Learning and teaching methodologies and approaches require innovation and relevancy for 21st century occupations and lifestyles. In this paper the authors compare and contrast English for Specific Purposes (ESP) strategies for English learners in the business and academic communities. The uses of problem-based-learning (PBL) and information and communications technology (ICT) methodologies are explored as valuable tools for English educators and learners.

*Keywords:* English for Academic Purposes; English for Business Purposes; English for Specific Purposes; English Language Learners; Information Communications Technologies; Problem-Based Learning

The English for Specific Purposes (ESP) community has grown at a near exponential rate over the past two decades. This is due in part to the parallel
growth of Information and Communications Technologies (ICT) that support rapid and global transmission of the messages and data in multiple formats. Altbach (2007) has argued that the creation of the internet and its multiple international networking platforms has led to a form of English hegemony in global communications in academic settings. Following a similar path, English now dominates the discourse of business on an international level. Therefore, we have observed the emergence of myriad on-line references for ESP program offerings and ICT-based courses. The authors were prompted to ask how does ESP compare in business and academic communities. Problem-based learning (PBL) lenses and ICT contexts were used to examine similarities and differences in the ESP arena.

The PBL Context

PBL has its origins in medical education in Britain, and thus has roots in a discipline where ESP is an integral part of the educational process. It quickly attracted attention and usage in the Canadian medical education community, and spread into post-secondary settings in the United States (US). PBL anchors learning and instruction in real-world problems. Learning content and processes become student-centered and collaborative and encourage the participants to find a common language to address concrete problems. Students are introduced to a climate and setting and are challenged to clearly
state what those issues are in language that is meaningful in the context of the problem. They are also charged with devising solutions and required to evaluate the problem in a post-problem reflection period (Barrows, 1988). This mode of teaching allows self-directed learning strategies and levels of collaboration that are naturally reinforced in the ICT context due to the nature of independent, activity-driven resources in the technology-enhanced curriculum. John-Steiner and Mahn (1996) noted that when a problem is imbedded in a larger cultural context, it allows the learner to be both transforming and transformed, and this contextual framework can be highly effective in reaching ESP students.

Although the sources of problems and the contexts for their classroom use may vary, PBL has common features: problems should engage students’ interest and motivate learning, require students to develop a line of reasoning that is backed by evidence, be complex enough to motivate participation of a group of students rather than just a single individual, be open-ended enough at the outset to allow participation by all students, incorporate the learning objectives of the course, and allow for many legitimate paths to a single resolution (Duch, 1996). PBL methods also resonate strongly with science educators and their students because they parallel the universal protocol of employing the scientific method, cornerstone of all scientific research. The
scientific process involves making an observation, forming a hypothesis, testing that hypothesis, and rejecting or accepting the hypothesis based on analyzing the results. Placing students in the active role of problem-solvers in a demanding situation simulates the kind of complex circumstances they are likely to face in international business or academic communities.

PBL is ideally suited for English language learners (ELLs) because it requires students to play the active role of problem-solvers. For students struggling with language acquisition, tacit learning, grounded in experimentation and experience, is the optimal mode for gaining expertise in a given subject. According to Evenson and Hmelo (2000), this mode of education places the responsibility in the hands of the students which is a role that has the potential to create life-long learners. It also places the instructor in the position of being a listener which is important for bridging communication gaps (Shultz, 2003).

Lee (2005) argued that current educational policies and practices do not support desired outcomes with ELLs. The authors would argue that education oriented toward the future ought to prepare students to function in a multicultural society with permeable borders. PBL can provide students with an inquiry-based approach for solving real-world problems. Students working hard to gain proficiency in English speaking and literacy gain an
understanding of a discipline through performance. It has been demonstrated that inquiry-based methods personalize classroom-based projects, increase relevance, and create ownership (Johnson & Kean, 1992). Problem-based classroom projects enable students to make a personal investment in their education and in the projects, where they are more likely to use their total support network of classmates, teachers, friends and the community of the specific application to help them meet project goals. ELLs who participate in such projects thrive in a cooperative learning environment which strengthens peer relationships. The hands-on nature of a project creates a sense of ownership among specific classroom project participants and caters to a wide range of skills and ability levels.

PBL can be utilized to select constructive problems purposefully designed to address the desired learning outcomes for the English for Academic Purposes (EAP) and English for Business Purposes (EBP) communities. These problems are often influenced by social and contextual factors. Cummins (2000, p. 39) stated “conceptual knowledge developed in one language helps to make input in the other language comprehensible.” Careful lesson planning is necessary in terms of language learning and content knowledge. When using the PBL model, content is introduced in the context of real world problems. The learners’ acquisition of knowledge is achieved
through a combination of learning strategies that are self-directed, independent, and collaborative, while also emphasizing communication skills and providing ongoing reinforcement.

The ICT Context

The teaching of ESP and more specifically EAP has taken on global significance. As early as 1996, Gillett (1996) offered a precise description of the growing EAP field identifying the four essential elements (reading, writing, listening and speaking) noting EAP’s increasing importance within the global higher education community. As Altbach (2007, p. 2) noted, “Until the mid-twentieth century, most countries used their national languages for academic university teaching and for science and scholarship.” Since the 1950s, English has assumed an ever increasing role as the predominant language for academic communication across the globe. It is now the language of choice for virtually all major peer-reviewed academic journals in international distribution, and the preferred language of presentation at academic conferences and colloquia (Altbach, 2007).

EAP entails training students, usually in a higher education setting, to use language appropriately for study, research and publication. It includes developing skills in the rigorous, rhetorically and grammatically correct modes demanded by the now globalized academy. It is a challenging and
multi-faceted area within the wider field of ELL, and is one of the most common forms of ESP. EAP is now a common part of the curriculum at universities around the globe, and is even being offered in the commercial marketplace, especially in Asia (Canagarajah, 2014).

More specifically, academic language differs from everyday language and other ESP language uses in very specific ways. For EAP learners, these differences take on even more significance. These learners are frequently required to read, write, listen to, and speak about relatively unfamiliar topics using technical language and drawing upon semantic resources that routinely differ from the language practices they use in the home or in social or business contexts. As such, EAP teachers need to make explicit the workings of academic language and the critical differences between every day and academic language.

The EAP community has had to develop its own systems to promote this more rigorous curriculum focused form of language learning. An EAP program focuses instruction on skills required to perform well in an English-speaking academic context across core subject areas generally encountered in a university setting. Programs may also include a more narrow focus on the specific linguistic demands of a particular area of study; business subjects are but one example. Sometimes EAP courses may be intended to raise students'
general English proficiency to facilitate university entrance. In the US, this can mean helping students attain a score of 70 or greater on the Test of English as a Foreign Language (TOEFL). In the United Kingdom (UK), this often means endeavoring to help students get a score of 6 or above in the International English Language Testing System (IELTS) examination. Frequently, these courses take on a specialty school atmosphere, where students can spend from a single semester to a year or two working on their English and academic skills before starting degree courses. EAP courses taught with other degree courses may be based on the British or American English and Composition models, or may employ content-based instruction, using material from the students’ degree subjects.

ICT has had and continues to have a major and distinct role to play in facilitating the success of EAP instruction. This role has expanded in both its breadth and depth, with the increasing proliferation of such tools, globally. While computers were first used principally to process data within closed environments, interestingly, once users found they could be used for communication and information sharing, this became the major use of the technology. Educators who had been using computer-assisted tools such as word-processing soon began to recognize the potential of the communication tools, as well. The ICT tools that support human-to-human interaction are
commonly referred to as computer-mediated communication (CMC). CMC can be divided into synchronous (real-time) and asynchronous (non-real-time) applications, with chat being the most typical synchronous and blogs and e-mail the most typical asynchronous examples, respectively. A variety of modes of communication constitute CMC, including e-mail, chat, IM (instant messaging), computer conferencing, listservs, bulletin boards, blogs, MUDs (multi-user dungeon, an interactive virtual game played on the Internet by several people at the same time) and MOOs (multi-object-oriented MUDs), to name a few. The macroscopic view of all of these ICT tools in the language education setting is referred to as Computer-assisted Language Learning (CALL). Over the past ten plus years, a distinct literature related to these tools has emerged, and is widely available on the world-wide web (Hubbard, 2009).

However, CMC and CALL are not without their drawbacks. With the exception of most e-mail systems, they do not provide flags for spelling, grammar or syntactic errors, and prevent learners from receiving timely feedback to correct them. The language of CMC may not provide appropriate models that language learners need in other contexts. Research had demonstrated that CMC incorporates both characteristics of written and spoken language (Murray, 2008). The abbreviated shorthand of texts and “tweets” has further exaggerated this differentiation. This informal language
is quite different from that used in other contexts, such as school and work. Thus language learners need to acquire a range of CMC proficiencies, outside of the academic environment, so they can use both the simplified language structures of social networks, as well as, for example, the formal emails for requesting time off from a manager, applying for a job or raising arguments when contributing to a discussion in an on-line chat. In addition, technological tools that facilitate synchronous use favor conversational fluency and community building over accuracy and scholarly discussion (Murray, 2008).

CALL and CMC resources in common use are also not typically geared to the more rhetorically demanding contexts of EAP and the lexicons contained in these programs are not geared to the more specialized content of EAP. While some word-processing programs now have the flexibility to choose the writing contexts among British or American spelling, and normal, business or academic grammar, these capabilities are not yet frequently found in other generic CALL software for ELLs. Use of specific programs and even ESP courses are the norm. Moreover, CALL and language translation programs continue to have frequent problems with poly-semantic words, particularly verbs, as Iacob (2009, p.147) describes in her discussion of the effectiveness of CALL tools. She notes by way of example that they are not capable of
differentiating among the several legitimate uses of the verb “to take”. At this point the critical terms within CMC and CALL remain “mediated” and “assisted”. Thus, at this point, the language teacher still retains the key role in achieving ELL, ESP, and EAP student success.

A command of the English language is a defining factor in the dynamically changing 21st century multicultural workplace and ICT is a tool that is being used to effectively bridge communication gaps. ESP capability is required in business and industry for competitive and contractual responsibilities. Highly skilled employees with ESP competence will excel in collaborative and individualized endeavors and gain the experiences needed to forge strong networking relationships. ICT is serving a crucial role in successful language learning that focuses on an innovative pedagogical delivery system. There are challenges and opportunities regarding the implementation and workplace acceptance of mobile learning platforms.

Mobile devices and digital interactive language learning incorporating strands of instructional technology with ESP software will encourage people to power up rather than power down in the workplace. ELL takes place in colloquial, informal exchanges in the majority of workplace settings with the exception of legal structured vocabulary required for judicial related strategies and practices. In the business world, research and design (R&D),
supply chain management, finance, operations management, and software engineering are a few examples of areas where ESP coupled with ICT is appropriate in our increasingly multidimensional and global society. Multitouch learning devices challenge learners, analyze their progress and maximize engagement resulting in seamless language learning reinforced by impressive pedagogical aspects that will boost comprehension as well as stimulate and enrich accomplishments. In the field of medicine, ICT is demonstrating strong support for ESP students. A study conducted on 60 second-year medical students, comparing ICT and traditional methods, concluded that instruction based on ICT is a more effective method for teaching ESP to the students of medicine, linguistically and methodologically (Arani, 2004). Altbach (2007) noted that the prevalence of the Masters of Business Administration degree has led to the dominant role of English on the world stage of business.

It is possible to customize ESP learning to address specific needs with leading edge technologies that may not be available in traditional classroom settings such as lecture capture and screen capture. These successful language learning processes and strategies will complement traditional English language acquisition models and target specific skills. Opportunities exist for the utilization of cutting edge technology that will enhance workplace
skills and spark inspiration and innovation. ESP learning is supported for unique populations integrating workplace requirements, language learning and transformative linguistic rigor. Not only is spoken language reinforced, but reading comprehension and content retention is boosted by using ICT tools effectively to amplify instruction. In reference to the workplace, Marschan-Piekkari, Welch and Welch (1999) suggest that the free exchange of information relies on an understanding of the context and social norms reinforced in communicating with others. ELAN (2006) confirms that with the growth of business and the installation of multinationals around the world, foreign language knowledge (English) is not only crucial for sales, marketing and export operations, but for enhancing socialization with others. Technology offers the necessary support resulting in data-driven decisions, re-conceptualizing and restructuring strategic utilization of solutions for transformative and leading edge quality instruction. This instruction flows from ESP to workplace competency and is flexible and collaborative and allows learners to accomplish learning objectives and gain a competitive advantage. Learning should and will take place in whatever setting is presented transforming longstanding reliance on traditional methods and broadening existing program delivery.
When focusing on ICT in virtual and online environments, ESP business learning situations offer contextual focus for learning. Students are able to grasp language skills and content more quickly. Learning can take place anywhere and rather than static learning that is more traditional in scope, the open and personalized learning is more flexible and collaborative using interactive tools as well as digital curriculum content providing a portal to the digital world and a more complex environment. Traditional ESP instruction is fundamentally changed and becomes more student-centered. Broad concepts that previously existed drive down to a focus on details coupled with reinforceable language learning. The opportunity exists to pilot innovative, digital structures and online resources building a model for ESP program improvement. The implementation of coupling ESP and ICT may seem daunting at first as digitalization takes a leading role in the instructional process, but focused training and professional development will expand the comfort zone and increase awareness resulting in deeper usage and increased access. Flipping the classroom with hybrid and online, mobile learning methodology will expand digital fluency and ESP in order to effectively teach English language even when blended with traditional face-to-face courses in hybrid settings blended with online segments. It will also provide increased
access to content and learning focused on the multicultural business community.

A new program aimed at improving international student EBP performance is now being offered to students at one US University. Golden Gate University (GGU) in San Francisco, California, is offering a specialized business oriented English language program for ELL students. The GGU Preparation in Language and University Studies (PLUS) program has been designed specifically for ELL students who have limited speaking and writing skills and who participate in a collaborative process to improve their business related English proficiency. GGU has a large Asian international student population within its business programs with students from Mongolia, South Korea, Japan, China and Taiwan needing to increase their proficiency in written and spoken English. PLUS is designed to encourage students to work in collaborative sessions, geared to solving common problems associated with the business curriculum, in which most students are enrolled (GGU, 2014). It employs the same PBL and ICT approaches that the student will confront in the business classroom. The program has a remarkably high 80-85% success rate as reported by Karin Fischer (2011) in her Chronicle of Higher Education article on PLUS.
Comparative Conclusions

ICT has made important and ground-breaking strides in the academic and business worlds. Social success, problem-solving, linguistic rigor, PBL, ICT applications availability, and ICT applications are compared below for academic and business purposes. Table 1 lists a comparison between EAP and EBP across the six parameters of social contexts, problem contexts, linguistic rigor, PBL contexts, ICT applications availability, and ICT applications characteristics.

Table 1. Comparison Between EAP and EBP Against Six Parameters

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<thead>
<tr>
<th>Parameter</th>
<th>EAP</th>
<th>EBP</th>
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<tbody>
<tr>
<td>Social contexts</td>
<td>Collaborative/Collegial</td>
<td>Competitive/contractual</td>
</tr>
<tr>
<td>Problem contexts</td>
<td>Theoretical/Rhetorical</td>
<td>Real world/Practical</td>
</tr>
<tr>
<td>Linguistic rigor</td>
<td>Precise/formal, grammatically and</td>
<td>Colloquial/except legal or contractual</td>
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<tr>
<td></td>
<td>syntactically complex</td>
<td>materials</td>
</tr>
<tr>
<td>PBL contexts</td>
<td>Research design, execution and evaluation</td>
<td>Customer/client contact and internal data management</td>
</tr>
<tr>
<td>ICT Applications Availability</td>
<td>Abundant</td>
<td>Limited to the corporation or corporate community</td>
</tr>
<tr>
<td>ICT Applications Characteristics</td>
<td>Generic Word Processing and Data Analytics</td>
<td>Task specific/ largely finance or focused on specific industry</td>
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ELLs, both in an academic and business context, have been using ICT to further their educational and professional goals. While in the academic world,
advances in ICT can have significant impacts on collaborative interchange. In a business context, ICT provides an edge necessary to make a competitive difference. In academics, ICT supplies a trial-run platform to address theoretical problems that will later become practical and real in the business world. Linguistic rigor may be a challenge both in business and academia, but improved communication technology will facilitate the ESP acquisition.

Partnering PBL with ICT leads to the development of creative strategies for educating in an ESP and EBP environment. A challenge in incorporating ICT into the workplace or classroom is the availability and willingness of the community to integrate these newly available technologies. This acceptance will largely be based on the character of the institution or nature of the industry, but any investment in the improvement of ICT infrastructure is a step toward facilitating communication among all the involved players.

The emphasis on reading, writing, listening and speaking in generic EAP situations will likely limit PBL-ICT applications to vocabulary building and language mechanics. However, when the EAP situation changes to one of subject matter specificity, the environment quickly shifts to one that is rich in potential PBL-ICT applications. Whether the subject matter be the sciences, technology, engineering or mathematics (STEM) related, or more attuned to
business, social sciences or even the humanities, PBL applications enriched with ICT tools are proliferating rapidly.

One area will continue to challenge ICT applications in ESP in all of its senses. The spelling, usage, pronunciation, punctuation and grammatical variations among the native English speaking nations, and the associated publishing and ICT tool building communities, continue to challenge ELLs, be it in an EAP, EBP or any other ESP environment. Some widely used word-processing tools are now equipped with “translating” subroutines to shift between British and American English, but these are only of use in the writing portion of EAP. Native and non-native English speakers will continue to be challenged by these variations in “common” English, but this too will likely be overcome in the near future using ICT to its fullest.

While ICT has provided a considerable advantage, especially for those who are trying to harness proficiency with the English language for business or academic purposes, it is essential to remember to take a step back and take a first principles approach for improved communication across language barriers. The goal has always been a commitment to strengthen and solidify that bond, so that, regardless of the specific outcome, understanding is achieved between or among the contributing parties. ICT will serve as a critical enabler in these attempts, but should not stand alone in an effort to
bridge the linguistic gaps between/among exchanges of information for whatever purposes. Technology has yet to provide us with the “universal language translator” which is of sufficient power to function without error across a multiplicity of purposes. Until that version of ICT is available to us, ELL will remain a dynamic and vigorous global effort, with EAP and EBP serving major roles within. PBL and ICT will provide valuable tools for that effort.
References


