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BALANCING "JUST IN CASE" WITH "JUST IN TIME" LEARNING IN THE TEACHING OF EAP WRITING, REFLECTING, AND CRITICAL THINKING

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Abstract. *In this article, the author argues that approaches to learning may need to be more efficient and gratifying to students now than in earlier periods in teaching history. She then juxtaposes Just-in-time learning, often characteristic of VESL/EOP learners, with Just-in-case, more commonly found in traditional educational institutions. After noting some of the pros and cons of each type, she suggests ways that EAP, and especially EAP writing, might balance the two.*

1. INTRODUCTION

The knowledge explosion and advanced technology in the 21st century, combined with the urgent need for more educated workers in a number of professions and industries, has encouraged researchers, theorists, and practitioners to re-examine ways in which students benefit from different approaches to instruction and educational guidance. Several of these experts (e.g., Riel, 1998; Cook, 2003) have drawn from well-established theories and approaches (e.g., Dewey, 1902;) as well as from industry and EOP/VESL experts, in an attempt to identify the most effective and efficient methods for delivering education to individuals who need to learn quickly, as they may not be able to pursue the same types of professional/educational goals throughout their lives in environments where changing jobs is now a common practice (Meister, 2012). One question that should be prominent in these discussions relates to whether it is more advantageous to advance "just in case" (jic) learning, which is common to more traditional educational institutions or "just in time" (jit) learning that, according to my colleagues in VESL/EOP professions, is more common to their pedagogies (See, e.g., Biterlin, Johnson, Price, Ramirez & Savage (2010), since their students are adults who must obtain jobs quickly in order to support themselves and their families.

In this paper, I discuss aspects of both types of learning, jit and jic, and weigh the advantages and disadvantages of each as they relate to English for Specific and Academic Purposes learning and instruction. Finally, I suggest ways in which the two approaches might be balanced, especially into an academic (EAP) class at secondary school or university.

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2. JUST IN TIME LEARNING (JIT)

The idea of learning something precisely at the point when you need it has been around for a very long time, particularly among language learners (Baskturman & Elder, 2004). Traders, travelers, soldiers and others who have experienced contact with people speaking another language with whom they must interact quickly and meaningfully for their shared benefit have devised methods for learning that are quick and sometimes quite effective because they focus on immediate, situated linguistic needs. Currently, just-in-time learning often takes place among those who need to do business with each other, but pilots who guide planes or ships, individuals who need to pass a certain kind of test (e.g. the TOEFL), and tourists, among others, often attempt a quick and easy method for communicating effectively in a new language. The current language learning industry is replete with advertisements for becoming communicatively competent quickly and easily in a new language, e.g., The Rosetta Stone. One of my friends' favorite sites for jit language learning is by Benny the Irish Polyglot, who seems to acquire language competence quickly in any culture. In his TED lecture, he promises fluency in three months https://www.youtube.com/watch?v=HZqUeWshwMs. Great fun to watch ... but one does wonder what "fluency" means in this case!

The origins of the catch phrase "Just in Time" comes from industry, the Toyota factory in Japan, to be exact. In the 1950s, Toyota researchers developed methods for increasing efficiency and producing products that would meet immediate consumer demand: Toyota and other [Japanese] companies that adopted the approach ended up raising productivity (through the elimination of waste) significantly [1]. To meet JIT objectives, the process relies on signals or Kanban[1] (看板?[2], Kanban) between different points, which are involved in the process, and tell production when to make the next part (Wikipedia).

Through a study of consumer demand and developing technology for production, communication and transportation, Toyota and other Japanese firms were able to satisfy market demand quickly without ending up with a stockpile of products that rapidly become obsolete or unnecessary. Not surprisingly, this jit concept has been picked up by software developers who often have no time to learn the theory behind their work. They want to create a product that will be available and consumed immediately, since technologies have a very short shelf life (Cook, p. 2.).

How does jit relate to education? Ideally in jit, what is learned is established by the learners. They may need to solve an immediate real world problem (What's the quickest route to Belgrade?) or learn a skill (Vaccinate children). In many cases, the internet quickly brings to these learners the information that they believe will enhance their learning. Thus, they may believe that they have achieved their goal without dependence upon schools, teachers, libraries or the traditional modes of access. Not only do learners gain knowledge through the many sources online, they find out how to apply this knowledge, using, for example "How to..." pages. A one minute search by this author for "How to Write a Research Report", resulted in the standard instructions from this website: http://dwb4.unl.edu/Chem/CHEM869K/CHEM869KLinks/www.ruf.rice.edu/~bioslabs/tools/report/reportform.html.

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[1] http://en.wikipedia.org/wiki/Kanban
[2] http://en.wikipedia.org/wiki/Just-in-Time_Manufacturing#cite_note-1

A model of Just in Time learning has the following dimensions:
- Learner-controlled: The learner poses the problem or states the need and completes the research online to solve it. Alternatively, on the job, the learner determines what skills s/he should pursue and then decides what s/he needs to master immediately to pursue that job.
- Time-dependent: The learner can get answers immediately or begin to learn skills right away, preferably on the job or as a need arises.
- Place-dependent: The learner can sit at the computer and discover much more than has been immediately available at any point in the world's history. In the past, learners have been apprentices to experts and learned on-the-job what they need to know to complete a task.
- Acquisition of information or skills that are immediately relevant. In many ways, Just in Time learning is very satisfactory to the learner because s/he can immediately use or apply what has been sought out (adapted from Riel, M. 1998, pp. 6-19).

In the most radical form of "Just-in-Time" learning, then, there are no teachers, textbooks, libraries or other types of intermediaries. The learner knows what s/he wants to learn or the skill s/he wants to master - and goes to the computer to look up the information, collects it from a job site, or observes an expert in the work context , by "job shadowing (see, e.g., Johns & Price, 2014, pp. 480-484).

Just in Time learning sounds wonderful, doesn't it? However, for many years, EAP scholars have been wary of the possibility that you could thoroughly and thoughtfully learn about a topic or acquire skills in a very focused, rapid way. In a memorable TESOL plenary entitled "ESP and Caliban", (cited in Pulverness, n.d.), Henry Widdowson, one of the world's best-known applied linguists, used an exchange between Prospero and Caliban in the *Tempest* to argue against such an immediate and focused approach. Caliban makes this statement to Prospero, who is keeping Caliban in a cave and limiting his learning: "English for Slavery is [what] you like" (Quoted in Pulverness, p. 2). For Caliban (and Widdowson), jit limits the learners to what we, as experts, or they, limited by circumstance, may see as their immediate needs, rather than supporting students with the language, skill and strategies that they may require in a number of perhaps unpredictable contexts. Caliban wanted to operate in the broader world, not in the world set out for him.

In a more recent, if indirect, critique of jit, Daniel Akst, in "The unearned hubris of internet searchers" (April 4-5, 2015), discusses a number of studies indicating that those who search for information on the internet are often unduly confident about what they have discovered. He cites Matthew Fisher, et. al. in an article from *The Journal of Experimental Psychology*, who, after completing nine studies, point out that "people using the internet are less likely to appreciate the gaps in their understanding [of a topic or skill.]" These researchers ...show that searching the Internet for explanatory knowledge creates an illusion whereby people mistake access to information for their own personal understanding of the information. Evidence from 9 experiments shows that searching for information online leads to an increase in self-assessed knowledge as people mistakenly think they have more knowledge "in the head," even seeing their own brains as more active..." (in press).

We ESP teachers probably didn't need these experiments to understand the issues related to just-in-time learning from the Internet. Without appropriate instruction and

guided evaluation, learners often do not take the time to consider which websites might be the most useful in filling their needs - where they can actually acquire the necessary information - because they are not expert consumers of on-line resources. Of course, they need to learn how to evaluate and critique online information; and fully as important, they need to know how to integrate the remarkable array of information on websites with the problem they are trying to solve or the skill they are attempting to learn. Often, as in the case of the "Writing a Research Report" website I consulted, there is insufficient practice in applying the solution or skill to a particular context for a specific audience (e.g., an employer) which may require that the knowledge or skills must be adapted for the situation. Not all research reports are the same. Writing a report not only takes practice and expert critique, but it requires an understanding of the necessary content, the audience, and a number of other contextual factors. It takes practice and expert critique, something that effective teachers and a more structured process of learning can offer. In addition, effective instruction and practice are central to the deep learning that will assist students to transfer their skills and knowledge to new situations or domains (Haskell, 2001).

3. JUST IN CASE

All readers of this journal must be familiar with "Just in Case" (jic) learning and instruction, for we have encountered it in most of our university classes. For a critique of one of these experiences, we might look to an on-line blog by "Teacher Man", entitled "My University Money". This writer tells readers that with jic in our classrooms:

> We read and talk about stuff in case we might need it some day. Of course, "some day" might be in a week, it might be in twenty years, so the utility of that style declines over time. (p. 1)

Others defend Just-in-case learning, based on their own post-secondary experiences. Frank Bruni, an American journalist, in an op-ed piece entitled "College's priceless value" (2/1//2015), discusses what his favorite class on Shakespeare did for him as a thinking adult in all areas of life:

> [The instructor] demonstrated the rewards of close attention... [her attitude] informed all my reading from then on. It colored the way I listened to people event watched TV. (p. A27)

Margaret Riel, in her paper presented at the Emirates Center for Strategic Studies and Research (Abu Dhabi, 1998), made an impassioned plea supporting the kinds of Just in Case learning that a college education can provide:

> Education implies a plan that integrates learning into larger intellectual frameworks.... [involving] integrated course knowledge and skills, with the structure influenced by forces in the economy, academy, and community. (p. 2)

Arguing that learners often need a "course" of "intellectual development, providing intellectual guidance and understanding" (p. 2) she points out that rather than doing away with teachers, which might be argued for "Just in Time" learning, education in the 21st century will require even more skilled teachers since student learning "should be a

process of constructing, elaborating, and modifying representations of knowledge" (Bruner, 1961), and students need careful guidance in the ways in which these representations are constructed (See, e.g., Lave and Wegner, 1991). In an effective jic class for the 20th Century, the teacher is actively scaffolding student learning, helping students to evaluate sources of all types (data, print, visual, from observation...) to solve problems, to structure their written and visual texts and to present ideas orally. In their active learning, students will always need guidance, modeling, and appropriate assessment by expert teachers, according to Riel.

A related issue that is important to an individual's success through life in a modern society is critical thinking, for as Richard Paul in "State of Critical Thinking Today" (2004) points out, there is a strong relationship between critical thinking, creativity, problem-solving, decision making and communication" (p. 1). Knowledge and thinking cannot be separated, and each academic discipline has a mode of thinking that represents the values and "ways of being" (Geertz, 1983) of that discipline. For example,

> ...learning to think historically requires that students learn historical content by thinking about historical questions and problems. They learn through a critical thinking process that history is not a simple recounting of past events, but an interpretation of events selected by someone and representing a point of view. (p. 4)

As a result, critical thinking appeals to reason and evidence. It encourages students to discover, evaluate, organize and process information. It provides opportunities for students to consider a wide variety of points of view, analyze concepts, and relate (transfer) ideas contexts. (p. 7)

Thus, a well-constructed "Just in Case" class prepares students for any contexts in which they need to ask, and answer intelligently, question such as:

> What is the question I am trying to answer or the problem I am trying to solve?
> What is the central concept or topic that I am working with? How does it relate to the current "conversations" about that topic in the discipline or profession?
> What data or sources do I need? Are these sources reliable and appropriate?
> What tentative conclusions do my sources lead me to?
> What assumptions am I making as I come to these conclusions?
> What are the implications of my study?

In 2015, I was a judge at the annual student research symposium at my university, where undergraduates and graduates from all of the disciplines presented their research proposals or completed work for comment and critique. What was evident in each of the presentations was the guidance of a skilled expert instructor in their discipline, an individual who had taken the time to make clear to students the current topics and conversations, the methodological approaches and their justifications, the types of results that ensue, and what can be tentatively concluded from the studies that the students engage in. Of course, closely related to these disciplinary values are ways in which they can be articulated to others, both in academic presentations (e.g., Reinhart, 2013) or in papers written for classes or publication (see Swales & Feak, 2012).

In the more advanced classes in the United States such as those in which the research students I judged were enrolled, there is a connection made by instructors among topics and a deeper understanding of situated knowledge. However, the question for ESP becomes

this: Are classes in the content areas/disciplines or are our language classes that have an EAP emphasis actually promoting critical thinking and transfer of learning? What kinds of thinking can students take from any content or EAP class that they can transfer to other classes?

4. SOME POSSIBILITIES FOR EAP

Despite the determined arguments for Just-in-Case learning and its corollary, critical thinking, Just-in-Time learning can be much more motivating than Just-in-Case, since students are attracted by the possibility that they can learn quickly and are motivated by their immediate successes with looking up a topic or issue on the Internet. How, then, do we satisfy learner wants (and perhaps needs) and yet provide the framework and critical thinking that Just-in-Case promotes?

Reil (1998) suggests creating "learning communities" with student-centered projects, tutorials, and tasks that are as authentic as possible, involving instructors across the disciplines, industry, the media (e.g., "tele-apprentice relationships"), and service learning. For fifteen years, I co-directed a learning communities/academic support program for first year students at my university, as we studied the content class in which they were enrolled as an academic microcosm (see Johns, 1997; Johns, 2001). In the students' EAP classes, they reflected upon the ways in which the content instructors framed the lectures, developed and instituted assessments, and completed their own research. Success among the students, almost all of whom were bilingual or ESL, was remarkably good; they thanked their EAP instructors even years later for orienting them to the language, texts, and cultures of academic life - and to ways in which they could analyze their learning situation.

However, I am well aware of the challenges forming and maintaining learning communities face. They can be expensive, and they require considerable analytical skill and time from all those who participate: therefore, they are impractical in many environments. For this reason, the remainder of this paper is devoted to suggestions for combining the jit experiences with organized, structured, EAP writing activities that can at least partially satisfy both the students' "Just in Time" needs in this fast-moving society while also providing some of the "Just in Case" learning that may lead to transfer to other context, not only of language but of knowledge and skills.

Research into effective academic writing provides for us some possibilities for considering both jit and jic. In the macro-analysis of fifteen years of writing instruction, Graham and Perin (2007) make clear some important teaching approaches that, if carefully constructed, can give our EAP students some immediate successes, yet open the door to transfer to other context. What are these approaches?

- Analyzing prompts: Students can be given one or more authentic writing prompts from a content classroom. Working in groups, they analyze the prompts - but don't necessarily write responses to them. Their analyses are critiqued by other students in the EAP class or the instructors.
- *Making a plan for writing*: Again using prompts, students can plan their writing - again without completing a text - and be immediately critiqued. Graham and Perrin tell us that effectively planning for writing (or reading) is probably the best predictor of student success.

- *Writing short, timed responses to a prompt or a visual*. One or two paragraphs, prompted by an "essay" question, is also an effective tool for immediate success or critique.
- *A brief reflection and discussion* on a reading, writing, or learning experience can provide students with immediate gratification and attention. Reflecting on their content classes in writing is also a tool for jit learning.
- *Templates to get started:* If students have difficulty writing, templates of various kinds can be provided to support successful texts (e.g., King, 2007).
- *Fluency writing*: Students should also be supported in writing fluently. Taking notes and then presenting an oral report or creating a poster will give students these experiences.

These are just a few examples of how students might have an experience that is more jit, immediately gratifying: one which provides for the classroom attention to students and yet gives them opportunities to reflect and work on possibilities for critical thinking and analysis. We cannot always provide for EAP students in post-secondary institutions the kinds of experiences that they might immediately have on the job. However, through short writing plus critique and discussion activities, they can encounter some of the possibilities that will give them more immediate successes that may lead to learning transfer.

5. CONCLUSION

The claim that critical thinking is subject specific appears, to be of practical importance and theoretical interest. Its meaning is unclear, however, and discussions of it are often confusing and at cross purposes. In an attempt to clarify the topic, Ennis offers a number of distinctions, including a distinction among three versions of subject specificity: domain, epistemological, and conceptual subject specificity. He holds that the first two versions contain valuable insights, but that all three suffer from excessive vagueness of their basic concept (domain, field, and subject, respectively). If the proposed clarification and critique are appropriate, then a number of avenues of research — at both practical and theoretical levels — need to be pursued, some of which are outlined in this essay.

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