilitarianism and categorical imperative (Sandel, 2009), and the lack of any possible defense for plagiarism is thoroughly demonstrated.

Instruction and Intermediate Deliverables

Instruction is given in scientific methodology and rhetoric, both by the Business Communications instructor.

A case study methodology crash course is given right after themes are assigned, teaching the fundamentals of Robert Yin’s procedures (2013). According to experience, that methodology works well to help students keep the focus on their themes. Moreover, adherence to the method (with help by instructors) provides the structure Ganobtsick-Williams (2006) shows students often lack an innate ability to develop. By defining research questions, research purpose, data to be gathered and how data will be used the students acquire a grasp on the subject of their paper.

The research steps are listed as follows, along with corresponding student activities.

Study questions, also called the research questions. Since the research, for focusing reasons, is limited to case studies, the most frequent research questions deal with “how” and “why”. In our

example, the study questions were “why there seems to be not enough enthusiasm in the city for promoting it as a logistic nucleus”, “how can the city population become aware of the importance of establishing the place as a logistic center” and “what is the most effective way to start the effort.”

The first deliverable is the set of study questions and data to be gathered in order to have the questions answered. Each set is carefully analyzed by the instructor and discussed with the students. The discussion includes the ways to have the questions answered (books, academic papers, expert information, questionnaires, interviews) and the data the answers will provide. When decisions come up, they are made by the students, the “owners” of the papers.

The team assigned with the example research decided on those questions and devised a program of historical research, interviews with ordinary citizens, business leaders and politicians, both local and representing the whole State, and contacts for interviews and collection of information with leaders of the remaining railroad system, transportation companies and the independent truckers’ association.

Study propositions: not exactly what the researcher wants to know, but what he or she is trying to achieve. The second deliverable, short, consists of a report on the instructions received plus the statement of study propositions. It is common for the students to misunderstand the meaning of study propositions and come up with new questions. The way to deal with that is Socratic: to ask the students what they intend to accomplish with their research.

Unit of analysis: the early definition of the unit of analysis revealed itself very significant, since the students showed a tendency to drift from the subject being studied, in our example trying to cover other cities or other business opportunities. This is a key contribution to the acquisition of sound business writing: an exercise in maintaining focus.

Logic linking data to propositions: the best way to teach the students on how to handle this step is to come up with a simple question: what are you going to do with the data? This is a crucial stage in structuring and organizing the research and, notwithstanding the simplicity of the question on what to do with the data; it is a heavily tutored step.

This is the point when the instructor presents to the students a list of references (books and academic articles) on the theme. They are encouraged to do the reading prior to preparing the third delivery, which consists on detailing the unit of analysis and the detailing of the logic linking data to propositions.

After the third delivery is evaluated and corrected, each team is then asked to produce a research protocol, comprising theme, questions, propositions, data to be obtained, and a description on how the data will be organized to accomplish the propositions. The importance to sound business writing of the ability to make connection between data and propositions is fervently emphasized to the students. The protocols are graded, and the students unable to explain convincingly the linking of data to propositions are interviewed in another Socratic session.

The First Draft

At this point, the research tools are well understood and the research well planned. The instructor presents a list of books and academic articles on the theme and encourages the students to look for more references as they progress with their research. The execution phase starts, and the team organizes itself to obtain data and to organize them. The instructors remain available, but all initiative is left to the students. The first draft contains research methodology, data presented within a structure and conclusions.

The instructor revises the draft for consistency and verifies if a point has been made. In the research used as example, the conclusion called for the city to implement, on a regular basis, a trade fair of logistics, featuring equipment manufacturers, product suppliers and service providers, with workshops and debate cycles as part of the program. At some point, the students looked on their own for references on trade fairs and events administration. Other components of the academic paper, like introduction and abstract, are dealt with later.

Soundness of Argument

After the first draft is adjusted for consistency, proper references and the existence of an argument, the effort proceeds with argument analysis.

Argumentation is, like ethics, taught along two lines: one is Aristotle's (320 BC), which still works after 2400 years: the use of logos and pathos to construct an ethos and obtain adherence of an audience. Some material comes from Perelman's work (1958). The team is to analyze, with the help of the instructor, how convincing the argument is. In the example, logos comes from all the reasoning, pathos from the implicit improvement of the self-esteem of city dwellers out of the renewed importance of the place and, in this case, the ethos to be pursued is the ethos of the article author, that has to write as to establish himself or herself as someone worthy of trust.

The other line is the structure of argument by Stephen Toulmin, who devised a model sometimes called the argument layout. According to Toulmin, an argument has six components, represented in the scheme below and then explained as follows.

1. **Claim:** proposition that sustains states, denies or asks for something; objective argument, thesis. According to Toulmin, first step for a sound analysis. In the example, the claim is: the best way to start an effort for the city to recover its status as a logistic hub is to organize, in a yearly basis, a trade fair on logistics. This is the argument to be proven valid.
2. **Grounds/data:** facts or data that sustain the conclusion. They are the motives, evidences, proof, circumstances and reasons that support the conclusion. In the example, the grounds are selected phrases of the interviews with politicians, managers, businesspersons and ordinary citizens; history of the city as a logistic center; demonstrations of paths linking suppliers and consumers; demonstrations of insertion in supply chains; histories of similar fairs and their results.
3. **Warranty:** statements with implicit logic, often hypothetical, linking claims and grounds. In the example, the accomplishments by similar trade fairs and the business and political experience of at least some of the interviewees can be posed as warranties. This means that both the results attained by the similar fairs and the knowledge of the interviewees will have to appear in the paper, even though they might be absent from the first draft.
4. **Backing:** statements that limit argument strength or that propose conditions for the argument to be true. This is usually not subject to questioning. In the example, the backing is the use of a sound methodology and the credibility, for example, of the city secretary of commerce. To enhance backing, it could be interesting to include in the paper a two-line biography of the secretary.
5. **Qualifier:** Indication of conclusion strength, usually done through words like necessarily or possibly. Any conclusion is presented along with its strength or limitations. In the example, it can

be stated that the effort may come useless and the argument will cease to be valid if the trade fair is done without proper planning and proper resources.

6. **Rebuttal:** Counter-arguments or statements indicating circumstances when the general argument does not hold true. In the example, the argument will not be valid if the trade fair is a one-time event, rather than a yearly effort. Again, this is a point that has to be stressed in the paper.

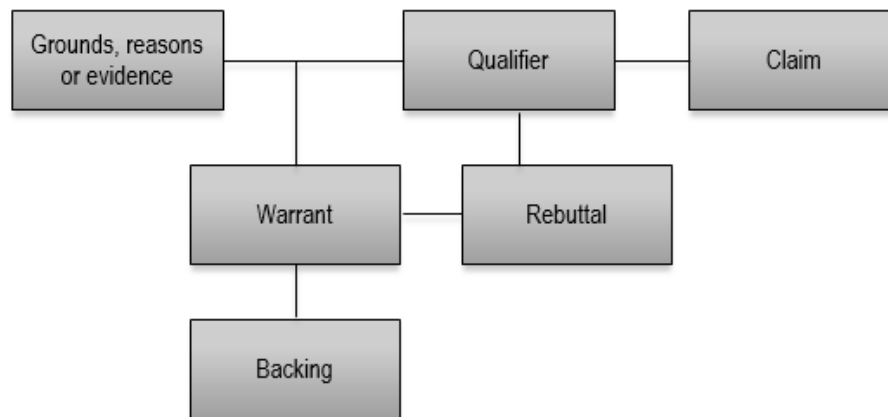


Figure 1. Toulmin's Layout.

Students are instructed and guided in order for their papers to have complete arguments, with all elements. This has been contributing contributed not only to have more consistent papers, but, rather surprisingly, to significantly reduce the number of repeated statements within the papers, since the points are made sharply enough to be necessary only once.

A written analysis is not required. Instead, the teams relate the findings and additions to the paper in interviews with the instructor.

The Final Paper

Only after all those steps, the students receive formal instruction on the structuring and formatting of an academic paper. They are instructed on how to write a three-language abstract (Portuguese, English and Spanish), an introduction and are invited to write three to four paragraphs summarizing what they learned from the specific readings they did for the paper. They usually need tutoring for that.

The rationale for such timing is the fact that after going through their research and writing, the students will better understand the reasons for paper-writing rules. Kind of strangely, they usually ask for a class on formatting rules rather than simply study the rules. Sometimes the students need help with page numbers and summary. Next deliverable is a second draft of the academic paper, finished and formatted. Notwithstanding prior instruction, students usually have trouble in differentiating introduction, conclusions and abstract, especially in writing abstracts that look more like introductions. They receive the annotated drafts and keep producing drafts until the paper is considered ready. Usually, the paper is finished after the second or third draft. Such activities help them develop qualities that will help them professionally: organize thoughts and present them concisely, understand precisely what they are asked to perform and focus on specified tasks. Finally, each team has to develop a PowerPoint presentation and, if they ask, they can present it to the instructor as a rehearsal.

Results

The results are in general gratifying for the students and for the instructors.

Academic writing has been found to improve writing ability in general (fact verifiable by comparison of last with first-semester writing by the same students), increases argumentation capacity and creates an awareness that one shall be prepared to prove whatever statement put in writing. As an overall result, self-confidence is also developed.

In order to verify if students agree with the benefits provided by academic writing, a short inquiry was made with 77 students who completed and presented their papers. The results are shown in the following plots and point to more success in having the students learn useful concepts and methods than in making them having fun.

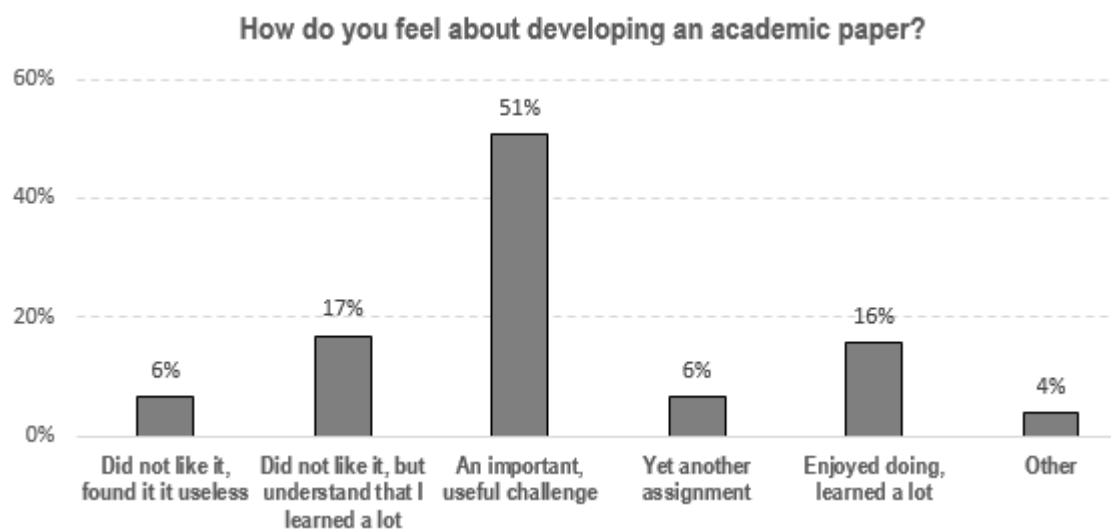


Figure 2. Acceptance.

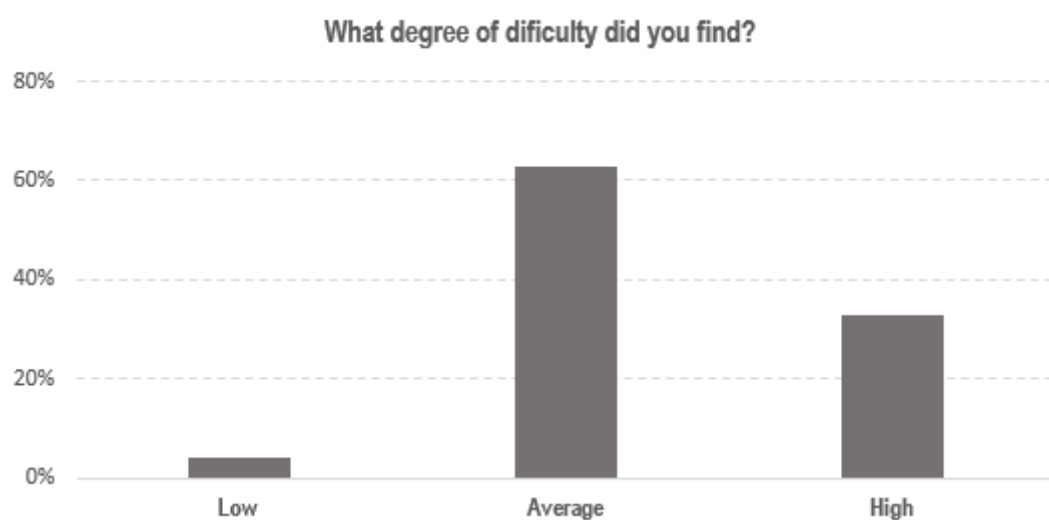


Figure 3. Degree of difficulty.

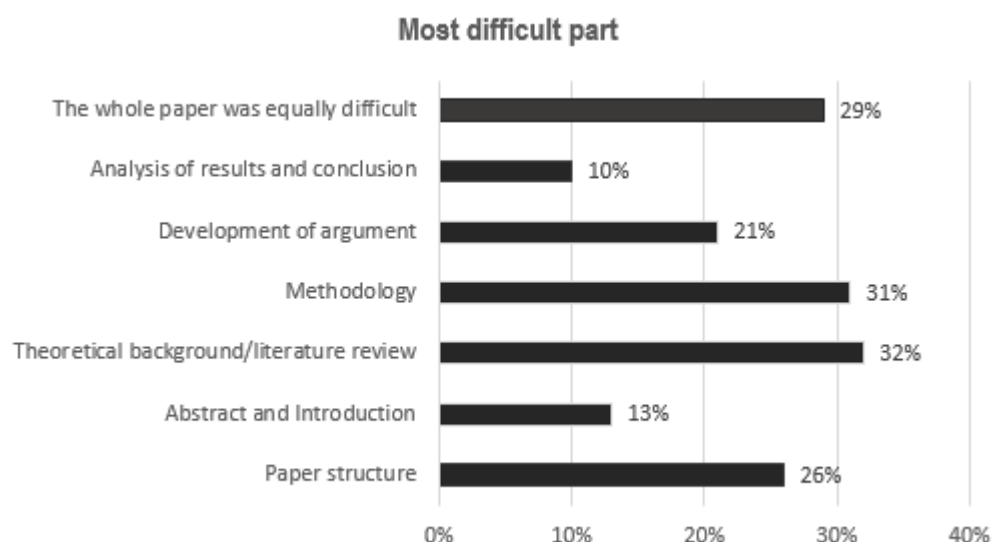


Figure 4. Hardest part of the assignment.

In short, students did recognize that a lot of effort has produced worthy results. No particular aspect was termed as most difficult by a sizeable majority.

Shortcomings

After so much tutoring and research, the papers, as expected, do flow, present logical coherence and completeness. However, the very fact that theory starts to be studied well into the research effort (this is made on purpose for the students to know why they are looking into the theory) the papers come out with few quotes. The example used was some kind of exception, since the students themselves decided that they had to know more about trade fairs.

The other point that fell a bit short of the target was the winning over hearts and minds of at least an overwhelming majority of the students. Around 12% considered the effort as a burden like any other. Not surprisingly, the best papers were authored by students who were truly enjoying themselves while developing the academic paper.

The Icing on the Cake

A mini-convention is held for the papers to be presented and graded by a panel of professors, both from the college and from other institutions. The audience consists of fellow students, family, professors and, in some cases, authorities like city council members who might have helped students with information. There is some solemnity to the mini-convention, with details like an as-lavish-as-possible coffee break and formal attire. Authors of the best papers are encouraged to submit their pieces to gatherings of undergraduate research and “adult” conventions. A few have been accepted, presented and found their way to proceedings. They will appear very nicely in recent-grad résumés.

The research shown here as example was presented to an audience that included three city council members and the Secretary of Commerce himself. The team was invited to repeat their presentation at the City Chamber of Commerce.

The College Board decided that students would have to present papers in every semester, except for the last two, when they will be busy with their graduation papers. Each program has one or such assignments per semester.

Exchange

Exchange of information by teachers comes naturally within a network of around 60 community colleges owned and operated by the State of Sao Paulo. It holds a number of events every year, like symposia, seminars on active learning, gatherings with various degrees of formality and meetings on scientific research. There is a consensus on the need to improve the papers resulting from undergraduate research, and the central board indicated that people involved in the academic writing effort herein described would be asked for a similar program tailored to undergraduate research.

Several colleges from the network have their academic writing programs, and the work depicted here stands out as the one aimed at producing “real” papers, not mere exercises.

Conclusion

This effort has been going on for six semesters, and the methodology has constantly evolved. With time, hours of tutoring per paper increased as well as the number of deliverables during the development of each paper. Approximately three quarters of the students treat their academic paper assignment very seriously. For the others, it is only a piece of hard work to be dealt with. In other words, not every heart and mind has been won.

Plagiarism remains a plague, to be fought with all possible weapons: convincing, formally with classes on ethics and informally by talking, investigating and exposing. Although investigation appears to be effective, plagiarism unfortunately seems to stem from some kind of culture: it happens semester after semester, and not only with freshmen. After much debate, punishment remains the same: plagiarists are exposed and given a very short time to produce legitimate work.

Tutoring appears to be concentrated on devising research questions and determining data to be pursued, evaluating and discussing the research protocol, revising the first draft and preparing the draft of the final paper. All other activities are well taken care of by the students themselves, although instructors are always available.

Students, as mentioned, not always like the assignment, the deliveries and the sweat, but teachers of all departments are no less than enthusiastic about it. Informal research showed that all teachers (meaning 100%) consider that the development of real research and production of a serious academic paper provide an enhancement in intellectual maturity visible to “the naked eye.”

The idea of using Toulmin’s argument layout to verify completeness and consistency of arguments worked extremely well, seems to be applicable to research in general and can be investigated in a broader context.

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