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Steven J. Sacco

San Diego State University (emeritus) and Sacco Global Consulting

Leonilda Renaldo

LeoDynamics

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Open Architecture Curricular Design and the Teaching of Corporate English

Steven J. Sacco

**Director Emeritus, The Center for International Business Education & Research (CIBER)
San Diego State University**

Leonilda Renaldo

**Founder, LeoDynamics
Geneva, Switzerland**

Introduction

English is acknowledged in most quarters as the primary language of international business (Crystal, 2003; Kankaanranka & Louhiala-Salminen (2013); Neeley, 2017). Workplace English or Corporate English is in high demand because of the disparity between the linguistic expectations of multinational corporations (MNCs) and the actual skill levels of nonnative speakers of English (NNSE). NNSEs in this case include engineers, computer scientists, agronomists, managers, and other “white-collar” staff. In a seminal study of over 5,300 companies worldwide, Cambridge English (2016) discovered that 56% of MNCs prefer that their employees possess native or near-native English skills. Most NNSE professionals tested in the study rate at a CEFR B1-Intermediate (CEFR, Council of Europe, 2001).

A major reason for the huge gap in skills levels and expectations (B1 vs. C1) is the fixed curricula used to teach English at all levels in most parts of the world—including the teaching of Corporate English. The fixed curriculum in the 21 countries of Francophone Africa, for example, features a grammar focus, huge classes, and nonnative English instructors (Sacco, 2019). Industry leaders such as Berlitz, Cambridge English, and the British Council are also guilty of presenting a fixed curriculum to its corporate customers throughout the world. We hypothesize that the adoption of Open Architecture Curricular Design (OACD) can narrow the gap significantly.

In addition to the limitations of a fixed curriculum, corporate language providers encounter learners with no experience in English for specific purposes, especially in the fields in which they are expected to work. Long et al. (2019) refer to a lack of experience in English for specific purposes as “language for nebulous purposes.” I argued in a 2019 article in *Global Business Languages* that teaching engineering and science courses in English using a content-based language learning approach would shorten the gap between employee performance and corporate expectations (Sacco, 2019). However, few universities outside of Europe follow use a content-based approach to teach engineering, business, and science subject matter. Consequently, B1 English speakers that we encounter are relatively proficient in social English but are unable to WORK in English (Geranpayeh, 2013).

OACD was coined in 2015 by former Defense Language Institute Provost Betty Lou Leaver (Campbell, 2022), but the partnership in course design and execution between companies and language providers has existed for decades. A term widely used in computer architecture, open

architecture uses the “adding, upgrading, and the swapping” (Wiki, 2021) of software components to facilitate the design of a structure such as a home, building or skyscraper. Open Architecture Curriculum Design, in the context of corporate language teaching, encourages companies and language providers “to add and swap activities and tasks on a continual basis” according to the company’s needs, student learning styles specifically their styles, strategies, level of fossilization, interests, and zone of proximal development... according to a thematically based syllabus based on authentic materials” (Leaver, 2022). In the case of an open architecture approach, the course and syllabus are co-created and co-managed by company representatives and language providers. A company’s active part in the design and modification of a language course prevents language providers from “guessing” the needs of a company or client, thus students take an active part in structuring, modifying, and shaping their own learning experiences. OACD systematically customizes instruction to individual learner needs.

In our model, systematic customization also applies to the corporations and companies that hire us to provide language instruction. For Hewlett-Packard (H-P), this involves offering customized courses in Japanese, Spanish, and Italian that are taught at its headquarters at convenient times of H-P’s choosing. For senior managers at the UN World Food Programme in Tunisia, customization involves offering report writing and professional communication via Skype at the end of their workday. For French-speaking executives at Jaeger LeCoultre and SwissBioinformatics, it is developing strategies to lower stress levels as they prepare for videoconference presentations in English. For other clients throughout the world, it means offering a virtual reality platform to provide 3D immersive corporate settings in the workplace. Each is developed after discussions between the client and the language provider.

Our use of OACD in corporate language learning will feature three scenarios: (1) an online course designed for hundreds of users, (2) one-on-one instruction, and (3) the emerging use of virtual reality. Our model, in part, has its roots in military language instruction conducted for nearly two decades at San Diego State University’s Language Acquisition Resource Center (LARC). LARC’s model comprises three main elements: a detailed needs assessment, customized language instruction, and constant feedback by all stakeholders (the military, end users, and the instructional staff) at all levels of development and execution. In this paper, the authors will describe how an adaptation of the LARC model of OACD is used in a corporate context.

Online Course Design: A Nationwide Program in Safety English

GAI, a pseudonym, is a major global agribusiness headquartered in the U.S. Midwest. GAI employs a larger number of Hispanic workers for its rice, wheat, corn, and sorghum mills throughout the U.S. Most Hispanic workers possess limited English proficiency (LEP) which puts them at high risk since safety is the major concern at all milling and processing facilities. Nearly all work is conducted in Spanish nationwide despite the corporation’s mandate of English as its official work language (Sacco, 2017). In 2015, GAI hired the senior author’s consulting firm to design a plan to enhance the English skills of all Hispanic workers in adherence to GAI’s official English-only policy.

To complete the mission for GAI and provide language instruction using an Open Architecture Curricular Design, the firm conducted a week-long onsite visit to observe the plant's operations, interview all stakeholders, assess workers' English skills, and propose an action plan to meet the corporation's needs.

The first step to incorporate an Open Architecture Curricular Design to strengthen workplace English skills is to conduct a needs assessment. Friedenberget al. (2003) divide needs assessment into two parts: an institutional assessment to better understand the client's operations and a language assessment to measure the current language skills of the clientele, in this case NNSE Hispanic rice mill workers. To design a language curriculum that features OACD, the corporate language provider must thoroughly understand the corporation's philosophy, history, and operations. These include . . .

- Workplace operations,
- Workers' job duties,
- Workplace safety policy and procedures,
- Current English skill levels, and
- The concerns of all stakeholders.

Like all the components of Open Architecture Curricular Design, the needs assessment must be flexible, responsive, and ongoing. In the case of GAI, that included pre-visit conference calls with company executives, daily interviews with the plant manager and senior managers, observation of workers and operations in every department, language assessment interviews with selected Hispanic workers, observations of pre-shift meetings, and discussions with ESL instructors at the local county office of education.

The dominant theme emanating from the institutional needs assessment was safety, which required unanticipated additional steps to collect key information. Prior to the needs assessment, GAI boasted a decade-long record of zero major injuries or deaths. Training accounts for the safety record, which meant that the assessment team needed a quick immersion into safety training. Upon request, GAI senior officials agreed to provide the assessment team with safety training, access to a worldwide videoconference discussing the week's safety incidents and injury-reduction best practices, daily interviews with the safety director, and the witnessing of a controlled explosion due to dust accumulation, a constant concern in any mill.

Safety training consisted of studying the corporate safety manual, viewing a PowerPoint presentation of 83 safety hazards, and watching a 50-minute safety video. Since workers must attain a perfect score on the safety exam (offered to Hispanic workers in Spanish), the assessment team took and passed the same exam. Safety procedures cover all worker and manager behavior 24 hours a day whether one is at work, at home or conducting daily activities such as grocery shopping. We discovered that no language program could be designed without using safety as a major theme of instruction. Prior ESL instruction at local schools and the community library focused primarily on conversational English.

Corporate language providers often limited themselves to face-to-face instruction. For example, a class of 15 students over a 10-week period costs between \$15,000 and \$20,000. When

presented with a customized face-to-face instructional option, the senior Vice President of GAI exploded in frustration:

“We need help with Hispanics at all of our U.S. operations, not just the rice mill you visited.”

The senior author and his LARC colleagues changed directions and presented an alternative plan to create a Safety English program online (Sacco, 2015). The online program needed to address current English needs identified by senior managers, shift supervisors, and Hispanic workers.

Senior managers and shift supervisors identified the following tasks:

- understanding pre-shift team meetings,
- understanding all job-related instructions,
- socializing with managers,
- describing problems to managers and other coworkers,
- reporting all emergencies via 911 or shift supervisors,
- reporting safety hazards to shift supervisors or managers and
- writing shift reports and safety incidents in English.

Hispanic workers added . . .

- understanding all terminology related to their job
- understanding all signage,
- understanding and completing GAI forms and inspection sheets,
- providing and receiving instructions,
- interacting with client truck drivers and customers,
- knowing how to ask questions in English (“asking for new gloves”),
- leaving notes to coworkers and shift supervisors,
- reporting broken equipment to shift supervisors

The senior author consulted with LARC course designers and created the specifications for the online Safety English program. The program would be used by Hispanic workers in GAI mills nationwide. E-learning authoring tools, such as Articulate Storyline, in combination with Learning Management Systems (LMS), have the ability to . . .

- “Incorporate video, audio, text, interactive activities, and learning checks into the e-lesson;
- Integrate ‘gamification’ techniques to inspire learner motivation and sustainment, such as digital badges and trophies, levels, points, leader boards, competition between GAI facilities;
- Be published in a variety of ways to give learners multiple access points, including on mobile devices;
- Incorporate learner input to enhance instruction;

- Allow administrators to track students' time on task, number of attempts, course completion, quiz results, and other detailed information to “datify” and better understand changes and growth in learner performance; and
- Include GAI professional development training material as course content” (Sacco, 2017).

We created the online Safety English Program based on the principles of Transformative Language Learning and Teaching (TLLT) discussed in Leaver, Campbell, and Davidson (2022). During program preparation, senior managers, shift supervisors, and Hispanic workers discussed and selected materials and activities for use in the program. We organized the course materials in modules and included authentic materials such as mill signage, shift reports, directions, and clips from pre-shift meetings in addition to survival modules to help workers cope with everyday life. The program was self-paced, enabling Hispanic workers to proceed at convenient times of the day or night. We also provided an option for learners to compete with their coworkers at the mill or with coworkers at mills throughout the country. The end of each module asked learners to provide on-going diagnostic feedback.

LeoDynamics: Building “Confidence, Clarity, and Conviction” One Corporate Executive at a Time

OACD-oriented corporate language providers often teach free of the constraints handcuffing academic language instruction. LeoDynamics, headquartered in Geneva, Switzerland, teaches customized *Boardroom English*® courses to French-speaking executives without the rigidity of (1) a fixed location as in a specified classroom on campus, (2) time constraints as found in semesters and quarters, (3) required content coverage as found in textbooks and course syllabi or (4) formal evaluation as found in grading. According to Saldutti (2020), in such a rigid system, courses “must always move *forward*, and never *sideways* or *backwards* into related or previously-covered content” (p. 1). LeoDynamics uses a method that business icon Steven Covey labeled as compass-based, not time-based (Saldutti, 2020).

Leonilda Renaldo, the firm’s president, offers extraordinary non-linear flexibility, resilience, proactive shifts, and real-world experimentation. At LeoDynamics, executives and instructors negotiate a bendable instructional schedule, method, materials, and activities in one-on-one or a small-group instructional setting. Before the pandemic, Renaldo taught courses onsite at the offices of major companies and corporations based in Geneva. During the pandemic, Renaldo switched over to F2F instruction via Zoom, working with individual executives or a small group not surpassing four. As an unexpected consequence of the pandemic, LeoDynamics can now provide customized instruction for executives located anywhere in Europe.

Renaldo’s focused approach is a contrast to generic corporate English instruction provided by giants like Berlitz, Cambridge English, and British Council. “We give people the tools and skills to have confident conversations by learning in a culture of fun, clarity, transformation, inspiration, tenacity” according to Renaldo. LeoDynamics selected *Boardroom English*® as the theme for her native French speaking executives who are under increasing pressure to work in English. Her coaching for individual executives or small groups combines language instruction with personal development. Despite the title *Boardroom English*®, Renaldo customizes each

course based on the needs of her clients. The end result is the attainment of C1 skills as recommended by thousands of multinational corporations queried in the landmark Cambridge English (2016) study.

Renaldo faces unique challenges with her clients. Self-doubt is the major obstacle since most of her clients have been educated in the French educational system where perfectionism in speaking English was ingrained. To reduce self-doubt, Renaldo creates fun environments to reduce stress. Her activities include games, role playing, storytelling, and improv theater, which are designed to assist executives to become more agile linguistically and more comfortable as they to think on their feet. The growth of self-confidence guides Renaldo's executives as they perform boardroom activities such as conducting meetings, making presentations, and providing company visits for investors and clients. Renaldo's method was recently published on Yahoo Finance where she equips companies and individuals to be more confident in global business (Newsfile Corp., 2022).

Virtual Reality: A New Tool in Open Architecture Curricular Design

Unlike GAI mill workers, most nonnative speakers of English come to Corporate English classes already at B1 after nine years of formal English classes. Our clientele already knows grammar so there is no need to repeat grammar instruction. In the past, instruction took place in classrooms or on Skype, which cannot replicate real work-related settings. For example, the classroom cannot be transformed into a rice mill or a hotel lobby or a board room or a bank with an ATM. Additionally, most providers like Cambridge English, the British Council or Berlitz teach Corporate English with prescribed textbooks and methods. Customization is impossible when a provider offers a Business English course with 20 students representing 10 corporations and five industries. Furthermore, the provider, not the corporate client, usually selects the place and time of instruction.

The use of virtual reality in corporate language instruction blends naturally with Open Architecture Curricular Design. OACD calls for integrating scenario-based and content-based instruction in a modular curricular design (Corin, 2022). Virtual reality platforms can do just that by providing 3D sensory-rich environments in high-immersion settings unlike the fixed curricula used in traditional workplace language programs (Kaplan-Rakowski & Wojdyski, 2018). Carefully designed virtual reality platforms present "authentic and unadapted" (Campbell, 2022) materials and daily communication. Instruction is "textbook-free" (Leaver, 2022) though they can incorporate language references and practice hidden within the corporate-based scenario. Disorienting dilemmas to engage critical thinking and higher-order thinking skills are interwoven into each scenario via role-playing and decision-making activities. Virtual reality platforms provide spaces for simulation for remote real-time spoken and/or written interaction with other interlocutors (Melchor-Couto, 2019). Virtual reality can also provide anonymity through the use of learner-designed avatars, providing a low-anxiety environment and lending itself to lowering affective filters (Krashen 1981). Finally, virtual reality platforms are co-designed in partnership with the client and end users who also participate in ongoing modification of content.

In the teaching of Corporate English, a virtual reality platform simulates authentic places based on the need of the client. At Unilever, authentic places include offices, the corporate

boardroom, the cafeteria, and even the elevator. At Cargill, a virtual reality platform includes the individual departments of the processing plant, key locations such as a grain elevator, a port and a shipping terminal, as well as equipment and machinery such as trucks, tractors, and forklifts. Regardless of corporation, the client selects the authentic places to mimic immersion.

To illustrate, *The Business Trip* is a unit designed for the needs of corporations who send their NNSEs abroad to conduct business. *The Business Trip* incorporates the authentic places listed by corporations we work with. They include the airport (the check-in, security, customs, baggage claim), transportation (cab, bus, metro), entertainment (meals and museum visits) and the hotel (check-in, the restaurant, the ATM). *The Business Trip* operates in a blended learning situation where instructors provide online remote-based instruction. In alignment with TLLT and OACD immersive VR language lessons provide an opportunity to use language in “the real world” while still providing features within each immersive VR scene that bring scaffolding, structure and support to develop confidence with language skills. The overall goal of each lesson is to provide a supported experience in which the learner can move from review of language forms to task-oriented experience that encourages language fluency.

The basis of each lesson proceeds as follows:

1. *Orientation and presentation (pre-task) in the VR room.* The instructor introduces the setting and the task and draws on learners’ past experience in similar locations. In *The Business Trip*, the instructor introduces the airport and asks questions about the types of activities most often accomplished at an airport etc., while presenting the task for the day.
2. *Task development – independent exploration and practice.* Learners independently review the room, the objects and language features within it, vocabulary, and task scripts already present within the VR room. In *The Business Trip*, the instructor sends students off to explore the airport and gather relevant information for completing the task of “checking-in to your flight” i.e., vocabulary icons located throughout the scene as well as dialogues scripts and audio clips.
3. *Productive practice* is a role-play activity based on leveled scripts provided in the VR room as models to support learners in successfully completing the real world task. Learners do not memorize or internalize scripts. They use scripts to examine language in situation and look at how to address challenges in situation. In *The Business Trip*, the instructor rallies students to the check-in counter and initiates the role-play “Checking-in for your flight.”

Following each instructional period, sessions end with a final reflection and connection to real world experiences.

The elements within each scene include language, vocabulary, grammar, and scripts:

- *Language:* Learners review the room, the objects, language features, vocabulary, and scripts. Language is room- and task-specific, though non-essential language elements are

provided to support L2 development and promote learning through curiosity and interaction.

- *Vocabulary*: A large number of vocabulary items have been provided in each situation, allowing for participants to review and explore language necessary for a specific experience. Instructors clarify if questions arise and build on vocabulary knowledge necessary to negotiate challenges. The goal is not to drill vocabulary or complete vocabulary review activities. The purpose of vocabulary is to provide support to aid in successful navigation of real world challenges or disorienting dilemmas.
- *Grammar*: As most of the scenarios and challenges are designed to be real world and authentic, most grammar used in situations will be simple present, present and future continuous and simple future. At no time do facilitators lead grammar lessons. If challenging grammar clarification arises, use facilitator prompts to park and redirect, to maintain focus on the authenticity of the experience.
- *Scripts*: Leveled scripts are provided as models to support learners in successfully completing the various real world tasks that need to be addressed. Participants should not be asked to memorize or internalize scripts. Scripts can be used to examine language in situation and look at how to address challenges in situation. Most scripts follow the traditional authentic format of (1) greeting interaction, (2) exchange of information, (3) presentation of problem, (4) negotiation of options, and (5) conclusion/gratitude and farewell exchange. With the VIR platform, the instructor has the option to initiate a challenge or disorienting dilemma. For example, a credit card gets declined or a flight gets cancelled.

The teaching of workplace language learning via virtual reality is flexible. Local providers such as Cambridge English can use a VR platform as a part of instruction; corporations can use a distance-learning format to receive language instruction for their employees on site when they purchase ocular headsets.

Conclusion

Language learning is becoming increasingly important, especially among multinational corporations. English, as the world's business language is the most popular, but other languages like Arabic, Chinese, French, and Spanish remain in high demand. Rakuten, the Japanese giant and Amazon rival, is mandating C1 Advanced skills in English for all of its employees, even mandating the use of English in its operations in Japan (Neeley, 2017). Hundreds of corporations are adopting the Rakuten model, thereby expanding the need for corporate language instruction.

The growing movement of Open Architecture Curricular Design is gaining entry into corporate language learning from the chains of fixed, one-size-fits-all curricula. Fixed curricula and classroom-centered language instruction will soon evolve into authentic, needs-driven, task-based, learner-centered curriculum and methodology. The use of virtual reality is a major tool in

our model as it provides real-life, work-related immersive language learning in scenario-based and content-based instruction in a modular curricular design.

A detailed needs assessment is the antecedent to the development of an OACD-based Corporate English Program. It provides a first-hand, on-site study of corporate practices and activities, along with input from all stakeholders including corporate executives and managers and, most importantly, from end users. In the GAI needs assessment, corporate executives, at first, desired their employees to “communicate in English 100 percent of the time.” However, the needs assessment team narrowed the “communicate in English” goal, recommending a focus around the theme of safety, thus leading to the design of an online Safety English Program.

Open Architecture Curricular Design is a huge upgrade from current corporate language learning providers, even industry leaders such as Berlitz, Cambridge English and the British Council. These providers seldom offer onsite, customized instruction designed for individual companies. They rely on classroom offering such as *Business English* to learners representing a variety of companies and industries. These courses are semi-customized relying on textbooks that are anchored in content until the arrival of the next edition. Companies seldom provide input into their specific ESL needs. Conversely, virtual reality platforms are pliable and can be modified based on client and learner input within a month. The classroom is limited in its ability to provide real-life simulated workplace language learning offered via a virtual reality platform. In many developing nations, nonnative English speakers serve as instructors whereas our virtual reality instruction uses only native, virtual-reality trained instructors. Language learning via virtual reality is most effective when it is grounded in Open Architecture Curricular Design.

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