Catalyzing Plurilingualism and University-level Academic Discourse Competence: The Language-Integrated Knowledge Education (LIKE) Approach

STEVEN L. THORNE

Portland State University & University of Groningen

ABSTRACT

Gaining the capacity to successfully write and speak in academic and professional contexts presents challenges to native speakers of English as well as to learners of second and foreign languages. The Language Integrated Knowledge Education (or LIKE) project proposes the use of language-specific online portfolios designed to enhance the ability to fully participate in specialized discourse communities. LIKE portfolios could accompany any course and would enable university (and potentially secondary level) students to actively accumulate and master relevant academic and professional terminology and discourse practices which are central to their field of study. Research shows that mastery of general academic language as well as discipline specific terminology is catalytic of academic success. Participation in the LIKE project would heighten students’ awareness of academic language through an explicit focus on the discourse expectations that articulate with scholarly excellence. Students would complete LIKE portfolios in English and would also have the opportunity to do so in additional languages. Foreign language LIKE portfolios could serve to bridge between foreign language requirements (e.g., for B.A. students) and the application of foreign languages to academic and professional topics of relevance.

INTRODUCTION

Academic success requires students to use particular forms of language that include academic register discourse as well as discipline specific vocabulary, collocational patterns, and sensitivity to issues of linguistic register and genre. This is a tall order. Indeed, gaining the ability to appropriately and successfully communicate in academic and professional contexts presents challenges for native speakers of the language of instruction as well as for learners of second and for-
eign languages at all levels. Yet relevant to all academic and professional pursuits is the fact that human knowledge is fundamentally mediated by specialized and technical language, often in tandem with other semiotic systems (e.g., mathematics, computer languages, musical notation, biological and chemical equations, and graphical renderings, among others).

This brief exposition describes a pedagogical initiative – Language-Integrated Knowledge Education (LIKE) – that is designed to make explicit, and thus more readily learnable, the linguistic resources necessary for full participation in written and spoken academic contexts. The LIKE approach seeks to improve student success, in university study and beyond, by focusing explicit attention to the discourse practices that are most relevant for subject matter learning, academic writing, and verbal engagement in academic and related professional settings. Translated into a pedagogical approach, this involves raising learner awareness of grammatical, lexical, stylistic, and genre choices in order to realize disciplinarily specific meanings for textual, interpersonal, and conceptual purposes. The core of the LIKE approach takes the form of (potentially) plurilingual academic language online portfolios. LIKE portfolios could accompany any course of study – the sciences, mathematics, humanities, social sciences, and professional fields – and would enable university students to actively accumulate, reflect upon, and eventually master relevant academic and/or professional terminology and discourse practices that are central to any branch of knowledge, and to do so in multiple languages. Importantly, using an e-portfolio platform would allow students themselves, as well as researchers and related faculty, to empirically track language learning, thus contributing to a better understanding of the development of scholarly rhetorical competence in the first and additional languages (Fischer, 2012).

Addressing Contemporary Challenges

As described by the literacy and second language acquisition researcher Lilly Wong Fillmore, “What is it that differentiates students who make it from those who do not? This list is long, but very prominent among the factors is mastery of academic language” (2004, n.p.). Put more strongly, mastery of general academic register language as well as discipline specific terminology is catalytic of academic success (e.g., Halliday, 2004; Hyland, 2012). In North America, the issue of academic language development has been prominent in research and educational policies that address the needs of English language learners (e.g., Cummins, 2008; Schleppegrell, 2004). However, considerably less attention has focused on the struggles that many other groups also routinely experience, including native and expert English speakers, many of whom find academic language to be new, difficult, and often obfuscating. Additionally, learners of foreign languages have few opportunities to apply the languages they are learning to their major fields of study. Indeed, foreign language learning, especially the first few years of study, is often isolated from other intellectual and knowledge producing dynamics in the academy (i.e., a manifestation of the ‘siloh problem’). Arraying an emphasis on academic discourse competence across multiple languages has the potential to
better integrate foreign languages into the broader intellectual milieu of university life. These are areas in which LIKE could serve large numbers of students during the lengthy process of developing plurilingual academic discourse abilities that foster trajectories of success in an increasingly mobile and globalizing world.

**Theoretical Grounding**

The rationale for explicit attention to academic language has a strong research base. Research on student learning outcomes in science, technology, engineering, and mathematics (or STEM) have shown that mastery of discipline specific language fosters academic success (e.g., Halliday, 2004; Sfard, 2008). Sfard, an internationally visible researcher in mathematics education, has gone so far as to describe mathematics relevant cognition with the term “commognition”, a neologism that combines the words ‘communication’ and ‘cognition.’ Sfard’s rationale for the notion of commognition is the extensive research that shows the relevance of disciplinary linguistic expertise as a primary factor leading to full participation in academic communities of practice. As described by Sfard, commognition is “grounded in the assumption that thinking is a form of communication and that learning … is tantamount to modifying and extending one’s discourse” (2007, p. 567).

Related research suggests that conceptual thinking in fields as diverse as the life sciences, engineering, philosophy, and critical theory are greatly enhanced by mastery of the discourse practices that comprise both written and spoken communication in these fields. Hubbard (2010), for example, has described the use of an exemplary science thesis as the source for developing pedagogical materials for the learning of core academic discourse functions such as defining, contrasting, attribution, hedging, and expressing conditions and findings, among others. More general analyses of spoken and written academic discourse have helped to isolate frequent and recurrent patterns of language use that occur significantly more often in academic than in non-academic contexts (e.g., Biber, 2006; Conrad & Biber, 2004; Simpson-Vlach & Ellis, 2010), the results of which have subsequently been used to develop English for academic purposes instructional resources and which would inform the evolution and implementation of the LIKE approach.

It is also relevant to note the importance of verbal-interactional situations such as classrooms, laboratories, discussion sections, and small group seminars, active participation in which is foundational to conceptual development. As described by Fusaroli & Tylén:

> language is a skillful, joint activity through which interlocutors attune to each other and the task at hand co-constructing a shared cognitive niche. Through social interaction, linguistic practices (words, expressions and whole jargons) are continuously evolved and developed to accommodate local coordinative needs. (2012, p.104)

Full membership in knowledge producing communities (academic and otherwise) requires facility with the historically accumulated discourse, or linguistic exo-
Existing Resources and Rationale for the Inclusion of English (and Other L1s)

As initially conceptualized (but adaptable to local student, faculty, and university interests and goals), a LIKE portfolio would involve a structured but largely independent student-directed process that could be associated with any course or subject matter. It would encourage and help students to design and develop discipline specific language portfolios in English and in other world languages they are studying. For many B.A. students, the completion of a foreign language LIKE portfolio could potentially substitute for, or follow, the final term of a mandatory foreign language requirement. This would allow students to apply and expand their developing foreign language abilities to their major field of study, and in some cases, students who would otherwise have been studying a foreign language solely to fulfill a language requirement may become inspired to continue their language learning. International and bi- or plurilingual students could be encouraged to develop LIKE portfolios in both their native language(s) as well as in English. As more students developed LIKE portfolios in multiple languages, a set of discipline specific linguistic repositories would be created that would form the foundation for pedagogically mediated introductions to core linguistic assets that are essential to full participation in the relevant academic discourse communities that comprise a field of study.

The ultimate aim is to embed LIKE portfolios in an open and intelligent adaptive language environment (ALE) to more fully support the process of student-initiated critical language awareness. ALE components would include access to academic and discipline specific written and spoken language corpora, corpus and computational linguistic tools such as collocations and frequency lists, data driven learning activities (e.g., Boulton, 2009; Johns, 1991), and intelligent computer-assisted language learning (ICALL) tools (Heift, 2010a, 2010b; Heift & Schulze, 2007; Schulze, 2008). Importantly, students would benefit from orientation to productive use of such tools and thus online tutorials as well as hands-on workshop orientations would be designed (Hubbard & Romeo, 2012). Lastly, building in learning analytics to track user behaviors, in combination with other assessment measures, would provide the data necessary to empirically document diverse usage patterns, their correlations with successful completion of LIKE portfolios, and to support innovation-process research that would iteratively improve the design of the e-portfolio environment (Fischer, 2007, 2012).

In terms of practical design and implementation, the LIKE approach benefits from existing pedagogical initiatives such as Content and Language Integrated Learning (or CLIL), which is widely used in the European Union, English for Academic Purposes (EAP), which emphasizes the development of linguistic skills necessary for success in English-speaking academic contexts, and widely used e-portfolio approaches to language study. Exemplars in the latter area include projects emerging as part of the Common European Framework of Reference for
Languages, such as the European Language Portfolio (http://www.coe.int/t/dg4/education/elp/, see also Lenz, 2004; Little, 2009), the collaborative oral language proficiency project WebCEF (CEF = Common European Framework, http://www.webcef.eu/), and the foreign language specific LinguaFolio developed at the Center for Applied Second Language Studies (https://linguafolio.uoregon.edu/, see also Cummins, 2007), among others.

Much like these aforementioned approaches, which presume that students would be developing academic discourse competence in a foreign or second language, the LIKE project was initially conceptualized as a way to encourage English-speaking university students to continue their foreign-language study by applying it to their academic discipline. However, in discussion with numerous university colleagues across various fields, particularly science, technology, engineering and math (or STEM) fields, it became apparent that native speakers of English would also benefit, potentially greatly, from this same approach in their native language. This is especially the case for at-risk populations, such as first generation college students, students who are first or second generation residents of the US (or other English speaking countries), and students from traditionally disenfranchised socioeconomic and ethnic communities. As described by a colleague in the life sciences at a major urban university, success in the study of biology (in English) involves learning a new language, the language of biology (Todd Rosenstiel, personal communication). Development of linguistic and conceptual expertise in one’s native language (or to borrow again from Sfard (2007) extending ones discipline-specific commognition) also aids conceptual development in additional languages. Cummins, for example, has argued the following:

at deeper levels of conceptual and academic functioning, there is considerable overlap or interdependence across languages. Conceptual knowledge developed in one language helps to make input in the other language comprehensible (2000, p. 39).

This provides the rationale for proposing that all students, across all academic fields, would benefit from explicit attention to the language and genre conventions of their discipline, in both their native language as well as any foreign languages they may be learning or wishing to use for academic purposes in the future.

**Thoughts on Process**

LIKE portfolios would begin in the first or native language and early in a student’s tenure at university. Questions guiding students could include: What terminology is specific to your field or course of study? What sorts of phrases and collocations (words that probabilistically co-occur with high frequency) do you notice in textbooks, research articles, lectures, and other materials? What vocabulary and patterns of usage seem most relevant for writing lab reports, documenting computer code, presenting business plans, writing proposal abstracts for literature conferences, expressing the clarity of argument encouraged in analytic philoso-
phy, or engaging in post-structural analysis of politics in the public sphere? Exemplars for each of these communicative contexts can be analyzed at the level of morphosyntactic realizations and broader elements of discourse convention, style, and genre, and these are precisely the adaptive linguistic skills that will prepare students for both success in undergraduate education and for academic and professional life post-university.

LIKE portfolios could eventually be required and/or credit bearing in some departments or universities, but the initial idea is to consider non-credit acknowledgement of completion (e.g., a system such as badges or a discipline specific foreign language endorsement). As mentioned above, in the case of foreign languages, a LIKE portfolio could potentially substitute for, or contribute to, the final component of a mandatory foreign language requirement.

Using an online portfolio shell on a “private” setting, students could keep a running log and accompanying reflective commentary on academic forms of discourse that they hear, read, and/or need to incorporate into their written work. Students would be encouraged to initially do this in their native or first language, and over time, expand to include foreign languages they are learning. When a LIKE portfolio meets the yet-to-be-specified requirements, it would be submitted for peer review (a system that is now widely and successfully used in MOOCs, and which lessens, but does not completely eliminate, the need for faculty oversight). All LIKE portfolio data would be designed to contribute to the open education movement, potentially resulting in inter-university collaborations and partnerships. Additionally, as part of a LIKE portfolio, students may choose to contribute emerging disciplinary and linguistic expertise to open knowledge fora, such as Wikipedia, that are constantly in need of topical entries in both English and other world languages. In this scenario, LIKE portfolios would benefit participating students as well as contribute to the global knowledge economy.

LIKE portfolios would be repeatable and/or augmentable as students continue to learn more about their major of study. New languages could be added at any time. The LIKE portfolios themselves could be shared by students with future employers and be used as evidence of academic discourse competence as part of admission to graduate programs. Students who express their ability with world languages through completing LIKE portfolios, and experience the excitement of actually applying a foreign language to their major discipline, may find this experience to be the catalyst that results in continued foreign language study.

IN SUMMARY

Students would complete LIKE portfolios in English and would also have the opportunity to do so in additional languages. Additionally, foreign-language LIKE portfolios would serve to bridge between many universities’ one or two-year foreign language requirement and the application of foreign languages to academic and professional topics of relevance.

In this way, the LIKE approach addresses a number of pressing contemporary challenges in higher education:
(1) Foreign language study at all levels (K-12 and university), especially in the US, is typically separated from most academic fields of study.

(2) Foreign language departments and programs have suffered due to recent budget constrictions, and part of this stems from the perceived peripheral role of foreign-language education vis-à-vis academic and professional success. LIKE would help reposition foreign language learning in the academy as a closely integrated component of discipline specific content learning.

(3) In English-medium universities, native speakers of English often experience significant difficulty with both general and discipline specific academic discourse, and thus would benefit from explicit attention to the linguistic resources that enable academic success.

The LIKE approach seeks to heighten students’ awareness of academic language through an explicit focus on the discourse expectations that articulate with academic excellence (Blyth, 2009). By having students actively produce LIKE portfolios, and through the process of searching for, selecting, producing, and reflecting on relevant lexical items, phrases, linguistically mediated concepts, and common genre conventions, they will play agentive roles in the construction of the linguistic knowledge relevant to their discipline. As has been long called for in various branches of applied linguistics, LIKE portfolios would also help students as well as external evaluators to empirically and longitudinally track language development (e.g., Fischer, 2007; Ortega & Byrnes, 2008). Processes that require the explicit objectification of academic discourse have been shown to raise awareness of the importance of using language precisely and purposefully (e.g., McCarthy & Carter, 1994; Thorne, Reinhardt, & Golombek, 2008), and thus will cultivate an ability to do so both while immersed in university curricula as well as in professional and intellectual contexts in the future, consequently serving the goal of life long learning.

NOTE

1 In common usage, plurilingualism and multilingualism are often seen as co-equivalent terms, with the former associated specifically with the Council of Europe’s language policy. At a descriptive level, both terms have been critiqued in recent sociolinguistics literature as problematic ideological abstractions as each suggests the notion of multiple discrete and stable linguistic varieties rather than the mixing and hybridity that is often in evidence in contemporary communicative repertoires (e.g., Blommaert & Rampton, 2011; Otsuji & Pennycook, 2010). Acknowledging this critique but also needing a term to describe the learning of multiple linguistic repertoires, I follow a growing trend that defines multilingualism as the presence of multiple languages in society, and plurilingualism as an individual’s experience with, and use of, multiple languages, sometimes in combination with one another (for a discussion, see Jørgensen, Rindler-Schjerve, & Vetter, 2012).
REFERENCES


