

# Can you learn to write better?

## Part 2

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### Abstract

Though writing about ideas is not as much fun as discovering new ideas, I think that the two processes are more deeply connected than most students think. I think that students should be encouraged to write essays and that professors should do a better job of explaining why that writing is valuable because the important rules of writing are really rules of logic.

Some students may complain that things written for a class differ from things written for a boss. Though the audience has different expectations, they share the common desire to learn something new and that something new is found by research. I also discuss a thing about writing that literature teachers seem to be especially uncomfortable with: arguments based on data.

Thanks to all of the teachers who suffered through my writing over the years, and especially to Richard Arnott who showed me how to do better. The paper has also benefited from discussions with Jane Londerville and Paulette Padanyi. Comments and suggestions will be welcomed and can be sent to Department of Marketing and Consumer Studies, College of Management and Economics, University of Guelph, Guelph ON Canada, N1G 2W1 or to panglin@uoguelph.ca. The most recent version of the papers can be found at <http://www.uoguelph.ca/~panglin>

Being able to write in plain English has been estimated to save hundreds of millions of dollars.<sup>1</sup> But, learning to write better is a constant battle. I wrote the two parts of this paper in hopes of seeing better writing. Part 1 focusses on the mechanics of writing while this part focusses provides a context to show why those mechanics are important.

I want to focus on the connection between writing and research. The connection may seem obvious: research provides the raw material for the writing. A more important connection is not obvious. For example, when I was an undergraduate, I wrote to get a grade. The grade might be high or low but I always thought that it was the essay that was being graded. As a professor, I now have a better understanding that each essay is produced by a research process and that, over time, it is the research process that is being tested. A student may get lucky once or twice but it is hard to be lucky consistently. A student who can manage the research process better is able to write better essays because their research produces a better or more complete understanding. Understanding the connection between good research skills and good writing explains why this part tends to focus on logic and plagiarism.

Another misunderstanding about a classroom essay is that, in isolation, writing is not seen as part of a dialogue. Students may not understand that the correctness of ideas which are familiar today used to be hotly debated and that today's ideas will be debated before being replaced by future ideas. These debates are rarely seen in a textbook or in a classroom because some students have enough trouble learning today's ideas. Research offers a peek at that debate and to face the confusion that necessarily comes with new questions.

Research can be unsettling since no answer may be obvious or apparent. When entering a university, many students seem surprised to learn that a university education does not focus on taking in more facts to be memorized. Confusing facts and ideas is a common problem in all scientific endeavours but two high profile examples may suffice. In the debate over teaching creationism/intelligent design in American high schools, there is a tension between presenting the facts of evolution (e.g. is the fossil record complete? how many generations does it for a monkey to become a human?) and presenting science as a process which proposes new hypotheses and tests them with facts (for example, when the previously dominant theory was replaced by evolution or the current debate on whether evolution is a gradual process or occurs in jumps) (Rennie, 2002).

The second example is Frankfurt's (2005) book "On Bullshit". It is a short book written by a philosophy professor who is unhappy about the quality of public debates. He probably has a preferred side in many debates but his book is not about whether his side was winning or losing. He is also not especially unhappy with people who lie, since liars believe that the truth is valuable and want to change what is believed to be true. His anger was directed at bullshit artists because we no longer live in an agricultural society where adding manure is productive. Being

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<sup>1</sup> I have already broken one of the rules from my checklist in Part 1: using the passive tense. In this case, I prefer the vagueness of passive tense because I am citing somebody else's data and that data is from the Web without a clear citation (<http://www.wizard4words.com/stylewriter-demo.html>, accessed Sept 14, 2006) .

able to distinguish truth and lies is simpler than separating truth, lies and bullshit but the latter is important in a knowledge-based society because knowledge, and especially new knowledge, is not a commodity that can be downloaded or Googled. Unlike new data and new facts which can be input into a spreadsheet or manipulated using a toolkit recently downloaded from the Internet, processing knowledge requires input from the consumer. Processing knowledge identifies whether the number computed by that spreadsheet program is an answer to any interesting question.

An attitude of not caring may be familiar to a 20-year-old university student writing an essay for a class because the responsibility associated with an essay ends at the end of the term and the student may not have wanted to take the class in the first place. In the real world, the report may be written because the author is looking for permission to implement its recommendations. Then, the author will experience the consequences of the implementation. Thus, unless the author is really good at bullshit *after* the fact (in order to transfer blame to somebody else) these consequences create an incentive to know the true situation (for both the author and any intended future scapegoat).

Part 2 is not as focussed as Part 1 of this paper because this part discusses a more diverse set of issues. The first half discusses more practical issues while the second half focusses on the conceptual issues that precede the actual work. The common theme is that writing should be clear and convincing and, to accomplish this outcome, you must have a good understanding of the research process. First, I discuss how to write about data. Even if you were a good writer in your high school literature class, writing about Shakespeare probably did not prepare you to write about a sales of kumquats for your quarterly review. Fortunately, avoiding the errors and confusion associated with data uses the same kind of ideas associated with other research endeavours. In both cases, a good explanation gives context and meaning. Second, I discuss two styles of writing that are used less often. They are good or bad depending on how effectively they can communicate your idea to your audience.

The third section of this Part starts with the question: how much explanation is enough? It is always possible to do more research and to write more. In part, this fact explains why the experts that you read during your research know more than you know now. Changing this fact of life, through your own research and through independent learning, will make you the expert that others look to in the future. This future benefit explains why taking the easy way out, plagiarism, is a cheat in many senses of the word. The fourth section of this Part offers a different perspective on the issue of plagiarism since, in my opinion, not all of these senses are widely understood.

### **Using Data**

Numbers have an extra importance because they are concrete. But many people are uncomfortable with numbers and become confused when other people use numbers (Best, 2004; Paulos, 1989; Huff, 1954). University-level statistics classes offer many examples of how numbers should be used or can be misused. Without discussing the log-Normal distribution or the mechanics of computing an F-statistic, this section notes some ways to make an argument more convincing to more people by combining numbers and words. Eventually, you may start to become a little bit dissatisfied with a simple discussion of averages or extreme examples and you

may start to understand why the log-Normal distribution is useful or why computing the F-statistic correctly would be better.

I suggest that there are two types of writing about data: description and explanation. Description is important when conveying a sense of the problem. To a consultant hoping to be hired, or to a student looking for a first job, being able to describe a situation in great detail helps to establish credibility and to convey confidence that they know what they are talking about. Description can fill time during a presentation or fill space in a report.

Lots of people can describe about a problem<sup>2</sup> but giving an answer, and explaining why that answer is the right one, is more valuable. The key difference between description and explanation seems to be in *how* the data is used rather than *what* data is used. A description answers the question “What happened?” while an explanation answers “*Why* did it happen” plus the more substantial question “Why did something else *not* happen?”. Consider the question of poverty in Canada. A description would include a 45 year history of globalization, of macroeconomic conditions and of the social environment. It could suggest, possibly using emotive language as a substitute for evidence, that the level of poverty is correlated with these things. Even if true, some things are *always* true, like a fixed cost: they are part of the description that is not part of any explanation. An explanation converts an argument based on correlation into an argument of causation by showing that if the conditions had been different then the level of poverty would have been different.<sup>3</sup> In this way, an explanation looks forward to indicate how the level of poverty would change if the conditions (or government policy) changed.

An explanation connects the variables. Explaining the connection proves that the connection is relevant and leaves nothing out. An explanation focuses on the operationally relevant aspects so that, if you are writing to solve a problem then the solution uses that connection. Providing a good explanation reveals the level of your awareness. On the job, awareness indicates that you need less oversight and that you are ready to advance professionally. As contrast, a description which is true can be bad because it does not help make the connections, because it makes connections to things which will not be part of the solution, or because your reader does not learn which distinctions are critical.

### *Mechanics*

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<sup>2</sup> Being able to talk about a problem does not necessarily mean that the talking is accurate. Krugman, who can write well in several styles, notes that a skillful writer can be persuasive even if they are not necessarily right. See <http://www.pkarchive.org> and search for the articles on “The Accidental Theorist” and “Ricardo’s Difficult Idea” for an analysis of different styles of arguments concerning issues in international trade.

<sup>3</sup> Note a key distinction: instead of tying poverty to some or all of these possible causes, an explanation tries to determine how much each cause contributes to the overall effect. Statistical methods reveal that these contributions need not add up to 100 percent; there may be residual error that is unexplained.

Lots of data is available through government or confidential commercial sources. More data on more topics than you can imagine are available through the University's library at <http://tdr.tug-libraries.on.ca>. Data can be handled in two ways. The more common approach is to use tables and graphs. Most of this section offers advice on this approach. This section ends with a short discussion of formal statistical analysis.

A table is a straight-forward reporting of a set of numbers. Every table, and every graph, should have a descriptive title. Many data sources, especially government sources, require an acknowledgement of the source as a condition of use. Showing that the data comes from a high quality source also makes any conclusions drawn from the data more convincing. Failing to provide a source suggests that you collected the data as part of your research, which would be impressive. But, if you collect the data you also need to convince the reader that the data are of high quality, which is what a consultant is trying to profit from but may be beyond the expectations of a student.

If the data are used extensively then it helps the reader to start with a simple summary, usually the mean of each variable plus possibly the standard deviation, maximum value, and minimum value. Beginners find it spooky how an expert can combine the information in a simple summary with their background knowledge to overcome a puzzle in the analysis. A short discussion of the summary data also serves as description before offering an explanation.

A graph can be powerful alternative way to convey a message. Different types of graphs are appropriate for conveying different types of ideas. A scatter diagram shows the relationship between two random variables. A line diagram or a bar chart shows variation in a direction, such as over time or from east to west. Pie charts or stacked bar charts show how the fraction of some total, such as expenses or market share, is divided among categories. Surface or contour graphs can show how variation in two variables affects a third. With practice, your graphs can be fancier, e.g. "box and whiskers" diagrams, or you can modify the original data and create your own types of graphs, e.g. calculating a moving average to reduce the effects of random noise and then plotting it. Colour adds to the power of a graph but, beware, that beautiful figure that you carefully prepared in colour changes once printed in black and white.

Each figure should have a title suggesting the content and a line indicating its source.<sup>4</sup> For more advanced advice, the best source on information on this topic is Tufte (1984, <http://www.edwardtufte.com>). An older and shorter book devoted to the abuse of data, either accidentally or deliberately, is Huff (1954).

Copying an image, such as a table or graph, from the web or scanning an image from a book is becoming easier. Each figure should be printed big enough so that the smallest writing can be read. (If it cannot be read then how can including that image in your writing help?) Many sites and sources have copyright restrictions and you should be careful. As with the discussion of plagiarized words, if in doubt about proper practices, ask.

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<sup>4</sup> If it is a picture taken by you then you should humbly brag that you took the initiative to collect this bit of useful information.

## Style

As noted in Part 1, a good style helps to convey ideas convincingly. A bad style either makes those ideas hard to understand or, in a worst case, misleads convincingly.

The worst attempts at “data analysis” confuse anecdotes for a representative data set and confuse story telling for analysis. An anecdote is useful but dangerous. It is useful because the best anecdotes are memorable and good writing aims to be memorable. This fact may explain why business gurus and politicians like to use them. An anecdote is dangerous when it is an isolated and unrepresentative example. Without a context, an anecdote can convince you that a wrong idea is right.

Fortunately, figures, tables and data can mislead for the same reason that any other form of communication can mislead: poor explanation. For example, a simple line graph is often used to *suggests* that a change in the variable on horizontal axis causes a change in the variable on the vertical axis. This suggestion is wrong if the direction of causation is the reverse or if a change in a third variable causes a change in the two apparent dimensions. More generally, any two variables are connected in one of only three different ways:

- cause and effect
- two effects related by variation in some deeper cause (e.g. “spurious correlation”)
- two causes which are independent (i.e. any pattern is an accident and a “coincidence”).

A description misleads when it confuses different types of relationships. An explanation tells you how to organize the available data into one of these three relationships. So, your research is trying to determine whether an important third variable deserves consideration.

Some people use a poor style of presenting data. I find that media reports have a disturbing habit of mentioning as many numbers as possible to give an air of importance. For example,

- What does \$100 million mean? It is less than some Chief Executive Officers (CEOs) make in a year. It is a huge multiple of the hourly minimum wage. It is a small fraction of Gross Domestic Product (GDP) for a small high income country like Canada.

- What does 50 percent mean? A 50 percent market share of the clothing market in China is a big number. A 50 percent growth in sales by fishers in Lake Ontario is important to few people other than those fishers.

Providing a scale and a context is important for many problems because most businesses would prefer to obtain a 50 percent market share but may or may not be willing to spend \$100m. A clearly written explanation makes the importance of the numbers obvious by relating each number to other numbers. Miller (2004) offered a much more advanced discussion of the problems and solutions associated with writing about numbers, with a checklist at the end of each chapter.

Much of this paper is trying to convince you to develop a rigorous research process to understand simple problems. It is easiest to learn the process when working on a simple problem but it is vital to have learned a process by the time you start organizing the data in a more complex environment with ten or a hundred variables. Rigour helps in uncertain environments where the outcome can change, even without a change in the conditions, because it is random. Rigour will also help you when a trade off is an essential feature of the problem, such as in any

decision-making problem. Sometimes, the advantage of a clear explanation is revealed by its ability to show when a critical bit of information is omitted.

Analysing complex large-scale problems may require formal statistical methods. Because the courses which teach such methods are widely hated by students, few students become skilled in them. I suggest that, even if you do not become skilled, you should become familiar with the statistical ways of talking about uncertainty. Understanding the concepts of mean and variance (or standard deviation) is only a beginning. The existence of uncertainty implies that an explanation is not considered either true or false. Instead, there is a “degree of confidence” that a particular explanation is true and more than one explanation may be true with some probability. With practice, it is possible to restate an argument about cause and effect to say that a change in X causes a change in Y *on average* or to say that if X= 10 then Y is greater than 5 *with a probability of 50 percent*.<sup>5</sup>

Some students become more confused because different professors, even different professors in the same department, prefer to analyse data in different ways. Some professors prefer to start with a clear organization of the data, called a “model”, while other professors prefer to “let the data speak” without prior organization. It is dangerous to let the data speak in economic problems because economics classes are full of examples of distinctions that, once remembered, could reverse the conclusion: e.g. the evidence may suggest that consumers act irrationally by buying more when the price rises until you remember to check for a shift of the demand curve (did consumer income increase? did the quality of the good being sold increase?). Remembering these examples may help you to find a good explanation. Essentially the solution is to distinguish “cause” and “effect” and making this distinction is hard in complex environments with many complementary activities and feedback effects.

### **Other writing styles**

Most styles of arguments are direct: A is true and A leads to B which leads to C. Part 1 of this paper indicates the three most popular styles for developing such arguments: school teacher, journalist and politician. This section notes a couple of other styles of arguing that can be convincing if used carefully: story-telling and quantitative vs. qualitative.

For certain kinds of reports, an indirect story-telling style may be better than a direct style. McKee and Fryer (2003) and Guber (2007) argued that telling a story can motivate an audience. McCloskey (1990) argued that most academic analysis by economists is actually a form of story-telling where a story is convincing to some people, even if it is not exactly right, because it is shared. Telling a story can reveal a weakness in an old way of thinking and suggest new way of thinking (often the hardest part about convincing people is to convince them that the

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<sup>5</sup> The concept of uncertainty can be applied to more than just measurement. Intellectual advances over the last 30 years have identified new strategies for dealing with risk and with risky environments, new ways of looking at old problems and a better understanding of why commonly-used strategies may not be as good as hoped. This kind of thinking is applied whenever somebody uses phrases such as strategic risk and “Nash Equilibrium”, financial derivatives, real options, option value and the “Black-Scholes Formula”.

old answer is not as good as they think it is). Telling a story can also be the starting point for a longer, unavoidably-obscure discussion. I have trouble writing in this style because, when used by a lazy writer and with little warning, a story-telling style can change into the weaker political or journalistic styles.

A good style aims to connect the writer to the reader and different readers find different styles convincing. Some people prefer to be convinced with lots of numbers while the same style give other readers a headache.<sup>6</sup> “Quants” (like me<sup>7</sup>) find a quantitative argument more convincing because it is precise and makes crucial distinctions. “Non-quants” (this euphemism is waiting to be replaced by a better term) prefer a style which recognizes things that are relevant but hard to measure quantitatively. Certain aspects of business tend to attract more quants, e.g. finance and accounting, while other aspects attract non-quants, e.g. human resources. An interesting comparison can be found in corporate annual reports: compare the conclusion revealed by the president’s statement with the conclusion revealed through the financial statements. Since most audiences contain a mixture of quants and non-quants, you may want to use a style that combines both quantitative and qualitative arguments.

A few students omit parts of arguments and use a style comparable to what they see established experts use. Essentially, this style is based on authority: “Trust me! I know what I am talking about.” Students cannot rely on credentials or experience to avoid tough questions. In fact, a student may be writing an essay in a course *because* they do not yet know exactly what they are talking about and researching the essay is the chance to learn what they need to learn. A written essay or business report differs from other types of communication because most of the intended audience will not read it with the author available to answer supplementary questions. Thus, writing the arguments in detail helps the audience and, ultimately, the student.<sup>8</sup>

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<sup>6</sup> An extreme version of the debate between these styles can be seen in the criticism that the arguments used by professional economists are *excessively* mathematical. To simplify a lengthy and continuing discussion, the critics claim that abstract mathematical symbols omit important ideas about human behaviour. In response, George Stigler (Nobel Prize Winner in Economics, source: <http://netec.mcc.ac.uk/Jokey>) said “Mathematics has no symbols for confused ideas.” Some economists follow advice that is about a hundred years old: Alfred Marshall suggested that mathematics should be used first, to make sure that the idea is correct, and then the explanation should be written precisely without the use of mathematics.

<sup>7</sup> To be clear, though I like to use quantitative tools in my own research, my comments on items returned to students should indicate that I am fairly tolerant of alternative *styles* of arguing (other than poor grammar). Whether or not something is written in a good “style” differs from whether the arguments used in that thing are complete and whether they are clearly stated.

<sup>8</sup> Relying on this style to be convincing is like thinking that becoming fat will make you a good sumo wrestler. While the best sumo wrestlers are big, you should not forget that many big wrestlers lose (uncertainty is an important concept in many ways, isn’t it?). The best wrestlers have other skills that they can use when needed.

As noted in Part 1, none of these styles dictate the use of academic-sounding words or industry-specific jargon over plain English. Complex explanations should be used when the complexity adds insight. For example, though it is possible to be clear without using the terms introduced in a classroom, economic instructors expect writers to use economic terms because the terms precisely highlight important and relevant distinctions: e.g. does “cost” mean “total cost” or “marginal cost” or “opportunity cost”? does “demand” mean “taste”, “quantity demanded” or the “whole demand curve”? The basic criteria of a good style is that it should help to convince.

### **How much explanation is enough?**

What you write is beautiful but, is that beauty only in the eyes of the beholder (i.e. you)? The real purpose of writing is to learn new ideas and, as opposed to what happens during a lecture, to have you learn the research skills and the problem-solving skills that enable you to learn independently. This learning includes learning what your professors left out of the lectures, or never knew. This learning will help you to deal with the increasingly complex puzzles that you will encounter outside of a classroom. But, if it is always possible to learn more, how much is enough?

From my perspective, writing is a process and each paper is a sign of how well you can manage that process. I am looking for thoughtful analysis since the problem that you have been asked to write about is not a simple one. I am not looking for a list of advantages and disadvantages since a list is only a beginning. I am not looking for an ex post rationalization because it is usually an isolated explanation based on unknowables. An ex post rationalization may also ignore aspects that are significant when a decision is being made but are known years later. I am not looking for something that *sounds* important.<sup>9</sup> I am not looking for a discussion of what *could* be true, unless you argue that only one thing could be true. I do not care about your opinion, unless you tell me the basis for that opinion. The ability to write a good essay provides an answer. It will help you to identify the basis of disputes and a good answer may identify a way to resolve them.

In my experience, most students provide too little explanation and expect the reader (i.e. me) to add too much. If an idea is obvious then it can be explained quickly in a sentence or two. If the idea cannot be explained so quickly then it may not be as obvious as you think. The fact that a professor asks a minimum number of words or pages does not imply that it is a make-work project. Setting a minimum seems necessary since enough students, like me when I was an undergraduate student, live with a time constraint that creates an incentive to write as little as possible.<sup>10</sup> My responses are: 1/ since whole books have been written on anything that are asked

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<sup>9</sup> Do not do what bad reporters do when they try to sound important with little information. For example, a bad reporter might say that “Person X has been *linked* to Al-Qaeda”: What is the nature of the link? Is it close or distant? Are *you* linked to Al-Qaeda in some way? [http://en.wikipedia.org/wiki/Six\\_degrees\\_of\\_separation](http://en.wikipedia.org/wiki/Six_degrees_of_separation)

<sup>10</sup> A by-product of setting a minimum may be that some students have become quite skilled at filling space with little content. An excellent example can be found in the love letter

to analyse, how could 10 pages represent an understanding?; and 2/ when you become a manager in the real world, would you want to hire somebody who is only willing to do the minimum?

Providing a complete explanation is also a good habit because it prevents you from quitting too early: e.g. an answer may be true but incomplete or an answer may be true but only under some conditions. As training for the future, you should learn to not be satisfied with simple answers and you should learn to ask better questions. Most of what is written in your textbooks has been hotly debated and you have the time to be able to debate such questions without the kinds of time constraints encountered in the real world. In 10 or 20 years, asking questions and accumulating the best answers will make you an expert in your field. At university, you can ask questions to find new answers to new and old questions.

Your classes identify arguments that have proven useful to solving problems in the past.<sup>11</sup> The lectures and discussion show which features are important and which are less important. It can take *you* a long time to learn how to use these arguments precisely just as it takes a professor a long time to become a professor. Traditionally, writing is the format that university professors and high school teachers use to allow students to practice, on their own, what they learned and to evaluate the research skills of students.<sup>12</sup> Reading what somebody else has written gives the reader time to think and to identify things that may have been overlooked. Good students learn to be dissatisfied with old answers to old questions.<sup>13</sup> They use their research skills to find a better answer or to ask new questions.

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printed in the *Annals of Improbable Research* (Lederman, 2005, <http://improbable.com/pages/airchives/paperair/volume11/v11i5/love-letter-11-5.pdf>).

<sup>11</sup> Philosophy departments at many universities offer classes in formal logic or critical thinking skills. Many students find such classes useful because they identify the steps needed to create a deductive-style argument on any topic. Such courses may be the only time that a student identifies the many styles of bad arguments ([http://en.wikipedia.org/wiki/Logical\\_fallacy](http://en.wikipedia.org/wiki/Logical_fallacy)) and learns why certain popular styles, such as *post hoc ergo propter hoc* ([http://en.wikipedia.org/wiki/Post\\_hoc\\_ergo\\_propter\\_hoc](http://en.wikipedia.org/wiki/Post_hoc_ergo_propter_hoc)), *ad hominem* ([http://en.wikipedia.org/wiki/Ad\\_hominem](http://en.wikipedia.org/wiki/Ad_hominem)), False Dilemma or ([http://en.wikipedia.org/wiki/False\\_dilemma](http://en.wikipedia.org/wiki/False_dilemma)), are deceptive.

<sup>12</sup> There are other means of exposition, such as debates or video presentations. However, since most business discussions start or end with a written document and since most professors are not trained to evaluate the “grammar” of a video presentation, I focus on the written form of communication.

<sup>13</sup> The worst mistakes in business occur when a company experiences something that it thought could never happen. For example, IBM dominated the market for “mainframes” until Microsoft and Intel showed something different. The Big Four auto manufacturers (now the Big Three, soon to be the Big Two(?)) dominated their market until the Japanese auto manufacturers showed something different. Polaroid cameras were very popular until 1-hour photo shops became common; then everybody involved with film suffered when digital cameras showed something different.

## Plagiarism

Many professors are offended by students who try to plagiarize. Partly, professors are offended because they are interested in the research process and plagiarism violates that process. Partly, good professors take offence since they work hard to set up a learning environment and then the student takes the easy way out. Even if not detected, the plagiarist suffers. Submitting a plagiarized article is similar to having the pictures to prove that you travelled through Europe but not learning about world politics from your roommates at the youth hostel located in a castle in Luxembourg, not knowing what it feels like to get drunk on Guinness in Dublin, and not sensing the sun or wind as you get an all-over suntan on a nude beach.<sup>14</sup>

Some students respond by arguing that they are under incredible time pressure<sup>15</sup> (would that argument suffice in a business context? would it suffice if you were the person being given this excuse?) or that the exercises on which they cheat are not important (since I choose my exercises to help you learn or to practice variations on what you have learned, this argument carries little weight with me). Responses to other arguments can be found at <http://www.academicintegrity.uoguelph.ca/>.

More importantly, these responses try to excuse a poor research process by focussing on a single output from that process. The fact that the output was not produced by its supposed author is a symptom. The more important and more practical problem is that the research process used by these students is flawed and has not been improved. In the upper years of university, and after leaving, the consequences of this flaw become more serious since one is expected to find new answers to old and new questions.<sup>16</sup>

## Concluding Comments

The two parts to this paper discuss writing. Part 1 focuses on how to write better. Part 2 focuses on the broader question of why each individual should want to write better. Part 2 links the specific task of writing to the broader issue of learning at a university. It may help to know that good writing is self-evaluating: the process of writing and rewriting forces you to anticipate

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<sup>14</sup> Youth hostel, <http://www.youthhostels.lu/e/Hollenfelsauberge.html>; Guinness Brewery, <http://www.guinness-storehouse.com>; best topless beaches as ranked by *Forbes* [http://www.forbes.com/travel/2006/01/12/topless-beaches-resorts-cx\\_sb\\_0113feat\\_ls.html](http://www.forbes.com/travel/2006/01/12/topless-beaches-resorts-cx_sb_0113feat_ls.html).

<sup>15</sup> To see the seasonal patterns in the number of searches on Google for the terms “term paper” and “college essay”, go to <http://www.google.com/trends?q=term+paper%2C+college+essay&ctab=0&geo=all&date=all&sort=0>.

<sup>16</sup> Or, to give a more business-oriented perspective, a student may spend many hours on an essay and feel that they deserve compensation for this time in the form of a high grade. But many students spend a lot of time. Grades should be based on output instead of input and the connection between input and output is the research process which was discussed above. And, to continue the business perspective, the link between input and *immediate* compensation becomes vaguer outside of a university.

possible objections to your beautiful idea. Thus, the writing process is connected to the research process which creates that beautiful idea. This connection is true both in a classroom essay and a billion-dollar business deal. This connection may help to understand the comment in the introduction to this part: that the use of plain English has saved hundreds of millions of dollars.

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