A project to improve a program in English for academic purposes in Malaysia is described. The program is a university preparatory curriculum for Malaysian students wishing to attend colleges in the United States. In the program, students are placed in one of three tracks based on English language proficiency. The project was intended to integrate critical thinking, learning strategies, and study skills into the curriculum. The instructional development model used to accomplish this has three stages and nine functions. The first stage is that of definition, during which the problem is identified, learning environment and participants are analyzed and described, and management tasks and timelines are decided. In the second stage, development, objectives are identified, methods are specified, and prototypes are constructed. The third stage is that of evaluation, during which prototypes are tested, results are analyzed, and the processes of revision and recycling are conducted. The procedures used in this project are chronicled according to these stages and functions. It was found that in using this approach, teachers learned to view themselves as instructional developers rather than as content specialists. Problems encountered and positive effects of the project on teachers are discussed briefly. (MSE)
Curricular Change Using an ID (Instructional Development) Model: Application within a Malaysian/American Cooperative University Setting

by Kim Hughes Wilhelm

Curricular change using an ID (instructional development) model: Application within a Malaysian/American cooperative university setting

Introduction

The traditional view of instruction, especially in countries which employ normative testing as the main measurement of learner success (e.g. Taiwan, Hong Kong, Malaysia) has involved the learner as the recipient of information which has already been mastered by the teacher. The teacher is expected to not only master all subject matter, but also to identify the crucial information, provide practice testing and follow-up with exam "revision," and assist the learner so that information can be successfully retrieved during the testing situation.

This approach may have been suitable when there was a limited number of teachers, when instruction was based largely on oral learning, or when printed materials were in short supply. However, more recent views of the instructional process give greater responsibility to the role of the learner as an active participant and the teacher one of many components in the instructional process.

This paper describes the steps involved in moving to a more learner active, content-based EAP (English for Academic Purposes) curriculum in an intensive English program in Malaysia. The writer will also discuss instructional issues which arose during the formative evaluation period.

Using an instructional development model, instruction is viewed as "A systematic process in which every component is crucial to successful learning" (Dick & Carey, 1985, p. 3). The
components of the instructional system usually include the learners, the instructor, the instructional materials, and the learning environment. Effective interaction of the components during the instructional process brings about successful learning.

The I.D.I. System

The I.D.I. (Instructional Development System) model is said to be one of the more comprehensive and most widely known of the instructional design systems used in the IST (Instructional Systems Technology) field (Molenda, 1984). This model includes three stages and nine functions. The first stage is that of "Definition," during which the problem is identified, the learning environment and participants analyzed and described, and management tasks and time lines decided. The second stage is that of "Development," during which objectives are identified, methods specified, and prototypes constructed. The third stage is that of "Evaluation," during which prototypes are tested, results are analyzed, and the processes of revision and recycling are conducted.

Application of the I.D.I.

STAGE ONE: DEFINITION

Function 1: Identify Problem

(Assess Needs, Establish Priorities, State Problem)

The learners in this program were Malay sponsored students who
were participating in a university preparatory program (UPP) for admittance into a U.S. midwest university. After admittance, students complete their first two years of coursework in Malaysia with Malaysian and American professors who have been approved as instructors of record with the midwest university. Students can then transfer those credits to universities throughout the U.S., which they attend to complete their undergraduate diplomas. Students are admitted into the UPP in yearly intakes of approximately 150 students and are placed into one of three "tracks" on the basis of language proficiency. "Accelerated" track students constitute only about 15% of the intake and attend only an eight-week summer session of ESL (English as a Second Language) before beginning university coursework in August. Track one students constitute about a third of the intake and attend the 8-week summer and a 16-week fall semester of intensive English before entering the university in January. Track two students, the majority, attend a full year in the UPP before entering the university. A three phase language-building plan (Appendix A) was employed to reflect the proficiency needs of our students. Track 2 learners were least proficient and moved through all three phases, beginning with the development of self-confidence and fluency in English and the encouragement of reading as a habit before moving into the second phase. Track 1 learners were more likely to begin in Phase 2, where they explicitly learn language and study skills and practice with skill-focused materials. The most proficient, accelerated
students quickly move from phase 2 into phase 3, in which they are expected to apply language and study skills with academically-oriented materials in an EAP setting.

Teachers felt that there was a need to develop critical thinking skills, with training in logic, cause/effect, claim and support, etc. It was decided that the curriculum also needed to include overt, meta-cognitive activities to encourage students to assess their learning preparedness and to revise their learning strategies.

There was also a need to develop increased consistency in terms of the grading schemes, content, and activities between classes and teachers. The previous curriculum provided teachers with materials, but little guidance regarding schedule, testing, or activities based on objectives. Many teachers worked in small groups to organize the curriculum as they went through it, but there was a concern to organize better within a single framework while still drawing upon teachers for materials development and lesson planning.

To summarize, four main needs were identified: 1) development of STUDENT HABITS useful for successful study and exam preparation, 2) more of a focus on STUDY SKILLS as well as faster reading and decoding skills, 3) a course of study with COHESIVE ACADEMIC CONTENT across an entire semester so as to encourage application of academic and language skills with realistic course difficulty and appropriate content, and 4) CONSISTENCY in terms of instructional objectives, grading, and materials presentation.
Function 2: Analyze Setting
(Audience, Conditions, Relevant Resources)

Audience analysis showed that we had, in general, two very
different groups of learners to provide for. Track 1 students,
who were to participate in the EAP mini-course during the fall
semester (August to December), tended to major in the Social and
Behavioral Sciences or in Business. Track 2 students, on the
other hand, take the EAP course during the spring semester
(January to May) and tended to be technical science (e.g.
Engineering) or mathematics majors.

The conditions for the two tracks were also quite different,
with Track 1 learners based on the Shah Alam campus and Track 2
learners based on the Subang Jaya campus, both with different
resources and facilities available. In addition, semester
scheduling was different for the fall as compared to the spring
semester.

Consideration of all these factors led to the Track 1 EAP
course designed as a three-module course, with a four-week
explicit Study Skills module, a six-week Social Psychology
content module followed by a midterm exam, and another six-week
Consumerism content module followed by a comprehensive (semester-
wide) final exam and a group project. Social Psychology was
selected due to the availability of reading and
listening/speaking materials and because many of the teachers had
taught using some of the materials previously. Consumerism was
chosen as a more applied content area which not only could be
tied to the Social Psychology content, but also had relevance in the everyday lives of the learners.

The Track 2 EAP course was also designed as a three-module course, with a two-week explicit Study Skills module, a ten-week Environmental Science content module with two unit exams and a final comprehensive exam, and a three-week Futures content module with a final exam and a major group project. Environmental Science was selected as the content area due to its regular pattern of hypothesis testing and the formulation of conclusions based on evidence, appropriate for technical science majors. Earth Science and environmental awareness were also relevant and could be made specific across majors. Content is not culturally-bound and draws upon global information and examples. It lends itself to vocabulary study of root words and affixes. There is also an abundance of current supplemental "realia" available. Issues can be identified and examined from a variety of viewpoints. Arguments are usually based on data from hard science or from computer prediction models and methodology is usually clearly described. Track 1 and Track 2 module breakdowns are shown in Appendix B.

Function 3: Organize Management
(Tasks, Responsibilities, Time Lines)

Management, while complicated, did not pose too many problems since the tasks, responsibilities, and time lines became clear as the development tasks proceeded. The two curriculum coordinators
divided their responsibilities, with one acting as instructional and materials developer and taking care of overall development needs and the other actually teaching the courses and acting as teacher coordinator while taking the lead in documenting ongoing problems and needed revisions. In addition, since the Track 2 group of teachers was so large (12 teachers), a course coordinator was selected to assist with materials selection, to manage time tables and audio-visual materials, and (most importantly) to work as staff liaison to ensure that teachers' needs were being heard and met.

STAGE TWO: DEVELOPMENT

Function 4: Identify Objectives
(Terminal, Enabling)

Terminal objectives were stated as program-wide goals (shown in Appendix C) and were worked on throughout the three phases of the program. Highlighted items indicate those worked on more explicitly during the application phase within the EAP course. As mentioned earlier, there was great concern to try to instill in the learners a sense of student responsibility in the learning process as well as the development of study skills and critical reading and thinking skills judged to be crucial to U.S. university academic success.

Enabling objectives were developed in tandem with functions 5 and 6, as it was judged important to select instructional media and materials which would lend themselves to meeting the enabling
Function 5: Specify Methods
(Learning, Instruction, Media)

It was decided to employ a mixture of text and non-text media. Text media involved a variety of materials, including academic textbook chapters, academic journal articles, current newspaper and magazine articles, and teacher-developed text organizers and note models. Non-text media included audio-visual educational and issues-oriented documentaries and academic audio lectures.

Instructional methods were discussed weekly by teachers in self-initiated Monday meetings to decide content objectives and to share instructional plans. Follow-up Friday meetings were built into the time schedule as a means to share instructional methods and results. Teachers were also encouraged to visit and observe each other's classrooms.

Function 6: Construct Prototypes
(Instructional Materials, Evaluation Materials)

The initial set of instructional materials was selected by the curriculum coordinators according to content and appropriateness in meeting instructional objectives. Sample instructional objectives as given to teachers can be found in Appendix D.

Evaluation was an ongoing issue throughout this development process. In general, evaluation was based on a combination of content and skill-based mastery and a combination of individual
performance and group performance. Individual performance was measured by grades on exams, unit tests, quizzes, homework, and class notes. Group performance was measured by grades given by peers (audience), group members (co-workers), and the teacher for three ongoing projects. Groups worked together to look for newspaper and magazine articles which related to class content, with an evaluation made of their efforts. Another group project was the development of a sample test over content materials. The final group project involved application of inquiry processes as learners made a TV commercial in Track 1 (stating audience, purpose, etc.), and learners conducting a survey in Track 2 (stating objectives, describing subjects, organizing findings, etc.).

Teachers worked together to submit and select test items in order to come up with standardized midterm and final exams. Unit tests and quizzes were developed by individual teachers, based on their classroom activities for that particular unit. An effort was made to include both skill-based and content-based instructional objectives when developing these test materials.

STAGE 3: EVALUATE

Function 7: Test Prototypes  
(Conduct Tryouts, Collect Evaluation Data)

The Track 1 curriculum was tested during the fall semester of 1991, which provided important information for the Track 2 curriculum implemented during the spring semester beginning in
January of 1992. Throughout each semester, teachers and curriculum developers met for a minimum of four hours weekly to debrief over the last week. A final meeting at semester's end resulted in calendar changes, materials changes, and the revision of selected instructional objectives and implementation procedures.

In addition, students were asked to judge the effectiveness of the teaching activities and materials. Student evaluations (collected via questionnaires) corresponded quite closely with teacher judgements of the usefulness of classroom materials and activities.

Function 8: Analyze Results
( Objectives, Methods, Evaluation Techniques )

Results indicated that the instructional objectives were sound, but that there was still a need for more consistency in terms of teaching for desired outcomes. The teachers found it much easier to agree on content objectives (i.e. what ideas from materials should be tested) than on instructional objectives (i.e. what learner behaviors do we wish to develop while using this material). There was an ongoing issue with some teachers focused more on the teaching of content rather than on the desired focus of helping learners to access content through the use of skills.

An assessment of instructional methods was difficult due to the lack of constant classroom visitations. While classrooms
were visited at least once during the semester, the observations were not regular enough nor frequent enough to judge whether methods used were consistent across classrooms. General impressions indicated that instructional methods were not very consistent.

On the other hand, evaluation methods were fairly consistent. Teachers calibrated before grading the exams and a final meeting was held to go over the exams item-by-item in order to see which distractors were marked and to evaluate and improve the exams. Revisions were made so that improved exams could be used again next year.

Function 9: Implement/Recycle
(Review, Decide, Act)

A review of the curriculum indicated the need to pay closer attention to the match between instructional objectives and evaluation materials. For example, instructors decided that more skill-based items should be included in the exams next year. In addition, they decided to standardize all unit tests rather than have each teacher make up his/her own. This will help to further refine instructional objectives and to establish the teaching to desired outcomes. Finally, the teachers decided to add a skill-based midterm based on content consistent with that being learned in class. This decision was based on the concern that testing this year encouraged teachers to focus on content rather than skills (since the test was largely content-based).
Another need identified was that of developing a library of pertinent academic lectures by actual professors. Audio-visual materials consisted mostly of TV documentaries which had a different format than that of many academic lectures. A combination would establish a better balance of lecture notetaking practice with documentary focused listening for content, transitions, and relationships between sentences.

Also identified was the need to get closer interaction between teachers in terms of sharing instructional procedures and activities. One suggestion was to require that all teachers make at least three observations of other teachers throughout the semester.

Curriculum developers felt that it would also be helpful to collect more specific information from the learners themselves as to what they feel they have learned. Student journals which ask for reflection on daily activities may be a means for discussion of student progress and for meta-cognitive awareness in students of desired instructional outcomes. It would also be helpful to observe students during their first semester in the academic program in order to determine which of the instructional and behavioral outcomes targeted during the EAP course are actually being demonstrated by the students in their regular coursework.

Conclusion

One of the most important goals of employing the I.D.I. approach was that teachers learn to view themselves as
instructional developers rather than as content "masters." The hope was that the teachers would begin to acquire the skills and leadership techniques necessary to continue this curriculum more confidently and more independently. For example, while most teachers were willing to share supplemental reading material collected, they were much less willing to share instructional materials which they had developed. While this may reflect a lack of confidence in their abilities as instructional materials designers, it may also be due to subtle cultural attitudes which do not encourage putting oneself forward as the expert. Whatever the reason, fostering a work environment in which teachers share materials and ideas would help immensely to promote the role of teachers as instructional development experts.

Another problem was that a number of teachers expressed ongoing frustration and discomfort with their lack of "mastery" of the material. It was very difficult to convince the teachers that they were not expected to know all the technical information or to explain to their students every detail mentioned on the scientific documentaries shown.

There seemed to be differing perceptions of the role of the teacher. Curriculum coordinators viewed the teacher as a guide and a model (e.g. deciding which information is most important, showing ways to record that crucial information for future recall, noticing details which help to make connections between ideas, teaching which details can be ignored). Another expectation was that teachers would function as models for
information synthesis (e.g. relating text materials to each other, recalling significant supporting details from other articles, evaluating the effectiveness and credibility of writers). While some teachers demonstrated their abilities to function confidently as models in these roles, others were less comfortable or had difficulty designing instructional tasks which fit with targeted instructional outcomes. Lack of confidence should be alleviated as the teachers use and revise the curriculum again, assuming that their motivation remains high.

While improvements could definitely be made and the role of teachers further developed, the positive effects on teachers were obvious. Most noticeable was the enthusiasm generated and the rapport established. Teachers initiated and organized an additional meeting at the beginning of each week for presentation and discussion of lesson plans for the week's materials. This led to increased consistency in expected instructional outcomes and to a natural means for teacher development and training. Interest was also expressed in visiting each others' classrooms. The teachers worked as a team to develop exams and to identify needed curricular revisions, with a subsequent noticeable increase in discussion of their work. Another unforeseen benefit was the interest generated in related research on EAP programs and student learning. Attendance at in-service workshops increased, and more teachers expressed a desire to attend conferences.

As a technique for curricular reform, the I.D.I. process was
successfully applied and was beneficial in that it also fostered attitudinal change by including teachers to institute curricular change. Important steps were taken to guide teachers toward their new roles as instructional designers and evaluators.

References


APPENDIX A

Three Phase Language-Building Process

Phase 1: Teach Habits, Encourage Fluency, Promote Self-Confidence
Focus on fluency in skill areas. Encourage reading as a habit.
Teach student recognition of roles and responsibilities.
Practice purposeful recognition of language and its structure.

Phase 2: Explicit Learning of Language Skills and Practice with a Variety of Skill-Based Materials
Step-by-step exposure to critical reading skills and reading for a purpose. Learning techniques to increase reading speed, comprehension, and ability to read for main ideas as compared to details.
Study skill exposure and practice with materials designed to teach/learn the skill. Meta-cognitive awareness of importance and application of skills learned.
Exposure to and practice of process approach to writing. Moving from fluency in writing to more structured planning and organization of written work for academic purposes. Self and peer editing of work for content, organization, and logic as well as surface structure use of English.

Phase 3: Application of Skills in EAP-Oriented Setting
Listening and Reading to Learn and Remember Information.
Realistic Testing with Opportunities for Study Skill Application.
Practice of Self-Help Strategies for Academic Success.
Meta-cognitive Awareness of Weaknesses and Needs.
APPENDIX B

Third Phase: Module Break-Downs

Track 1 (Social Science and Business Majors): EAP Course Taught: Fall Semester (Aug. through December) and Preceded by an 8-week Summer Term:
I. Study Skills Unit (4 weeks)
II. Social Psychology Content Module (6 weeks) & Midterm
III. Consumerism Content Module (6 weeks) & Final
IV. Group Project Presentations (Advertisement)

Track 2 (Technical Science/Mathematics Majors): EAP Course Taught: Spring Semester (January through May) and Preceded by an 8-week Summer Term and a 16-week Fall Semester:
I. Study Skills Unit (2 weeks)
II. Environmental Science Content Module (10 weeks):
   A) Unit 1: General Ecological Principles (4 wks) & Test
   B) Unit 2: Humankind's Effects on the Environment (4 wks) & Test
   C) Unit Three: Earth's Future (2 wks) & Final Exam
III. Futures Module (4 weeks) and Skill-Based Exam
IV. Group Project Presentations (Survey)
Goal 1: ORGANIZE SELF AS A STUDENT

Self-Initiated conferencing sessions with teachers.
* Establishing and meeting deadlines.
* Working with others in small groups for extended projects.
  Using library and other reference sources effectively and efficiently.
* Preparing succinct, task-oriented conferencing notes in preparation for teacher conferences.

Goal 2: PURPOSEFUL RECOGNITION OF LANGUAGE AND ITS STRUCTURE

Making Writing more Interesting through Sentence Pattern Variety and Complexity through Subordination.
* Transitions within paragraphs and within essays.
  Focus on writing with grammatical accuracy.
* Reading complex passages and independently finding main clauses by using grammatical structure.

Goal 3: ESTABLISHMENT OF READING AND VOCABULARY DEVELOPMENT AS A HABIT

* Evaluating Credibility of Sources
* Comparing Discourse Styles in Terms of Audience, Purpose and Effectiveness
* Examination of a Subject from a Variety of Viewpoints and Sources
Goal 4: READING AND LISTENING FOR ACADEMIC PURPOSES
* Reading/Listening to Generate Ideas and to Inform
* Reading/Listening to Support/Expand Ideas
* Reading/Listening to Summarize and Condense
* Survival Reading in University: Skim and Scan, Speed Reading,
  Notetaking, Highlighting, Locating Key Ideas, Understanding
  Reading that is too Hard, Strategies for Vocabulary
  Development
* Literal, Interpretive and Applied Levels of Comprehension
* Reading/Listening to Learn, Remember and be Tested
* Use of Latin roots/stems/prefixes/suffixes for technical and
  scientific vocabulary development.

Goal 5: FLUENCY AND ACCURACY IN SPEAKING AND WRITING AT A
  COMMUNICATIVE LEVEL
* Speaking/Writing to Explain Ideas and to Inform
* Speaking/Writing to question.
* Speaking/Writing to take a position and support it.

Goal 6: FLUENCY AND ACCURACY IN SPEAKING AND WRITING FOR ACADEMIC
  PURPOSES
* Speaking/Writing to Support/Expand Ideas
* Speaking/Writing to Summarize, Condense and Synthesize
  Introducing Sources
  Paraphrasing/Quoting and Indirect Speech
  Citation of Sources
Goal 7: UNDERSTANDING AND USING THE WRITING PROCESS

* Evaluating peer and own work for content, organization and structure.
* Self-analysis of language needs and progress.

Goal 8: USE OF LOGICAL THOUGHT AS A LANGUAGE TOOL

* Ability to discuss/explain logical train of thought in discussion and writing topics.
  Ability to organize writing ideas in a logical progression and format.
* Use of logical connectors.
* Identification of faulty logic (causal oversimplification, questionable cause, misuse of correlation, slippery slope logic, etc.)

Choosing Effective Support Materials Using Facts and Experts to Convince or Impress

Pitfalls to Use of Sources: Overgeneralization, Oversimplification and "cut and paste" sources
Sample Instructional Objectives - EAP Track 2 Module Course

Some Matter and Energy Laws (week 3 & 4)
- Recognizing and Remembering Definitions
- Text Structure and its Repetition
- Use of Examples to Support Main Ideas
- Accurate Selection to Highlight Main Ideas
- Summarizing Text with Use of Charts or Outlines to Organize Information
- Using Pronouns as Referents
- Using Connectives/Transitions to Understand Logical Connections
- Guessing New Vocabulary from Context
- Comparing Notes to Those of Others
- Differences between Literal, Interpretive, and Applied Questions

Planet Earth Videos (week 3-6)
- Finding Main Ideas by Listening
- Understanding a variety of English Dialects
- Discriminating between the Parts of the Program
- Identifying Words Used to Introduce New Ideas
- Identifying When to Listen and When to Summarize on Paper
- Recognizing Transitions Leading to Summaries and Definitions
- Summarizing Main Text in Own Words, both Verbally and in Writing
- Recognizing Research Report Format (e.g. hypothesis, procedure, results, interpretations, further research needs)
The Ecosphere and Laws of Ecology (week 5-7)
- Identifying Controlling Ideas for Each Paragraph
- Grouping Vocabulary Items According to Category
- Examining Relationships within/between Sentences
- Identifying the Author's View or Position on an Issue
- Comparing the Author's Message with Own Point of View in order to Critically Evaluate Text
- Compare/Contrast Writing Style and Effectiveness with previous reading selection (Some Matter and Energy...)
- Extension/Application to Current Issues in Our Lives via Search for Related Newspaper Articles

Study/Exam Groups for Student-Generated Exams (week 3-17)
- Develop Study Materials for Help in Learning and Remembering Information: - Definition lists - Vocabulary lists - Summary Charts - Notes & Revisions
- Examine Question Formats and Anticipate Weighting of Questions
- Metacognitive Awareness Development of Test-Taking and of Material Comprehension Skills/Needs (awareness of own weaknesses as a learner)
- Practice in Questioning Peers, Defending Points of View, Group Negotiation Strategies, etc.
- Regular Review of Content Covered in Class. Study to Learn and Remember.