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Electronic Journal of Foreign Language Teaching
2005, Vol. 2, No. 1, pp. 16-24

Purposeful Writing in the ESP Classroom: Assessing the 'Beg, Borrow or Steal Simulation'

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Abstract

Writing presents difficulties for non-native speakers of English for a number of reasons; grammatical accuracy issues are a constant focus. However, the problem of producing purposeful and practical documents should not be overlooked. In this paper, we consider the importance of functionality in writing as an outgrowth of workplace language learning activities. In our setting, 26 Japanese computer science students participated in a simulation in an academic English writing class. The constructs of the simulation had students employed at one of two rival computer software companies. The students were given role cards outlining a problem that required immediate action. Following group discussions, the members of each group needed to write a report in English providing advice to their respective company president concerning the direction the company should take. Observation of students' writings revealed that students were able to identify and write about important discursive functional elements common to problem-solution documents. Furthermore, a qualitative analysis of posttest debriefings revealed that students were motivated throughout the simulation, and could see the long-term value of participating in the simulation. It is suggested here that carefully and appropriately designed simulations can be a very effective way to teach writing to second language learners.

1 Introduction

The definition of success in the language learning classroom is often determined by the measure of accuracy in production by the students. Although accuracy is one dimension of a learner's ability, it is limited in scope as a measurement of capacity to communicate effectively. In fact, in many instances, when learners are intent on producing language with prescriptive accuracy, they will opt to forgo opportunities to use their second language in creative and productive ways. It has also been questioned whether a strict focus on accuracy produces improved results in output (see especially Robb, Ross & Shortreed, 1986).

A second problem for writing teachers is providing students with sufficient opportunities to write texts, which are meaningful to the students, and which allow students to visualize and write for the intended readers. Manifestations of this problem are illustrated by assignments where there is only one possible conclusion (the teacher's) and assignments where the student-teacher relationship becomes the focal point of the students' productions (Jackson, 1998). Here is one such text exemplifying the latter problem (see also Freiermuth, 2003, p. 222).

> I find that to help someone to understand is very hard and difficult. And that, I have to take (a matter) into consideration about individual personality. In the other hand, I must teach by individual fitting study style.

> When student's result of test is bad, I feel … but heart-breaking thing is not all. At the same time, I get many things! What is more, I, maybe do same things toward you. I'm sorry. So no matter how hard, I am satisfaction, because I get many many things in exchange for bitterness.

This writing seems aimed at satisfying the teacher's request, and consequently, it fails to be a generally readable text. It has been drafted for an audience of one (or possibly even none). It has fulfilled 'the goal' of submitting a document to a teacher to receive a grade. However, it lacks any real purpose (Jackson, 1998; Badger & White, 2000).

The aforementioned example illustrates a problematic personal essay; however, the same kinds of problems can be found in more technical reports written by students strictly as assignments. Here is an example cited by Freiermuth (2004, pp. 151-152).

> Recently many infrared communications have adopted to the communication between a computer and peripheral equipment. A computer should communicate simultaneously with more than two peripheral equipments. The system that communicates with more than two peripheral equipments called one-to-one (1:one) communications. The system which communicates simultaneously with more than two peripheral equipments in one infrared input-and-output ports is called one-to-many (1:n) communications.
>
> A system using 1:n communications has many requirements. The correct data may not be transmitted to the computer because of peripheral equipment blocked transmission of other peripheral equipment, and the data from peripheral equipment have to be transmitted to a computer within a fixed time.

In this example, the student is attempting to clarify his research aim – the purpose of the paper. Clearly the student has the language capability to express this. However, it is also clear that he has failed to do so. We believe that the problem is related to the one in the first example. The student has failed to understand the purpose of the research from the viewpoint of the audience. In other words, he has the ability to conduct the research but not the ability to express his need to do such research in a manner that is appropriate for the readers. As Swales (1990) so importantly points out, in such instances, the students remain in a state of being only language learners as opposed to language users with specified goals in mind. Tasks, by nature, do not have in-built concise purposes; that is to say that if students cannot determine a goal (other than the goal of simply finishing an assignment), their writing will most likely reflect this deficiency.

Another problem teachers face is the viability of the assignments provided to students. Students' goals, which may be exceedingly difficult to identify, often go unrecognized by the teacher. This can result in the creation of assignments that are of little interest to students. This is compounded when students are unable to see the usefulness of such exercises, which can and often does lead to unmotivated students simply trying to get a passing grade (Jackson, 1998).

The aforementioned problems can be tucked under the umbrella of *functionality*. If learners are obsessed with accuracy, it will likely be at the expense of function. If there is only one path to success, the writing can easily become stilted and perfunctory. If teachers are seen as the final and only audience of a production, the writing will lose broad readability. And, if the students' needs are unknown, students may produce documents that are aimed at simply satisfying the requirements of the assignment and nothing more (Swales, 1990; Bhatia, 1993; Badger & White, 2000).

This kind of product-aimed approach to writing fails to engage students in the kinds of processes that are associated with good writing, which entail a cyclical process of pre-writing, drafting, revising and editing. In a process approach, the finished text emerges rather than appearing as soon as the student reaches the required word count. Nevertheless, process approaches are often criticized for failing to recognize that different types of texts serve different purposes. On the other hand, genre approaches to writing are very much concerned with the purpose of the text and use of language in context, but at times at the expense of focusing on the skills needed to accomplish the tasks (Coe, 1994; Badger & White, 2000).

Badger and White (2000) suggest using a process genre approach, whereby students are confronted with a situation, which in turn influences them to address the situation using a

particular genre of writing. The students, with the help of their teacher and appropriate texts, must deal with the situation in the appropriate way. Process can be initiated by way of peer-to-peer interaction, teacher-to-peer interaction and from the problem associated with the situation (which advances the idea of effective and complete resolution). Genre is closely connected to the basic fabric of the situation, which should be developed in a manner that elicits the appropriate approach to the writing.

In our classroom, we address the aforementioned writing problems by employing a simulation that applies the tenets of the process genre approach advocated by Badger and White (2000). In the simulation, 26 Japanese university students (4 females and 22 males), acting as engineers in a software company, had to make important decisions that would affect the direction of the company. To satisfy the language production task, students had to construct their own glossaries and write a report that advised their company president of the optimal path for the company to take in consideration of the presented circumstances.

2 Simulation constructs

Simulations that can be used for language learning classrooms fall primarily into two categories: tactical-decision simulations and social-process simulations. Both of these types of simulations involve problem presentation and subsequent resolution. However, tactical-decision simulations involve the interpretation of data as a means to address the problem, while social-process simulation's problems are resolved through the interaction derived from conflicting interests of the participants (Gredler, 1992). Of course, there are plenty of simulations where the lines between these two types are blurred.

For computer science students in particular, the notion of problem-solving is a relevant issue. Schön (1983) and Jackson (1998) have both noted that the use of problem-based coursework can act as a kind of an apprenticeship tool for students, especially when the decision-making process is founded upon an actual case, as is true in the simulation we employed here. Furthermore, a case-based exercise can act as a kind of liaison for teachers connecting workplace with the classroom. Jackson (1998) notes that this can be very beneficial to the teacher:

> The analysis of cases can help teachers make connections between knowledge and practice and can stimulate and foster the skills and confidence that they will need in order to feel at ease and competent in the professional community of ESP practitioners. (p. 163)

One significant advantage of using a simulation with ESP students is that the tenets of the simulation can be tailored to meet students' needs in the relative safety of the classroom. Actually, a simulation not only offers students a chance to experience a virtual world in safety, but because there are some built-in controls, a simulation is also more easily controlled than events that take place in real-life settings. This gives teachers the ability to emphasize certain aspects that they deem as important for students while minimizing others (Raser, 1969; Tomlinson & Masuhara, 2000).

For our students, a tactical-decision simulation based upon an actual court case was used. Students assumed the role of engineers in one of two software companies and had to make decisions based upon the information contained in role cards. A more detailed explanation of the parameters of the simulation is included in subsequent sections.

2.1 Design stage

Prior to designing the simulation, the students' interests, needs and linguistic capabilities as well as the teacher's objectives should be considered (many teachers have a knack for this sans any formal tool). Based upon these three essential considerations, a simulation idea can be hatched and roles cards developed. Nevertheless, the following questions from Freiermuth (2003, pp. 229-230) may be worth considering before charging into the classroom:

- What are the simulation tasks to be implemented?
- How many class sessions will be needed to complete the entire simulation? How much time will each task consume? What is an alternative plan if a task finishes early? Can the next task be started immediately? What is an alternative plan if a task takes longer than intended? What if one student or group of students finishes a task early?
- Does the simulation have multiple sections (e.g., Part "A," Part "B," etc.)? Are the sections interconnected? If so, what happens if the results from the initial section are unexpected? Will this render the second section useless?
- How does this simulation address the linguistic needs of ESP (in our case) students? What linguistic elements are going to be addressed? How are they going to be assessed (for more detailed analyses, see Jones, 1982; Tomlinson & Masuhara, 2000)?
- Will there be group work (in many simulations this is an essential element)? What are the consequences (if any) if one member from a particular group is absent? Can the parameters of the simulation be easily adapted to counter such problems?
- What roles will students have? Will each student have the same role as his/her peers, or will each student have a specific role within a group or classroom (e.g. engineer, consultant, designer, etc.)
- Is there some type of debriefing where students can either discuss their experiences or write them down?

If the answers to these questions are addressed prior to implementation, there will be less potential for fallout in the classroom. (The aforementioned list of questions represents some basic elements that can be used to help teachers develop a simulation. However, there are more extensive accounts available as well. See particularly Jackson, 1998; Tomlinson & Masuhara, 2000)

Recall that one of our primary goals was that through the simulation, students would be better able to produce a document that demonstrated purpose and audience awareness (i.e. functional readability). To address these elements, we were compelled to look at students' interests and needs (Swales, 1990).

At our university, all of the students are on the road to becoming computer scientists, so it is a true ESP (English for Specific Purposes) setting. Also, the students who took part in this simulation were members of Academic Writing II, which is a class taken by students who are in their second year at the university. Being mindful of the students' situation, we took note of two primary needs. First, students would need to write about problems and solutions in their third-year technical writing class, and again in their fourth-year thesis writing class. And second, a significant number of the students would probably end up working for one of the many large computer companies in Japan. Concerning students' interests, generally speaking, a favorite pastime for computer science students is the playing of computer games; our students are no different. Hallway chatter about new and exciting software games is rampant. Casual observation of the students to determine what needs should be addressed is often a very valuable qualitative tool when considering how to develop fitting classroom materials (Jasso-Aguilar, 1999).

Student interest was at the core of how the simulation idea was conceived and also was an integral part of the simulation itself. Hence, the simulation was taken from a court case involving software game manufacturers. In the actual court case, computer game giant *Sega* sued a smaller game maker, *Accolade*, in a California court. *Sega*'s premise was that *Accolade* decoded the security code that had been programmed into *Sega*'s newest game console (called *Genesis*) by using a process called reverse engineering. Once they had unraveled the code, *Accolade* continued to develop and produce software games to run on *Sega*'s *Genesis* console. *Accolade*'s defense was that reverse engineering is a common practice in the computer world, and that they as well as other companies had engaged in this practice on a regular basis. In fact, they had designed games to run on previous versions of *Sega*'s game consoles without any apparent complaint from *Sega* (Spinello, 1997).

Of course, the case by itself did not constitute a simulation. It needed some alterations and the development of the role cards, which included the writing tasks. Hence, the role cards were written as if the clock had been turned back (prior to the time of the actual court case) to the point where decisions had to be made that would affect each company, and also, a few of the details of the case were tweaked to make the simulation more interesting. As a result, the original court case was transformed into a tactical-decision simulation, ready for the language learning classroom.

2.2 Pre-simulation

If language learning students are supposed to adequately interpret the data given to them, it is an imperative that they are not only able to handle the linguistic elements presented to them, but also the conceptual elements (Jones, 1982; Jackson, 1998; Freiermuth, 2003). This might require the teacher to provide some pre-simulation materials aimed at generating and/or helping students to develop background knowledge, enabling them to satisfactorily comprehend the simulation. To leap into a simulation without considering what the students are bringing to the table is a recipe for a potential catastrophe in the classroom. This can dampen any enthusiasm for further attempts at innovative approaches (Esteban & Cañada, 2004).

In our case, the understanding of specific computer terminology was a crucial element needed for a successful simulation. Once the problematic terms were isolated, tasks could be designed to help students comprehend the terms and consequently the simulation. Students had to create a glossary of the critical terms and have this glossary posted on their homepages. The vocabulary items were checked for both grammar and content, and if an item was poorly or inaccurately defined, it needed to be rewritten. Each week, the best examples were posted on the teacher's homepage, so that other students could check them. Here is an example of a poor definition, which was subsequently revised (see also Freiermuth, 2003, p. 225):

> ***Software Licensing Fee***
> "Software" is the almost same meaning as a "program". "license" means the right and using consent for using the purchased software. Usually, use of one software is restricted to one personal computer by the agreement of a license. "Fee" means an amount money that you pay for professional advice or service. To sum up, "Software licensing fee" means Remuneration to the right for using a certain software.

From the viewpoint of grammatical prescription, the definition is fairly accurate; however, the student has not demonstrated an understanding of the underlying concept. He has simply defined each word in dictionary-like fashion. The revised version is much better (see also Freiermuth, 2003, p. 225):

> ***Software Licensing Fee***
> Softwares are licensed rather than sold. If a software company sell its product, that mean its right of ownership moves to the buyer. The user must acquire the right for using it, and a buyer bought the license from the dealer. Do you know that the buyer can copy the product by CD-R? If a man who want many money copied from the product to CD-R and sold it, the company that sells the product suffer damage. Therefore, the buyer must acquire the right and needs to pay money as the license charge.

What the student loses in prescriptive accuracy, he makes up for in understanding. He defines *software licensing fee* as it relates to computers and follows the definition with appropriate examples as support.

Students posted their background definitions on the web, and students made use of their online, self-created glossaries when they were engaged in the group-writing stage of the simulation. In other words, the glossaries themselves became part of the language learning process, acting as an ESP dictionary. Whenever pre-simulation activities are incorporated into a language learning simulation, they should be viewed as an integral part of the language learning activities and not simply as additional, time-consuming procedures (Esteban & Cañada, 2004).

2.3 Role cards

Once students have been sufficiently prepared (if indeed preparation is needed), role cards can be given to the participants. Role cards generally include the specific role of the individual and his or her goals for the simulation. The role card is of vital importance to the success of the simulation. Hence, role cards must include enough information so that students can make appropriate decisions.

Once our students had been placed in groups of three to four members, they were given their role cards. Information on the role cards informed each group that their members constituted an engineering team at either *Sega* or at *Accolade* and that they needed to help advise their respective company president concerning the latest developments in the software game market.

Looking at the specific companies, engineers employed by *Sega* were under the assumption that *Accolade* had already reverse engineered the console. The crux of the information they received on the role cards posed the following questions:

- Should they allow *Accolade* to develop the software (which *Sega* had done in the past)?
- Should they demand that *Accolade* pay a software licensing fee (made especially hefty for the purposes of the simulation—$200,000,000 per software title)?
- Should they take legal action against *Accolade* in a US court for violating copyright?

The groups of engineers from *Accolade* were provided with different information. Their role cards noted that *Sega* had just developed the new *Genesis* console, so they needed to consider the following questions:

- Should they refrain from developing any new games for the new console (while continuing to develop and produce games for the older *Sega* console)?
- Should they pay *Sega*'s licensing fee?
- Should they use reverse engineering to discover the source code of the console, and continue to develop the new games that are being worked on?

Additionally, engineers in both companies were encouraged to devise their own solution to the presented dilemmas (see also Freiermuth, 2003, p. 224).

2.4 Debriefing

Following the successful completion of all of the simulation related-tasks, students need to be given time to reflect on the simulation. If students have the capacity to reflect on the process in spoken English, this is preferred. However, in many cases, class sizes are quite large and time is limited to the point where not all students would be able to participate. In such cases, a viable alternative is a posttest questionnaire. A Likert scale or *yes-no* items can be used; however, there should be some items that allow students to reflect in words (sentence-length texts).

Due to the size of our classes and the fact that our students are quite hesitant to communicate using spoken English, it was decided that a posttest questionnaire would be the most suitable way for students to debrief. Additionally, it was felt that students would be more straightforward about their feelings if they could write their comments.

The questions asked focused on aspects of group work as well as the merit of using such a simulation. The two main goals were to see if students thought the simulation was beneficial, and to see if they could make any connection to future workplace settings.

To assess the former goal, students rated the simulation on a Likert scale. The results indicated that 96.2% of the students found the simulation either *useful* or *extremely useful*. Concerning the latter goal, many students easily made the connection to the workplace. This is reflected in a few of their comments (see also Freiermuth, 2003, pp. 228-229):

- *I think that there are nothing which will not be useful in the future.*
- *Through this simulation, I understood that I must not think only income and must think the near future economy.*
- *It's important to think for company's and make a decision.*

- *At first, we thought that not to develop any games for the new console because it seemed to be the safest decision. However, we realized that to run a risk produces better result in some cases through this working.*
- *I reflected this problem seriously. Perhaps, I never reflect such a thing like this if I don't face such a problem. It was a good experience.*
- *This simulation makes our more thinking deeply.*
- *This simulation was study for not only English but economy as well.*
- *When I start working, I need to have and speak my opinion about my company.*
- *I didn't know this issue. We will get a job related to computer, so we had better know this information.*
- *Like this simulation is possible in the future in fact, so we can simulate and think about "what is copyright" seriously. This experience will be utilize a lot.*
- *I think this experience is the most important, so I think this simulation is very useful. I have to gain experience by practical use.*

Obviously, the comments were added support to the effectiveness of the simulation. The students were able to see the purpose of the simulation and write about it effectively (see the following section for assessment of the writing). The results exceeded our expectation, which often proves to be the case if developers have put in sufficient time and effort to assure that the simulation has been produced and implemented appropriately (Jones, 1985).

2.5 Linguistic aspects

One other element that must be considered in a language learning simulation is what linguistic elements are to be addressed. In some cases, this might be the spoken English that is used to resolve the task. In other situations, the goal might comprise what students need to produce in English. To create a simulation that incorporates both interaction and production in English is ideal; however, decisions about language-use should be considered in light of the students' linguistic capability (i.e. ability to manage a discussion in English), any classroom environmental factors and the amount of time available to run the simulation.

As mentioned at the outset, it was our desire that students be able to use a document to communicate effectively. In specific terms, we wanted students to be able to identify a problem and offer appropriate solutions. The idea of a simulation fits the bill because it could be designed based upon a problem that was contested in an actual court case. The role cards reflected the problems and asked students to offer what they considered as the most beneficial solutions. In other words, they were not writing a report to satisfy the teacher's mysterious goals; they were writing an advisory report to their company president that needed to provide enough information to make it a sensible and readable document (Jackson, 1998).

To be successful, then, students had to identify the problem and offer the most reasonable means to resolve it. Flowerdew (2003) provides a nice framework for determining whether problems and solutions are appropriately addressed in a text. Elements that need to be present are *problem evaluation* and *recognition*, and *solution evaluation* and *recognition* (see also Hoey, 1983, 2001; Jordan, 1984; Winter, 1986). We have extracted these elements from one of the group reports to illustrate how effectively the students addressed these issues (see also Freiermuth, 2004, p. 154):

> ***Situation Recognition***
> … we have confidence that no one can make compatible with our Genesis. Because our premium console had very complicated source code for security.
> The parent of the trouble is Accolade. Though they knew that reverse engineering had a possibility to violate SEGA's copyright, they did it …

Problem Recognition (including consequences)
… and they got our Genesis source code, made by our sheer dint of effort, without any labor! If we overlook this serious condition, other medium and small software companies breakdown our new console source code with the same way of Accolade did, and it means that we have wasted our valuable time and money developing such sophisticated console and its complicated source code.

Solution Recognition
Considerable thought was directed toward solving this grave trouble, however, our team decided to propose to our company's president not both of two, we propose a new option to compromise with Accolade for price of licensing fee.

Solution Evaluation Recognition
In general when game console maker produce new type game machine, a great deal of money is invested, such as wages for engineers, ad rate of new console and other over head expenses. Most of the console maker cover such initial investment by mainly the new console sales and the licensing fee from other game software companies. Without either of them, companies get into the red, so we have to gain a licensing fee if the rate of it is not entirety. Therefore, we think that our company should not over look Accolade's illegal activity. However, we don't recommend to take legal action against Accolade sue them for copyright violation for the following two reasons. First, if we accuse Accolade of their guilt, we might lose. Since it is too late to claim the Accolade's illegal activity and the difficulty of to prove illegal point of reverse engineering … Second, even if our company SEGA win the trial, there is the possibility that Accolade appeal the decision. If this supposition turns to reality, the cost of the case will become more greater … The best way in this case is to negotiate with Accolade about licensing fee which both of the company can compromise…if we offer our plan about licensing fee, which is lower fare as far as we and they give or get fixed percentage of commission, there is strong possibility that Accolade side will walk toward us and the negotiation will complete smoothly.

In this example, students were able to make a well-reasoned proposition. And, although there are some problems with grammatical accuracy, the argument is never in doubt. It is supported in a step-by-step manner that can be easily understood. Additionally, it is important to note that this example represents neither an isolated writing example nor the writing of a cleverly devised super-group (actually groups were mixed so the better writers would not end up on one team). All of the groups' reports included these discourse features in varying degrees of detail. Again, our students' ability to incorporate the elements of problem-solution documents exceeded our expectations.

3 Concluding remarks

In this paper, we have provided some basic information about a simulation, which was developed for an academic environment, but which also considered students' probable future activities. Because we contemplated students' needs and interests from the outset, the simulation was successful from a motivational standpoint. From a teacher's standpoint, the simulation was also successful because the students were able to demonstrate that they could write about problems and solutions in a very thorough manner.

To sum up, we viewed the simulation as successful because students discussed, revised, contemplated and struggled to produce a real document that considered function as ultimately important (Badger & White, 2000). Students had to reflect seriously about an issue and gain a consensus with their co-workers about what should be done. Did *Accolade*'s activities constitute *stealing*? Or, was *Accolade*'s activity only a commonly engaged in practice of *borrowing*? It was not a black and white issue. There were no teacher-approved answers! Perhaps that is why many of the groups negotiated vigorously to change the dynamics of the situation – that's the *begging* – more-or-less. In any case, this is just to say that the students understood the realistic aspects of the simulation and consequently produced writings that were both functional and reasonable (Jackson, 1998).

An overarching assessment of this simulation is that it served our purposes very well. A key element to its success can be attributed to the custom design, which fit the needs and interests of

our students. Once this pre-requisite had been met to our satisfaction, we figured out ways to work in the language elements to address our language learning goals. The formula is very simple, but the teacher needs to do his or her homework prior to implementation. Nevertheless, with adequate preparation and a sprinkling of imagination, simulations can be extremely productive activities, providing rewarding experiences for students and teachers alike.

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