
Content-Based ESL Writing Curriculum: A Language Socialization Model

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Abstract

In this paper, we propose a content-based, advanced level adjunct English as a Second Language (ESL) instructional approach for writing from a language socialization theoretical framework using basic principles of systemic functional linguistics (Halliday, 1994) and sociocultural theory of learning (Vygotsky, 1986). We emphasize an ESL curriculum that stimulates ESL students to learn domain specific knowledge, to develop cognitive and meta-cognitive learning and thinking processes, and to learn rhetorically and lexico-pragmatically appropriate writing (Raimes, 1983). We provide a complete review of the theoretical principles derived from research based on integrative curriculum for second language (L2) students. We explain how an adjunct course model (Adamson, 1993; Mohan, 1986) can be used to design the specifics of the course.

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Thousands of international non-native speakers of English study in American postsecondary institutions each year. Many of these students enroll in English as a Second Language (ESL) or Intensive English programs (IEPs) to improve their English in general and academic writing in particular. Such knowledge is important because academic writing is a severe problem for many international students as many of them are not taught how to write academically even in their first languages (Shi & Beckett, 2002). Those who come with prior knowledge about writing are often trained to write differently than what is required in North American universities (National Research Council [NRC], 1999a).

Furthermore, the existing writing curricula are designed to teach ESL writing as a separate subject typically focusing on fixing sentence level grammar problems. They neglect to link writing instruction with authentic content area writing assignments that non-native English speaker students encounter in their real studies. Such neglect ignores calls for integrated teaching of language, subject matter content, and higher order thinking skills by the National Research Council (NRC) (1999a, 1999b), leaving ESL students incapable of accomplishing writing tasks required by their respective

disciplines, even after taking several writing courses in ESL programs. Such phenomena not only cause frustrations and despair among ESL students, their ESL teachers, and content area professors, but also jeopardize the educational agenda. This paper addresses these issues through a curriculum designed for an advanced level IEP to teach subject-matter content and to language socialize ESL students in context (Ochs, 1989). That is, the curriculum teaches ESL, ESL writing, and subject-matter content simultaneously in an authentic context.

The specific purpose of this educationally applied paper is to share a much needed writing curriculum designed from sound socio-cultural (Vygotsy, 1971) and Systemic Functional Linguistics (SFL) (Halliday, 1994) perspectives. This ESL instructional approach has the objective of using a curriculum following a language socialization model that integrates cognitive processes and learning strategies with subject matter across content areas. Through immersion in this active and problem-solving based approach, ESL learners can develop authentic communicative skills in English through using cognitive and emotional or affective strategies in a socioculturally appropriate manner and learn rhetorically and lexico-pragmatically appropriate writing skills (Raimes, 1983). This integrative curriculum also stimulates ESL students to develop higher level critical thinking skills by becoming bilingual, bicognitive (i.e., thinking in both languages using both languages as methods of instruction), and bicultural (i.e., developing cultural identities that identify with both cultural backgrounds). As such, this paper responds to a national need for high quality curricula based on theory and research knowledge.

This paper contributes to bridging a gap in the ESL writing curricula literature, it responds to the NRC's call for a responsible curriculum that aims to correct prior misconceptions, and empowers students with new knowledge to succeed in their new environment. According to the NRC (1999a), we need to teach students the expected ways of organizing knowledge, cognitive and meta-cognitive strategies, which can facilitate retrieval of information and transfer organizational and problem-solving skills. We need to design curricula that integrate three critical elements for being a successful learner: (1) in depth knowledge of content and topic knowledge (subject matter), (2) conceptual understanding in order to gain awareness of knowledge structures in various disciplines, and (3) critical thinking skills to be able to engage in meta-cognitive strategies to self-monitor learning (i.e., learning how to learn, how to think, and how to solve problems). As pointed out by the NRC (ibid), "Helping students to recognize and build on knowledge structures is a crucial goal of teaching" (p. 26). According to the NRC, students should be taught to learn through multiple examples, practice application of concepts to multiple real-life problems connected to subject matter, and make connections between prior and new knowledge. It also points out that all students learn "processes of comparison, evaluating same/different distinctions, categorizing the new problem in terms of what seems familiar or unfamiliar and evaluating feedback" (National Research Council, 1999a, p. 27). Extensive research from the 1980s and 1990s (Bruner, 1990; Cole, 1996; Tobin, Wu, & Davidson, 1989) shows that learning (i.e., both in terms of acquisition and use of knowledge) takes place through interaction between internal variables such as individual cognitive processes and external factors such as the context of cultural and social norms and expectations. What this means is that students, particularly ESL students, need external help for internalizing the new linguistic and socio-cultural knowledge that they need to acquire to be successful in authentic contexts. The instructional approach for advanced level ESL writing we are proposing in this article discusses and illustrates how these can be done theoretically as well as practically.

Specifically, we provide a complete review of the theoretical principles derived from research based on integrative curriculum for L2 students. We explain how an adjunct course

model (Adamson, 1993; Mohan, 1986) can be used to design the specifics of the course. As such, the paper responds to an urgent need for an alternative and meaningful model for advanced level ESL writing courses that can be more effective than sheltered models for preparing ESL students to make real-life applications. The proposed curriculum has important educational implications because it empowers ESL students to apply concepts to real-life problems connected to subject matter, to develop content knowledge, problem-solving, and critical-thinking skills (NRC, 1999a).

Theoretical Orientation

Language learning involves learning the language code as well as the culture (appropriate ways of thinking and acting) associated with the language. This implies that ESL students enrolled in a writing class need to learn how to write and the writing culture of specific subject areas in context as opposed to correct grammar and paragraph writing in isolation. We apply Ochs's (1989) notion of language socialization as a general conceptual framework for the proposed curriculum. For Ochs (1989), people learn language through socialization and socialize through language. From this point of view, language socialization means learning the language and learning culture simultaneously. This is an important concept for us because our curriculum is aimed at helping ESL students to learn how to write authentic essays in relation to subject matter, and the cultural discourses associated with specific knowledge structures and content areas.

We propose a content-based curriculum that can provide ESL students with opportunities to learn various discipline specific discourses and subject-matter content with the assistance of ESL teachers acting as mediators. Such contexts can be environments where ESL students can develop cognitively through learning authentic subject matter as well as learning context appropriate learning strategies. It can provide ESL students opportunities to develop understanding of subject matter content represented in the new target ESL language as well as learning the social values. That is, in addition to language and content learning, such context can also provide ESL students opportunities to learn communicative styles of interaction and cultural thinking styles necessary to think about and articulate content material in a particular socially and culturally acceptable manner.

Systemic Functional Linguistics and Socio-Cultural Perspectives

At a specific level, our course design is influenced by the SFL theory that sees language as a meaning making resource (Halliday, 1994) and sociocultural theory (Vygotsky, 1986) that sees learning as a social activity that uses language to construct meaning from authentic contexts with help from more capable others. The SFL approach perceives language as actual content and a resource that allows ESL students to participate in new academic contexts and their associated genres (Eggins 1994; Halliday, 1994; Mohan, 1986; Mohan & Beckett, 2001). This approach to language learning is concerned with how people use language in order to accomplish real communicative goals such as participating in discipline specific knowledge construction. Such ability is crucial for all learners because today's complex society expects its students to be equipped with the ability to meet the social and linguistic needs of various contexts for full participation (Colombi & Schleppegrell, 2002).

Sociocultural theory calls for socialization of individuals into various discipline specific discourse communities paying special attention to specific cultural contexts. From this perspective, there are everyday concepts and scientific concepts that we must learn. Everyday concepts are those we are socialized to understand unconsciously and scientific concepts are those that are consciously learned, typically through language (Vygotsky, 1986). For Vygotsky (1986) and others who work within this theoretical framework (Lave & Wenger, 1991), discourses are embedded in communities of practice including the disciplinary communities that students are expected to become members of. Becoming a member of a community means learning to be able to function in the discourse acceptable for that community. For example, ESL students who come to the U.S. to study sociology are expected to adopt the social practice of American sociologists by talking and writing like their American classmates, and professors and by using the sociologically appropriate register expected of them. The SFL theory (Halliday, 1994) and sociocultural learning theory (Vygotsky, 1986) together call for curricula that take ESL students beyond sentence level grammar instruction in writing classes. Such curricula acknowledges that what we do with language varies from context to context and task to task. That is, what we do with language is interdependent with what is talked about (*field*), the relationship between speaker and listener or reader and writer (*tenor*), and expectations for how particular texts should be organized (*mode*) (Halliday, 1994). They require curricula that aim to empower ESL students by increasing their context and task appropriate meaning making resources for full participation in an academic community, thus responding to the NRC's (1999a) call for responsible curricula.

Furthermore, Eggins (1994) argued that when using language we are making choices about the appropriateness of language for a given context. Knowing how to use language in a discourse appropriate way, or understanding what Halliday (1994) called field, tenor, and mode, is what we want to accomplish in an L2 learning environment. Mohan (1986) pointed out that, very often, in thinking about language learning and teaching, we are not attentive to the role of language as a medium of learning and do not acknowledge that content is being communicated in the language learning classroom. Research also shows that teaching ESL students advanced literacy and discipline appropriate language is better done through authentic subject matter content rather than "dry run" practice courses (Adamson, 1993; Early & Hooper, 2001; Mohan & Beckett, 2001; Smoke, 2001). In light of these findings, we apply a content-based (Mohan, 1986) adjunct course design (Adamson, 1993) for our curriculum. This model is conducive to teaching ESL writing integrated with authentic subject matter content (Sociology 101) that enables students to learn the English language, learn through the language, and learn about the language (Eggins, 1994; Halliday 1969; Platt, 1989), or what Ochs (1989) called language socialization (i.e., learning language is the acquisition of language as well as socio-cultural knowledge).

The Curriculum: Content-Based Language Teaching

In order to design ESL writing curriculum that can achieve all the research-based goals discussed above, we turned to content-based language teaching or a language and content integrated approach to language teaching. Content-based language teaching was introduced to the field of ESL education in 1986 by "the publication of Bernard Mohan's seminal book *Language and Content*" (Snow & Brinton, 1997, p. xi). The belief system behind content-based language teaching is consistent with the SFL view of language (Kasper, 2000) and the sociocultural view of learning. That is, L2 learning is similar in many ways to first language (L1) learning that is essentially the learning of the language, learning about the language, and

learning through the use of the language (Halliday, 1969). This view holds that planning of language learning and teaching should incorporate activities that represent learning the specific discourse of the subject matter content and acquisition of language through construction of authentic knowledge. That is, knowing about how to use the language is just as important as knowing the linguistic code, and through using the language, we explore and learn how to communicate meaningfully and appropriately. A content-based language instruction curriculum model then promotes language as a meaning making resource for people to construct meaning out of their daily activities such as learning sociology and/or completing a writing research paper for a sociology course.

Interest in content-based language teaching has “increased dramatically” (Snow & Brinton, 1997, p. xi) in recent years. However, due to its relatively recent entry to the field, a systematic professional training program to implement this model has not yet been established (Sagliano, Stewart, & Sagliano, 1998). We are not aware of any systematic content-based advanced level IEP writing curricula developed from SFL and sociocultural learning theory perspectives. Our curriculum will help bridge this gap by showing how an integration of a regular university course (e.g., Sociology 101) with an ESL writing course can allow ESL students to use the English they learn in their IEP courses as a resource to learn: (1) authentic sociology subject matter content, and (2) discipline specific academic English through the study and completion of authentic sociology writing tasks with the help of their ESL teachers in an adjunct course.

An Adjunct Course

Pairing an IEP ESL writing course with a regular university course is not an easy task. There are many things such as teacher knowledge and logistical issues (i.e., scheduling) to consider. For specific details, we turned to the adjunct course design proposed by Adamson (1993) and Brinton, Snow, and Wesche (1989). This design was chosen because case studies conducted by Adamson (1993) and his colleagues suggested it would be successful. According to Adamson (1993), an adjunct course enrolls ESL students for credit in a subject matter content course and an associated ESL course in which the content material is reviewed and the academic skills and background knowledge necessary for success in the course are taught. The purpose of the adjunct course is to help students master the subject matter content material, introduce them to L2 academic discourse, and develop skills which they can transfer to other academic areas. Such a course links the content area course with the ESL course where the language syllabus is “mapped” onto the content curriculum and includes treatment of more general academic language skills in addition to content-specific language needs. It provides excellent contexts for developing academic strategies because the ESL component of the course is directly related to the students’ academic needs. It provides support for students in revising their notes, preparing for exams, and building a conceptual framework for understanding the reading material and the course dealing with real subject matter. The students must earn at least a passing grade, which motivates them to master both the content material and the academic strategies. In our curriculum, the adjunct course design allows us to utilize the subject matter content of the university course Sociology 101 to teach an advanced level IEP writing course. Sociology 101 is chosen as an example for our purpose, but this model can be adapted and applied to any subject-matter content area. Our model (i.e., a content-based adjunct course) makes teaching advanced level writing effective by increasing students’ academic writing proficiency and empowering them with useful skills necessary for a smooth

transition into university credit courses (Brinton, Snow, & Wesche, 1989; Crandall 1995; Kasper 1994, 2000).

Procedure

Specifically, our curriculum requires the ESL students to enroll in a ten-week (three classroom hours a week) non-credit advanced-level (i.e., students' English language proficiency is at 500-550 level) IEP Writing course and a ten-week three-credit university sociology course (five classroom hours a week) simultaneously. Students are required to attend the sociology course with their mainstream American counterparts participating in all the required activities of the course. They are asked to make notes of areas and points of difficulty and seek assistance from their ESL instructor, particularly when it comes to their writing assignments. This model requires the sociology and ESL course instructors to work collaboratively in planning their courses to identify key contents, making notes of the thinking skills and linguistic challenges that ESL students may face, and sharing ideas about assignments (Kasper, 2000). After the syllabus planning stage is completed, it is advisable that the ESL writing course instructor attend the sociology course with the students so that she or he is aware of the activities that take place in the course. Such a practice helps the ESL instructor advise her or his students with their writing tasks for Sociology 101. Sustained communication between instructors is essential for success of this instructional model. In other words, the subject matter content instructor is responsible for the instruction of content material, and the L2 instructor provides linguistic and cultural assistance to the students who are enrolled in the subject matter content course. The ESL writing course suits the content-based language socialization model we propose in this article because writing can help students learn by reinforcing their linguistic knowledge of subject matter content. Writing for an authentic content course is a meaningful activity that promotes and requires rhetorically and lexico-pragmatically appropriate writing (Raimes, 1983). A specific framework we found helpful in implementing our concept of integrating a university sociology content area course with an the IEP writing course is that of Mohan's (1986) Knowledge Framework. This framework is a powerful conceptual tool that can guide teachers and students in their understanding of the relationship among the subject matter-content being covered, various thinking skills (e.g., classifying, describing, and evaluating), and the relevant linguistic features that need to be taught and learned in a particular subject matter content.

Knowledge Framework

The Knowledge Framework was developed by Mohan (1986) to be used as a theoretical foundation for language and content integrated research. However, it has also been used as a conceptual framework for language and content integrated L2 instruction. The framework is based on the idea of activity and is intended to be "a guide to the structure of knowledge across the curriculum" (Mohan, 1986, p. 25). It provides a framework for activities around which most L2 teaching can be organized. According to Mohan (1986), activities are central to learning. An activity may be divided into six major types of knowledge structure: classification, description, principles, sequence, evaluation, and choice. Semantically, the Knowledge Framework looks like Figure 1 below.

Figure 1

Semantic Representation of the Knowledge Framework

| | | |
|----------------|------------|------------|
| Classification | Principles | Evaluation |
| Description | Sequence | Choice |

Mohan also believes that we need theoretical as well as practical knowledge to carry out an activity. The upper level of the framework can be applied to learn and express theoretical knowledge. The lower level of the framework can be applied to learn and carry out the practical aspect of knowledge. Research has shown (Early, Mohan, & Hooper, 1989; Mohan & Huang, 2002; Tang, 1997) that teachers can apply classification, principles, and evaluation knowledge structures to help students transfer new knowledge into new material. Huang (1996) and Liang (1998) have also found the Knowledge Framework to be a useful data analysis tool, which proved to be true in our case as well.

The classification structure can be used to teach students how to define, develop, and apply new concepts. The principles structure can be used to teach students how to interpret, explain and predict data, and draw conclusions. The evaluation structure can be used to teach students how to make judgments and evaluations, and express personal opinions. The description structure can be used to teach students how to describe events such as a science experiment. The Knowledge Framework is conducive to identifying and teaching thinking skills and language as each of the knowledge structures has thinking skills and distinct linguistic features that need to be learned when carrying out an activity within a certain knowledge structure. Figure 2 below is a semantic representation of the Knowledge Framework, the six knowledge structures, sample thinking skills, and the linguistic features related to the knowledge structures.

Sample Thinking Skills & Language Related to the Knowledge Framework

Figure 2

Sample Thinking Skills & Language Related to the Knowledge Framework (based on Early, Mohan, & Hooper, 1989; and Mohan, 1986)

| Theoretical/General | | |
|--|--|---|
| <p>Classification</p> <p><u>Sample thinking skills:</u></p> <ul style="list-style-type: none"> • Classifying • Identifying • Understanding • Applying or developing Concepts <p><u>Sample language:</u></p> <ul style="list-style-type: none"> • Verbs of class membership: <i>be</i> • Verbs of possession: <i>have</i> • Comparison: <i>more than; taller than</i> • Classification: <i>include/pla under</i> | <p>Principles</p> <p><u>Sample thinking skills:</u></p> <ul style="list-style-type: none"> • Establishing hypotheses • Interpreting data • Drawing conclusions <p><u>Sample language:</u></p> <ul style="list-style-type: none"> • Cause/reason: <i>is due to</i> • Condition & contrast: <i>if...ther</i> • Prediction: <i>probably</i> • Generalization & explanation: <i>completely</i> | <p>Evaluation</p> <p><u>Sample thinking skills:</u></p> <ul style="list-style-type: none"> • Evaluating • Ranking • Judging • Appreciating <p><u>Sample language:</u></p> <ul style="list-style-type: none"> • Describing emotions: <i>like/dis satisfactory; unsatisfactory</i> • Evaluation adjectives: <i>good, right/wrong;</i> • Verbs of volition: <i>prefer/had rather</i> |

Sample thinking skills:

- Observing
- Identifying
- Comparing
- Contrasting

Sample language:

- Stative verbs: *believe; to feel*
- Relative clauses: *who; who*
- Prepositions of place: *bet*

Description

Sample thinking skills:

- Arranging events in order
- Following directions
- Predicting order

Sample language:

- Logical & chronological connectors: *during; next; final*
- Prepositions of space & time: *at; about; between; around; towards*

Sequence

Practical/Specific

Sample thinking skills:

- Selecting
- Generating solutions
- Solving problems
- Identifying issues

Sample language:

- Modals: *can; will; must; should; would; may;*
- Request/offer: *I can*
- Preference: *prefer; had rather*

Choice

It should be noted that each knowledge structure also has key visuals that can be helpful in teaching and learning language and content in an integrated manner. Figure 3 below shows some sample key visuals related to knowledge structures that we found useful.

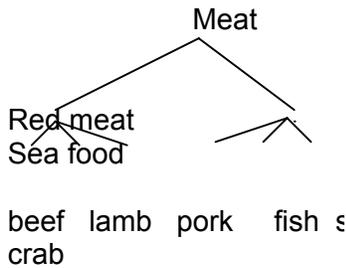
Sample Key Visuals Related to Knowledge Structures

Figure 3

Sample Key Visuals Related to the Knowledge Structures (based on Mohan, 1986)

Classification

Classification tree graph:



Classification table:

a b

d

| | | | | |
|--------|---|---|---|---|
| Item # | | X | | X |
| Item # | X | | X | |
| Item # | | X | | X |
| Item # | X | | X | |

Principles

Cause and Effect table:

Effects of diet on humans

| | | |
|------|----------------------|-------------|
| Diet | Enough protein | Good growth |
| Diet | Insufficient protein | Poor growth |

Cause effect graph for population decrease:

| Cause | Effect |
|-------------------------------------|---------------------|
| • Women have control of their lives | Population decrease |
| • Women have birth-control means | |
| • Costly child-care | |
| • Employment competition; | |

Evaluation

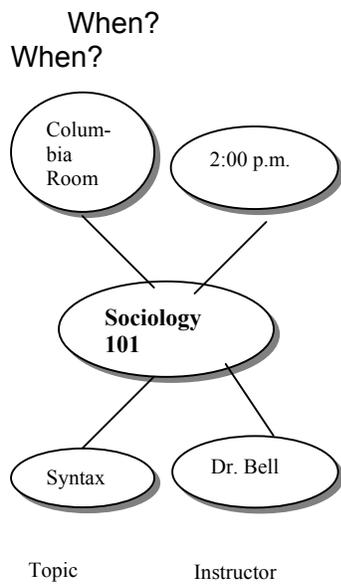
Evaluation graphic of Sociology 1

| | | |
|--------|-------------------|------|
| Term 1 | All theory | Bad |
| Term 2 | Theory & practice | Good |

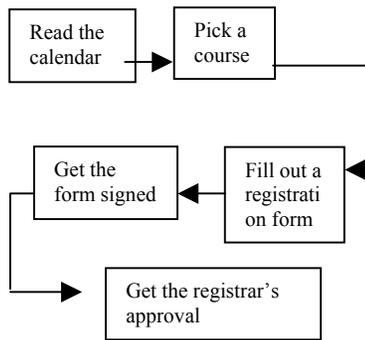
An evaluation grid graph:

| |
|------------------------------------|
| The worst course I've ever taken: |
| ----- |
| What was bad about it? |
| ----- |
| What was the cause of the problem? |
| ----- |

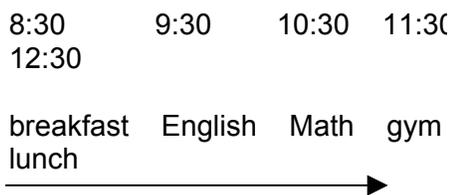
A web description graph of a class:



A course registration sequence flow chart graph:



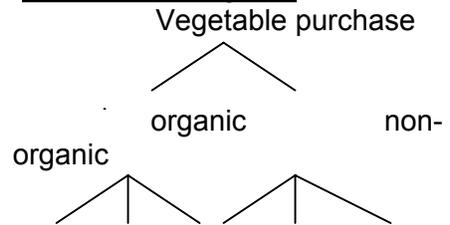
Time sequence graph a student morning schedule:



Evaluation graph for choice of eat out or eating in:

| | Action | Outcome |
|----------|---|---|
| Choice 1 | Eat out (Go to Lucy's; lamb chops, cakes, gourmet drinks) | Nice change of route, tasty, unhealthy weight gain, |
| Choice 2 | Eat in (Fish, rice, vegetable salad, skim -milk) | Low cost healthy, no weight gain |
| | | Easy choice, expensive, bad for health |
| | | Difficult choice, Cheaper, Good for health |

Decision point graph:



Description

Sequence

Choice

Research on the Application of the Knowledge Framework

The Knowledge Framework has been applied for integrating teaching of language and content in secondary school ESL and elementary school Mandarin Chinese as Foreign Language contexts (Early, Mohan, & Hooper, 1989; Mohan & Huang, 2002; Tang 1997). Early, Mohan, and Hooper (1989) is a study conducted in Vancouver, Canada. The researchers wanted to explore methods to assist students to “comprehend and express knowledge across a variety of topics, tasks, situations, and modes” (p. 116). They believed one way of doing this was to use key visuals (graphics), one feature of the Knowledge Framework. They thought key visuals “play a central role in that they lower the language barrier and display simply both the ideas and the underlying logical relationships among the ideas” (p. 116). Therefore, they encouraged a group of elementary and secondary ESL teachers to incorporate key visuals in their teaching units and task design. Then they studied the implementation of a unit on *fish* taught in a pull-out ESL program, where one teacher taught 10 students at the 5th and 6th grade level. The findings of the study showed that it was possible to design and teach units using the Knowledge Framework, and students were able to learn content knowledge and

language simultaneously. For example, the students participating in the study showed evidence of learning information about fish and the discourse and language to talk and write about fish scientifically.

Tang (1997) claimed that the Knowledge Framework enables “ESL students to access the language of textbooks and, at the same time, reach a level at which they can read the language of content classroom texts independently as well as write academic discourse in English” (p. 70). According to Tang (1997), a Canadian teacher found the Knowledge Framework helpful in systematic integration of language and content in her 7th-grade social studies class. The teacher used a social studies text book called *Other Places, Other Times* (Neering & Grant, 1986) in her teaching. She read all the chapters needed to be taught to organize the content according to the knowledge structures and prepare graphic organizers that best summarized the information. She identified the knowledge structures of the sections, put the information on a transparency, and presented the information to her students. Then, the teacher prepared a graph for the students to complete using the information from her transparency. Graphics helped the teacher in her planning the content material such as early people conveyed in chapter 1 of the text and the linguistic devices associated with the timeline. The linguistic devices associated with the timeline included expressions such as “lived from... to...; began in... and ended in...; during that period.” When the teacher presented information on the overhead projector, she deliberately used the language of description to answer “when, where, what” questions. After the graphic presentation, the teacher drew her students attention to the description knowledge structure and its specific linguistic devices such as “lived, hunted, longer than, different from, similar to.” The teacher also gradually trained her students to create graphics on their own, recognize, and use the linguistic devices. According to the teacher, with explicit teaching and practice, her ESL students were able to produce coherent passages of academic discourse from graphics using the appropriate linguistic devices of the knowledge structures.

We have discussed how the Knowledge Framework helps ESL teachers and students to organize their teaching and learning in a language and content area in an integrated manner. Research also shows the Knowledge Framework to be helpful in other contexts such as Mandarin as a Foreign Language (MFL). For instance, Huang (1996) examined the implementation of the Knowledge Framework in a MFL context in a British Columbia elementary school. Huang wanted to know if classroom activities organized around the knowledge structures of the Knowledge Framework (1) support language and content integration, (2) involve learners in the use of target language over a wide range of activities within the topics and subject matter to be covered, and (3) bring about a broad range of form-function relations in the students’ use of the target language” (Mohan & Huang, 2002).

Seventy-three 5th and 6th-grade students in the second year of their Mandarin program participated in the study. At the time of data collection, these students’ learning activities were designed around knowledge structures, using graphic representations to mediate the content and language to be learned. An inductive analysis of lesson plans, interviews, field-notes, and discourse data from students’ interaction and written work showed that learning tasks designed around knowledge structures enabled the participants to learn the target language, the content material, as well as thinking skills. The participants did this by contributing in activities organized for culture learning, which was the content of the unit. They discussed their daily lives and routines by describing and classifying themselves, their classmates, and their families in Mandarin, the target language. They then learned about the daily lives and routines of Chinese elementary school students. They compared and contrasted the two kinds of daily lives and routines, evaluating them and stating their preferences for a particular daily life and routine. By

so doing, the participants worked with all six knowledge structures (i.e., description, classification, principles, sequence, evaluation, and choice). This enabled them to learn how to classify, describe, and explain things (thinking skills); the discourse of classification, description, and evaluation (the target language); and, the similarities and differences of their daily lives and that of their Chinese counterparts (content).

The above review of the literature shows how elementary and secondary school ESL teachers and an elementary school Chinese as a foreign language teacher found the Knowledge Framework to be useful in integrating language and content instruction. However, as pointed out earlier, we are not aware of the application of the Knowledge Framework in integrating language and content in IEPs through the adjunct course model. In the following section of the paper, we discuss how we propose to apply it to integrate an advanced level IEP writing course and a regular university content area sociology course.

Integrating IEP Writing with Sociology Content

We went through five specific steps in designing the advanced level IEP writing course integrated with Sociology 101. These steps included: (1) conceptualizing the course, (2) identifying the theoretical framework and pedagogical approaches, (3) reviewing the literature to find out how others have used the theoretical and pedagogical approaches we chose in our work, (4) identifying the content area and ESL instructors, and (5) analyzing the content area course. More specifically, we met with the content area instructor who teaches Sociology 101 every year and discussed the possibility of cooperation between her and the ESL instructor. We obtained a copy of a 42-page content course syllabus and discussed the content and requirements of the course focusing on the writing assignments. Since our intention was to integrate a writing course with a sociology course, we conducted a careful analysis of the 42-page syllabus that included a detailed study guide, the course readings, and discussed with the course instructor the application of the Knowledge Framework to help ESL students with their writing assignments. These analyses allowed us to identify the types of knowledge structures, thinking skills, and linguistic features required by Sociology 101 in general and the writing assignments in particular.

The requirements for the course included reading the required text by Brinkerhoff, White, Ortega, and Weitz (2002) *Essentials of Sociology*, some issues of National Geographic, and answering a series of questions in writing and orally. These questions included:

1. What are institutions? Describe two basic institutions. What happens to institutions as societies grow larger and more complex?
2. Compare hunting and gathering societies to agricultural societies. Why are hunting and gathering societies so small?
3. Imagine yourself as sociologists doing research on U.S. participation in organized religion. What steps would you take in designing your research?
4. What is the difference between material culture and non-material culture?
5. Ethnocentrism means to judge others by your own standards of behavior. Is this always a negative thing? Think of both positive and negative aspects of ethnocentrism and give an opinion

The Knowledge Framework analyses of the possible answers to these questions showed all the six knowledge structures identified by Mohan and made it clear that in order to read for and write about these questions, the students needed the thinking skills and linguistic

features associated with these knowledge structures. For instance, Question 1 calls for thinking skills and linguistic knowledge of description, classification, and principal knowledge structures. This is apparent from the fact that students need to identify, classify, compare, hypothesize, predict, and draw conclusions in order to define the term institution, describe two basic institutions, compare and contrast, and explain what happens to institutions as societies grow larger and more complex. They need to have linguistic ability (i.e., sociologically specific lexico-grammar) to carry out these tasks by being able to use vocabulary and phrases such as presumably, partially, completely, consequently, hypothetically speaking, and contrary to. Question 3 calls for thinking skills and linguistic knowledge of sequence, evaluation, and choice knowledge structures by choosing and describing some particular steps they would take in designing their research if they were to conduct a research project on American participation in organized religion and to justify their choices. In order to do so, students need to be able to predict and arrange in order, evaluate, judge, and choose various possible research strategies using sociological and research appropriate lexico-grammar such as first, subsequently, finally, unsatisfactory, would rather, and prefer.

The above analyses helped our ESL instructors to understand the inadequacy of sheltered ESL writing courses that do not go beyond sentence level grammar practice. It helped them to understand the importance of content-based language teaching and the need in an adjunct course for intentional language socialization of advanced level IEP writing students. Our instructors also understood the benefit of using the key visuals associated with the Knowledge Framework and learned to use them in their lesson plans.

Theoretical and Educationally Applied Implications

In this paper, we pointed out that there is an urgent need for an alternative and meaningful model for advanced level IEP writing courses to replace the currently dominant sheltered model that is inadequate in preparing ESL students for real-life purposes (i.e., the authentic academic writing that they need). We proposed a content-based adjunct course from a language socialization theoretical framework using the basic principles of systemic functional linguistics (Halliday, 1994) and sociocultural theory of learning (Vygotsky, 1986). We argued that a content-based adjunct course based on a language socialization model of language teaching provides an integrative approach for ESL learners in their successful learning of the English language, subject matter content, rhetorically and lexico-pragmatically appropriate writing (Raimes, 1983), and thinking skills in authentic contexts.

This paper responds to the need for deriving educational implications for research in two areas: (1) the education of ESL learners, and (2) teacher preparation and continuing professional development. First, we respond to the need for developing theoretical and research-based educational approaches for providing high-quality instruction to ESL learners. The curriculum presented in this paper emphasizes the active role of ESL learners as social members of an interactive learning community. New theoretical knowledge derived from SFL and sociocultural theory of learning emphasizes the importance of creating a social classroom environment in which ESL students can use their L2 as a resource for learning. That is, we emphasize an ESL curriculum that stimulates ESL students to learn domain specific knowledge embedded in frameworks that have coherent structures based on principles. Understanding these knowledge frameworks provides ESL students with conceptual knowledge that they can transfer to other theoretical and applied content subject areas. Then, content learning across

subject areas and L2 discourse become resources for enriching ESL learners' cognitive and meta-cognitive learning and thinking processes.

The paper also responds to the need for providing teachers with the same higher-level instructional learning experiences that stimulate the development of subject matter knowledge, authentic writing skills, and cognitive and meta-cognitive skills. We provided a complete review of the theoretical principles derived from research based on integrative curriculum for ESL students. By understating the underlying theoretical principles of high-quality instruction, teachers can provide much needed assistance for ESL students in their understanding and development of concepts within specific topic and content knowledge across subject areas.

Most importantly, we showed how a SFL (Halliday, 1994) and sociocultural learning theory can be used to design an advanced level content-based writing curriculum from a language socialization perspective (Ochs, 1989). Moreover, we explained that an adjunct course model (Adamson 1993) and the Knowledge Framework (Mohan, 1986) can be used to design the specifics of the course (i.e., how our ESL teachers and the sociology content teacher worked together to successfully develop the two courses). This is significant not only because no curriculum of this kind existed before, but also because the proposed curriculum creates a context that enables ESL students to see how ESL writing is done and what they need to learn to be able to function successfully in authentic cultural and social contexts. Other educational implications of this ESL writing curriculum we propose is that it empowers teachers to help ESL students develop knowledge structures. It empowers the students in their application of concepts to real-life problems connected to subject matter, development of content knowledge as well as acquisition of problem solving and critical thinking skills that are recommended by the NRC (1999a).

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