

Data Laundry-Listing: When Student Writers Lack a Foundational Argument

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As an academic writing tutorial specialist working one-to-one with students at a Japanese university, one tendency I have observed in numerous papers is the “laundry-listing” of data. Students often marshal out a cornucopia of discrete data without connecting them to each other or to a concrete thesis statement, instead posing their research as a broad overview that aims to ascertain the characteristics of a given phenomenon. When asked during tutorial sessions what conclusion they would draw from their data, students are often at a loss. But with reams of data collected over many grueling hours, students have the unfortunate choice of either omitting a strong thesis statement and making a laundry list or ditching copious data in order to draw a concrete conclusion that may well rely on the sharpshooter fallacy anyway. This paper looks at the tendency of data laundry-listing by introducing several specific examples culled from my experience working with students at the Mei-Writing Center of Nagoya University. The examples suggest that data laundry-listing is a result of the lack of a coherent thesis statement at the outset. Moreover, an effective solution to this tendency is to reach students early and compel them to articulate an explicit thesis statement before completing the collection of data.

1. Introduction

In recent years, there has been a push toward integrating North American and European academic practices at Japanese universities as a means of attracting international students and offsetting declining domestic enrollment. In 2012, an in-house panel on enrollment reform at the University of Tokyo approved plans to change the beginning of the school year from spring (which has been the tradition) to fall to align itself with the academic year of Western universities (Donald 2012). In 2009, Japan’s Ministry of Education launched the Global 30 Project in which thirteen major universities, including Nagoya University and the University of Tokyo, attempt to draw in international students. Participating universities go as far as to offer degree programs conducted solely in English. Likewise, the Komaba campus of the University of Tokyo started PEAK (Programs in English at Komaba) in 2012, the first four-year undergraduate curriculum to be offered entirely in English (Tanikawa 2012). The implications are clear: for better or worse, the English language maintains a firm grip on academics around the world today. Clearly, Japanese universities recognize this and are making efforts to accommodate students who seek recognition of their academic work internationally, which means publishing in English. Since students need to publish in English, it is incumbent upon Japanese universities to teach them how to write publishable papers in that language.

The majority of students enrolled at Japanese universities are Japanese, obviously, or are from other countries in Asia, and therefore English is their second language. This is of course a major obstacle to publishing, but another important factor in this is a lack of training in

Data Laundry-Listing

English academic writing practices.¹ Indeed, many of these students have had no specific training in English academic writing prior to beginning a graduate program. This puts graduate students at Japanese universities at a disadvantage to students from North America and Europe. Thus, in order to level the playing field for students who face the disadvantage of having to write in a language considerably different from their own in order to contribute and disseminate their research throughout the academic world, it behooves Japanese universities to ensure that these students' writing meets the standards of academic writing in English.

One central issue that arises in academic writing in English at Japanese universities is the deployment of thesis statements. Even though students who have undergone a Western education may struggle with this requirement, it is likely that they are at least familiar with it and can make an effort to provide a unifying idea in their academic writing. Students working in a second language who have little or no training in academic writing in English, however, may encounter this requirement for the first time upon entering graduate school. From this stems the risk that these students will embark upon their research project without giving due consideration to a unifying idea that can guide their argument.

When students begin writing an academic paper without a clear idea about what direction they want to take their argument, numerous issues will inevitably arise. One of them is "data laundry-listing," which happens when a person working on a research project has obtained copious data, but lacks a foundational argument to tie this data together and, as a result, marshals out a cornucopia of discrete data without connecting them to each other or to a concrete thesis statement. The purpose of this paper, then, is to describe how the issue of data laundry-listing arises and, based on this description, to offer a means of preventing this tendency. This paper relies on the experience of its author advising EFL (English as a Foreign Language) students at a Japanese university on their academic writing as a tutorial specialist at the Mei-Writing Academic Writing Center at Nagoya University. By introducing several specific, but nevertheless generalizable, examples culled from the experience of working closely with students at Mei-Writing, this paper illustrates how students who lack a foundational argument are forced into producing a laundry list of findings in order to complete their research paper. It also illustrates how this frustrates students and poses concrete problems that can diminish the scholarly value of their research. These examples will show that data laundry-listing is a result of the lack of a coherent thesis statement at the outset of data-collection. Moreover, this paper will argue that an effective solution to this tendency is to reach students early and compel them to articulate an explicit goal and thesis statement before they begin collecting data.

2. Mei-Writing Tutorials

Before providing example cases of clients of the Mei-Writing Center falling into the trap of data laundry-listing, it is important to provide some context, so I will begin with a brief description of what Mei-Writing tutorial sessions entail. As a tutorial specialist, I work one-to-one with graduate students at Nagoya University on English language theses, dissertations, and scholarly papers intended for peer-reviewed publication. One of the principles of the tutoring services is that rather than providing language correction, we focus on the logic and argumentation of the paper. The main objective is to assist students in structuring their arguments. We attempt to accomplish this by prompting students to explicate research goals, methodology, and ultimately their thesis statement in the concrete form of a written abstract. Ultimately, the final goal is for students to produce a paper ready for publication in an academic forum. Indeed, the Mei-Writing Program uses this as a criterion

¹ Admittedly, it is difficult to narrow English academic writing down to a single set of practices, but for this paper, applying evidence and logic to support a central thesis statement is assumed to be a core principle.

for measuring effectiveness of the tutorial services. For example, in 2012, 41 percent of the clients who used Mei-Writing services published manuscripts for which they received tutorial assistance (Lai 2013).

Tutorial sessions deal with clients that for the purposes of this paper can be divided into two types: students who have not yet gathered data for their research and students who have already collected data—including students who already have a completed manuscript draft. When conducting tutorial sessions with the former, the objective of the tutorials is to prompt clients to construct a preliminary thesis statement and build an argument to support it. The clients are then asked to use this preliminary thesis statement to guide their data-gathering activities. Many of the clients using Mei-Writing tutorials are, however, of the latter type. In these cases, clients bring a draft of their manuscript to the tutorial session and discuss their research project with the tutorial specialist. The goal of the tutorial remains the same (i.e., prompting students to build a thesis statement), but the means of accomplishing this task must be modified: the tutorial specialist begins by asking the client about the topic, research goal, and main idea or conclusion for the project. As with clients of the first type, the client struggles with the main idea/conclusion question—indeed, this is often the reason a client has elected to use the tutorials in the first place—but the main difference is that when the latter type begins the tutorial sessions, he/she has already invested considerable time and effort collecting data and/or producing the draft for a paper in a foreign language. This can be especially problematic for international social science students who are investigating phenomena in their home country and therefore must conduct such activities as consulting documents and taking surveys overseas. Unlike natural science students, who may be able to return to the lab and do experiments again, these social science students often cannot easily return to the places where they collected their data and must therefore work with what they have.

3. From Data to Data Laundry-Listing

In cases where the client has already collected data, the tutorial can proceed in one of two directions: the client can try to find an underlying connection in the data and build an argument based on it, or he/she can opt to use the data without establishing any connection. If the client tries to find an underlying connection in the data, two problems can arise—data waste and fallacious argumentation—and the problem of data laundry-listing can occur when no connection is established.

3.1 Data Waste

Finding a conclusion amidst heaps of data can be a matter of simple luck. Sometimes a legitimately logical connection amongst the data exists, and clients need only pore over their data to discover this connection. In one representative case, a Mei-Writing client (Client A) using the tutorial services for the first time had come to the session with all of her data already collected. Client A was conducting research on the use of farming organizations in Cambodia and had taken very broad surveys attempting to measure the attitudes of farmers about these organizations as well as their usefulness. During the first tutorial sessions, the client was asked about the main point of the paper, but she was initially unable to specify a unifying argument that tied her data together. After some discussion, however, the main objective of her research became clear and she was able to settle on a preliminary thesis statement and then construct an argument to support it. Upon establishing a preliminary thesis statement, it became apparent, to the understandable dismay of the client, that the argument needed to support this statement would render most of the data she had culled for the project irrelevant; only a small subset of her data could be used to support her newly-found main idea, and

although the rest did not necessarily contradict her argument, it was simply immaterial to the final conclusion. As a result, the client was forced to ditch a considerable portion of the data she had spent several weeks obtaining and relegate it to the proverbial recycling bin, hopefully for use in a future research project.

Client A's case provides an example of a core problem that arises in academic writing without a foundational argument—data waste—and many instances have been uncovered in the Mei-Writing tutorials. More to the point, however, this issue is entirely predictable. When students collect data without a foundational argument to guide the process, they are risking data waste. When asked about their initial goal at tutorial sessions, students such as Client A frequently claim they intended to create an “overview” of their research topic and therefore have aimed to collect as much data on the topic as possible. Client A's surveys, for example, were designed with the objective of “understanding the characteristics” of farming organizations in Cambodia. Thus, the problem behind data waste is not necessarily that the client lacks any research goal, but rather that the research goal lacks sufficient focus.

3.2 Fallacious Argumentation

While data waste is a problem that can frustrate students who invested copious amounts of time and money in collecting data, it only relates to students who have the good fortune of being able to find a logical connection amongst their data. If, however, the student has not attempted to hypothesize a possible connection before collecting the data, or does not organize the data-collection process in a manner in which links would easily be found, it is more likely that the collected data will bear no logical connection to each other. Without a central argument to guide the process, then, the data might not support any serious argument, and the student can either force illegitimate connections to form a unifying thesis in the paper or opt to eschew the inclusion of a unifying thesis in the paper. The former exposes an ethical issue that can arise when a foundational argument is lacking: if a writer is unable to *find* a legitimate connection amongst the data, he/she may be tempted to *force* a connection. For example, a student might be tempted to cherry-pick data that supports their hypothesis while ignoring any data that contradicts it. Or the student could focus on a small part of the data, claim a pattern exists in that subset, and then draw a conclusion. The latter would be an example of the “Texas sharpshooter fallacy.”

The Texas sharpshooter fallacy arises when a pattern is found amongst data without taking into account the possibility of random chance. The expression comes from the image of a person, presumably in Texas, shooting at the side of a barn randomly; after he has finished shooting, he finds a clustering of bullet holes and draws a target with a bull's eye centered on that clustering, making him appear to be very talented with a gun. Phyllis Supino gives an example of a clinical researcher who inherits a data set with 95 patients suffering from chronic coronary artery disease; although “he has no a priori idea about what relationships would be most reasonable to explore ... he comes up with some statistically significant findings” by using software for statistics and thereby “confirms” a hypothesis that did not exist prior to examining the data for patterns (Supino and Borer 2012). Supino is quick to point out that such an activity generates a hypothesis, rather than confirms it, and the vital step of testing a generated hypothesis is missing in cases of the Texas sharpshooter fallacy.

While students need to be able to generate hypotheses, collecting data as a strictly hypothesis-generating activity leads to two problems which students need to be alerted to and solutions need to be provided for. The first is that because such an activity can only provide a hypothesis, not test it, the researcher might conclude fallaciously that the hypothesis has been confirmed by the data. In this case, students will need to have a means of testing the hypothesis they have generated, but, as mentioned above, this can be a practical impossibility for many students who cannot return to where they collected their data. The second problem

is that the data set may provide no viable hypothesis, in which case students may need to use their data to support a series of disparate findings, rather than a unified argument.

3.3 Data Laundry-Listing

It is no exaggeration to say that in all cases, Mei-Writing clients have been eager to avoid wasting data or engaging in fallacious argumentation. But steering away from these two pitfalls forces them into adopting a third strategy: eschewing a thesis altogether. When given these three options, clients invariably go for the last one, preferring to produce papers that offer trivial or poorly integrated conclusions. This results in research papers that form broad overviews of a research topic without providing a concrete central argument.

The case of Client B, for example, illustrates this point. Client B was researching the wage gap for informal employment in her home country, and she arrived at the initial tutorial session with a complete draft of her manuscript. The paper listed several research goals with an overarching objective of creating an overview of the current situation of informal employment in her country. As a result, the paper lacked a focused argument about this important phenomenon and the conclusions amounted to a list of unrelated findings. This can affect a paper's publishability. In Client B's case, after submitting her paper for publication, she had it returned with suggestions from the reviewers. Notably, one of the comments about the Conclusion section of the paper was that it "reads like a *laundry-list of findings*" (my emphasis), which the reviewer found hard going as a reader.

This "laundry-listing of findings" is arguably the most frequently arising problem in the papers written by clients of Mei-Writing. It occurs among students who have collected data without a foundational argument, cannot find a logical connection amongst their data, and are aware of the risk of drawing false connections; they utilize their data to form an "overview" that lists their findings, a tendency which I call "data laundry-listing." It arises when a paper does not have a concrete unifying conclusion, but marshals out a variety of discrete data without connecting them to each other or to a concrete thesis statement. Because it is the result of a writer going deep into the research process without a preliminary thesis statement, Mei-Writing tutorial specialists advise clients to form a thesis and strongly discourage them from organizing their papers as a laundry list of findings. In Client B's case, she ended up restructuring her paper around a strong thesis, wasted much of her data in the process, but produced a paper that was accepted for publication.

4. Front-Loading Research Projects

How do we help prevent students from spending a lot of time collecting data they ultimately cannot use, fishing for a thesis statement in the late stages of the research process, or delivering a laundry list of findings that make the paper difficult to read? The key to circumventing these problems is to front-load research. For example, one objective of a Mei-Writing tutorial specialist is to try to persuade a client to come up with a preliminary thesis statement before the data are collected. The tutorial process is begun by prompting a client to articulate a main idea, even if that idea is vague and embryonic, and then the tutorial specialist tries to help the client pare down this idea into a manageable research question. Finally, the client and tutorial specialist reformulate that research question into a reasonable answer which creates a preliminary thesis statement. Although the preliminary thesis statement must have some degree of flexibility and be open to future modification, the tutorial specialist encourages the client to commit to it for some time so that the project will not be abandoned.

Formulating a preliminary thesis statement prior to data collection is often met with some resistance from clients. When a client who has not begun to collect data prior to beginning

Data Laundry-Listing

tutorials is asked what sort of conclusion is expected, a frequent response is “I don’t know; I don’t have the data yet.” Ostensibly, this is a logical position. After all, how can you draw conclusions without data? And are you not risking confirmation bias? Clients, therefore, often show some reluctance to building a preliminary thesis statement before they have any data to analyze.

This is where abductive reasoning comes into play. In *The Stanford Encyclopedia of Philosophy*, Igor Douven describes *abduction* as an “inference to the best explanation” (Douven 2011a). Originally, abduction was explained as a way of taking an observed fact and a set of hypotheses used to explain that fact and “determining which of the hypotheses...are to pass to the next stage and be subjected to empirical testing. The selection criterion is that there must be a reason to suspect that the hypothesis is true,” and the reason we suspect it is true is that it provides “a satisfactory explanation of that fact” (Douven 2011b). John Josephson formulates abduction in the following pattern:

D is a collection of data (facts, observations, givens).
H [the hypothesis] explains *D* ([or] would, if true, explain *D*).
No other hypothesis can explain *D* as well as *H* does.
Therefore, *H* is probably true.
(Josephson and Josephson 1994)

In other words, abductive reasoning could be described as guessing at the best possible explanation and testing to see if that explanation is accurate. This sort of hypothesizing and testing is something done in everyday life. For example, if we look outside and see the ground is wet, we might guess that it has rained and then eliminate other possibilities (e.g., the streets have been washed, a water pipe has broken) to conclude that it is probably true that rain caused the ground to become wet.

In this sense, abduction as a form of reasoning is familiar to students, and, moreover, it is applicable to their research. Even if students have not collected any data, they invariably do have some ideas and knowledge about the topic—after all, they do know enough to want to conduct a study on it—so they are not entering into the research process as empty shells. Therefore, when a Mei-Writing tutorial specialist has a session with a client who is still at an early stage in the research process, the tutorial specialist notes that the client does have some expectations about what has or will become of the data. In one instance, a graduate student studying robotics (Client C) had already conducted an experiment, but was having difficulty establishing his thesis at the pre-writing stage. He balked when first asked about what conclusions he might draw from the results of his experiment, saying that he had not analyzed the data yet. However, when I reminded him that he must have conducted the experiment for a specific purpose and with a conclusion in mind, and that his data would either confirm or refute that conclusion, he was able to return to a follow-up session with a falsifiable, specific, and non-trivial preliminary thesis statement.

Client C’s case is typical in the sense that student writers often do have expectations about what the data will show even if their explicit research goals do not reflect them. The aforementioned Client A, for example, did indeed have a hypothesis in mind before she had embarked on collecting her data—she believed NGO farming organizations were more successful than those run by the state—but unfortunately had not designed her surveys to determine whether this was true. In order for abduction to work, then, the researcher needs to have the right data, so it is advantageous to encourage students to hypothesize and commit to a preliminary thesis prior to data collection. Hence, in early Mei-Writing tutorial sessions with a client, emphasis gets placed on “front-loading” research by building a firm but flexible preliminary thesis statement and forming a foundational argument before data collection, as opposed to “back-loading” a project by collecting all of the data and then trying to produce a

conclusion.

5. Conclusion

In this paper, I have illustrated how data laundry-listing is not only the most common, but also the most likely outcome of a research project written up by students in a second language when they lack a preliminary thesis statement or foundational argument. Although I have used specific examples from my individual experience as a tutorial specialist, I believe these examples can be generalized more broadly and are relevant for many students doing research under conditions similar to Mei-Writing clients. Finally, I have argued that a realistic means to prevent the problems described in this paper is to reach students early in the research process and encourage them to articulate a thesis statement before they have collected all their data. Encouraging students to front-load a research project can help eliminate the issues mentioned above and can also increase the chances for publication. In an academic environment in which students who are not native users of English have the two-fold disadvantage of working in a foreign language and of lacking extensive training in academic writing practices in that language, it is important to help students avoid the discouraging and dispiriting pitfalls of research so that they can make successful contributions to scholarship in fields that may very well be otherwise neglected.

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