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ABSTRACT

This report discusses three recent developments in foreign and second language education. The first is the "proficiency movement," which is leading teachers and curriculum planners to find effective ways of measuring functional language proficiency and of bringing students to pragmatically useful levels of speaking, listening, reading, and writing ability. The goal of foreign language teaching is now the effective use of the language in real-life communication settings. The second development is the introduction of the microcomputer to the language classroom. The following aspects of computer-assisted language learning (CALL) are discussed: (1) accessibility; (2) guidelines for CALL software development and review; (3) adoption of a systems analysis view of the instructional process; and (4) evaluation of CALL results. The third development is content-based language instruction--the simultaneous teaching of English and subject matter areas such as history or social studies to nonnative speakers of English. Guidelines are listed for developing effective programs of content-based language instruction. Future trends are covered and a list of references is included. (PS)

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## Developments in Language Education

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Three recent developments in foreign and second language education present important challenges and opportunities for the language teaching field. The first is what is increasingly coming to be known as the "proficiency movement"--an initiative in which teachers and curriculum planners are finding effective ways to measure functional language proficiency and to tailor their programs to bring their students to pragmatically useful levels of speaking, listening, reading, and writing ability. This trend is as exciting as it is far-reaching because it offers the potential for establishing common goals of language instruction--as well as agreed-upon procedures for measuring success--at the same time as it allows a natural and healthy diversity in the specific teaching techniques used to attain these goals.

The second development, welcome but potentially problematic if not cautiously and thoughtfully implemented, is the introduction of the micro-computer to the language classroom. Foreign and second language educators need to be aware of the variety of options available in computer-assisted language learning. Once they understand the options, they should be able to find the optimum middle road between skepticism, distrust, and avoidance of computer applications on the one hand and, on the other, uncritical and unthinking adoption of any and all computer-based approaches--even those with serious pedagogical shortcomings--simply because of their technological glitter.

Finally, content-based language instruction--the simultaneous teaching of English and subject matter areas such as history or social studies to nonnative speakers of English--is increasingly of interest to curriculum planners and school authorities as a viable and cost-effective means of imparting subject matter knowledge in an academically rigorous way while at the same time developing students' proficiency in English. Effective means of cooperation between language teachers and content area teachers must be found, and suitable textbooks and other materials must be developed in order to attain this dual goal.

### The Proficiency Movement

Proficiency in foreign languages is crucial to the United States' political as well as economic ties with the rest of the world. As an example of U.S. deficiencies in this area, a study by the International Association for the Evaluation of Educational Achievement and by UNESCO of 30,000 10- and 14-year-old students in eight countries ranked American students next to last in foreign language competence (Carroll, 1975). As

the world becomes increasingly interdependent, the importance to the United States of encouraging genuine foreign language competence is regaining recognition both by the government and within education. No longer can foreign language study be viewed as primarily an academic exercise culminating, for a select few, in the appreciation of literary classics; it is now a vital practical endeavor for every American student, an endeavor whose goal is the effective use of foreign languages in real-life situations.

### Steps Toward the Proficiency Orientation

In the 1950s, the Foreign Service Institute (FSI) of the U.S. Department of State developed a verbally defined scale of language proficiency and an interview-based testing procedure that were intended to reflect the linguistic requirements of the jobs that foreign service personnel are expected to fill overseas. Jobs were observed directly and analyzed to determine the nature and level of spoken language ability required for success. The resulting scale specified five separate levels of increasing proficiency, ranging from Level 1--the so-called "survival level"--through Level 5, representing proficiency indistinguishable from that of an educated native speaker (Solienberger, 1978).

Over the next several years, the FSI proficiency scale was further developed, and more detailed descriptions were prepared for each proficiency level. These were formally endorsed in 1968 by the Interagency Language Roundtable (ILR), a consortium of about 30 government agencies concerned with foreign language training and evaluation. In the early and mid-1970s, the procedure was expanded to other government areas such as the testing of Peace Corps volunteers, and the proficiency scale and interviewing technique also began to receive greater attention within the academic community. Recently, five states (California, Florida, Illinois, New Jersey, and Texas) have adopted speaking ability requirements based on the proficiency scale as part of the certification requirements for bilingual teachers.

### Gathering Momentum in the Schools

In the late 1970s and early 1980s, Educational Testing Service (ETS), the American Council on the Teaching of Foreign Languages (ACTFL), and other language-related organizations worked cooperatively in the further dissemination of information about the proficiency scale and interview at both the secondary school and college levels. This effort also included the refinement and expansion of the lower level of the scale to better accommodate measurement needs at the early stages of language instruction. The ACTFL Proficiency Guidelines describing these levels were drafted in 1982 and revised in 1986 (ACTFL, 1976).

The capability now exists for proficiency-based testing and curriculum development to be implemented within a large segment of the foreign language education field, and several relevant initiatives have already been started.

Wing and Mayewski (1984) have developed a handbook on oral proficiency testing for college foreign language programs. Northern Arizona University has received a grant from the U.S. Education Department to prepare guidelines for articulation between high school and college language programs, based on proficiency-based curricula and assessment procedures. ACTFL and other organizations have developed and offered a variety of workshops in this area for teachers and supervisors, ranging from half-day familiarization sessions to considerably longer and more intensive tester training programs.

Proficiency-based assessment--which Higgs (1984) has referred to as the "organizing principle" for the language teaching process--holds major implications for materials development, teacher training, and program design within the language teaching field. Fortunately, the "proficiency movement" is not a revolution that will require wholesale rejection of current methodologies and materials, most of which already include or can be adapted to include effective proficiency-developing elements. A potentially greater problem is that many teachers themselves have only a modest level of proficiency in the languages they teach--a situation uncovered by a 1981 ACTFL survey (Paul, 1981). Although the overall level of language competence of teachers newly entering the field can be raised through proficiency-based certification requirements, a similar upgrading of skills on the part of the existing teacher pool will require a variety of inservice training activities--including, especially, carefully planned experience abroad--that have yet to be implemented on a widespread basis.

Through workshops, published materials, and other means, language teachers throughout the country are becoming increasingly familiar with the ACTFL proficiency guidelines and with measurement techniques that can be used to assess their students' proficiency levels. In addition--and even more crucially--educators who become knowledgeable about the fundamental concepts underlying proficiency-based assessment are beginning to perceive the important ramifications these concepts have for classroom teaching practices and for the development and adaptation of teaching materials.

It is not overstating the case to say that proficiency concepts, as they are being elaborated and disseminated within the field today, have major implications and potential benefits for virtually all areas of foreign language education. Teacher training, the development of textbooks and other instructional materials, classroom practices, course sequencing, and means of assessing student progress will all be viewed increasingly from the standpoint of the ability to use the language effectively in real-life communication settings.

#### Computer-Assisted Language Learning

Microcomputers and their associated instructional software are more and more in evidence in the nation's foreign and second language classrooms. Indeed, the rapidly growing number of computer-assisted language learning

(CALL) programs on the market present the language teacher, department chairperson, or other decision maker with the difficult task of making wise and pedagogically valid choices from among the many options available. Educators' responses to the instructional possibilities presented by CALL have included two opposite--and both undesirable--extremes: some reject CALL materials altogether, while others embrace them uncritically. These two stumbling blocks aside, the language teaching profession has a pressing need to develop guidelines for selecting and using CALL programs that will most effectively advance the language learning process.

At least four major questions need to be addressed. First, how can computers be made more accessible to language learners, both physically and in terms of "user-friendliness"? Second, what criteria should be used to evaluate available software and to guide the development of new CALL materials? Third, in what ways and to what extent can CALL be integrated within a total learning system that includes a live teacher, interacting students, and other noncomputerized instructional media? Fourth, how does CALL compare with other modes of language instruction in terms of its success in developing students' second language skills?

### Accessibility

As is often the case with technological applications in the U.S. school system, math and science classrooms were among the first to benefit from the introduction of microcomputers and associated software programs, with the result that subject areas such as music and foreign languages have had to wait their turn. However, the initial imbalance with respect to equipment and software availability has begun to be corrected, with encouraging signs that the necessary facilities are increasingly available to all areas of the curriculum. A recent survey (Becker, 1985) found that the number of computers in schools had quadrupled in the preceding two years and the number of students using them had tripled. Becker estimates that more than one million microcomputers are now in place, mostly in secondary schools, and are being used regularly by approximately 15 million students.

Availability of microcomputer equipment within a given school setting does not guarantee accessibility to either the teacher or the student. For too many instructors, the technological aura of the computer is an impediment to even attempting to make use of its capabilities. For those who are willing to at least give the computer a try, unfortunate experiences with poorly designed or error-ridden programs may be a source of frustration and eventual rejection of this technology. Although students may typically be less in awe of the computer than instructors, their learning attempts may be frustrated by software that does not meet basic standards of accuracy, freedom from programming errors, and so forth.

Before CALL can reach its potential in the typical school setting, the basic problems of equipment availability and "user-friendliness" must be satisfactorily addressed. Thanks to the constantly decreasing costs and



greatly increased availability of microcomputer equipment, the hardware problem seems well on the way to being resolved. Increasing sophistication on the part of language teachers and other professionals in the field concerning the attributes of a quality software program, and the healthy market competition that their feedback produces, may contribute appreciably to the technical and pedagogical upgrading of available CALL materials. Language teachers can share their experiences with specific software programs through newsletters, user groups, and conferences. Research comparing achievement results with and without CALL and among different CALL applications will provide essential feedback to the computer industry. In turn, software publishers should more actively seek to understand teachers' needs and provide inservice training to address them. Improved communication in both directions will foster the development and use of the microcomputer as a viable component of foreign language instruction.

#### Guidelines for CALL Software Development and Review

The language teaching profession has not yet arrived at even a rough consensus on the particular areas of the curriculum in which CALL efforts might best be focused. Many of those closely involved with CALL developments emphasize the computer's strengths in tirelessly (and nonjudgmentally) presenting a variety of information and exercises to the student, with which the student can work at his or her own pace and level. For this reason, much currently available software provides drill and practice with formal aspects of language: vocabulary, grammar, spelling, and specific usage problems.

More innovative uses of CALL for English as a Second Language (ESL) and foreign language learning are described by Wyatt (1984) and Hope, Taylor, and Pusack (1984) respectively. The technical capacities of the computer make it well suited for presenting reading material in the foreign language, and, with suitable auxiliary equipment, listening comprehension passages and exercises. Controlled writing activities are also possible to a certain extent. Although available computer equipment and programming cannot readily offer computer-assisted practice in speaking on the student's part, there have been several attempts to develop such capabilities. These include a system described by Wyatt (1984) in which student utterances are captured in digitized form and compared with a reference standard. If the utterance deviates too far from the model, the student is instructed to try again. A less expensive, but less realistic, means of providing speaking practice is the ELIZA program, which offers a simulated conversation conducted in writing on the computer screen using a selection of "scripts" as the basis for interaction with the computer. The near future should bring the schools more affordable interactive videodisc equipment, which can provide audiovisual stimuli and interactive instruction with push-button speed and accuracy (Johnson, 1985).

Regardless of the particular skills a CALL program is designed to address, commonsense guidelines can be followed in assessing the instructional suitability and general quality of the program. Programs should first of all be free of technical errors that may cause the entire program to "freeze" or that put the student into an endless loop of repeated actions.

A second major desideratum is for the program to interact flexibly with the student so that, depending on the student's particular responses, the program can "branch" to the next item that is immediately relevant to that student's learning needs. Flexible programs, especially those that offer problem-solving tasks, invite interaction among pairs or small groups of students, which has long been recognized as an effective catalyst for learning (Johnson, 1985). Completely "linear" programs that have all students follow exactly the same path are much less suitable.

Third, higher-quality programs allow the instructor to modify or augment the content according to immediate needs. For example, a vocabulary training program that allows the instructor to add or substitute particular lexical items of his or her own choosing may be considered more flexible and of greater potential teaching value than a program that does not permit such modification.

A fourth desirable characteristic is for the CALL program to accept, and to interpret as correct, more than one possible answer to a given question. Just as the "real world" (as well as the classroom teacher) admits of more than one way to phrase a response in a given language-use situation, the computer program should be able to accommodate a reasonable degree of variability in students' responses.

Finally, CALL programs, regardless of their specific instructional goals, should relate beneficially to the student from the psychological or affective standpoint. For example, programs that provide encouragement in the form of frequent reinforcement of correct answers, as well as non-threatening indication and remediation of incorrect responses, are preferable to programs with less sensitive approaches to error correction and other aspects of computer-student interaction.

#### Toward a Systems Approach to Computer-Assisted Language Learning

Given the differing--and largely complementary--capabilities of the computer and of the live instructor, the best approach to finding an optimum role for CALL within the foreign and second language teaching field is probably to adopt a "systems analysis" view of the entire instructional process. Under such a view, CALL would be seen as one of several possible components of instruction, along with regular textbooks, other types of print and nonprint media, the classroom teacher, native speaker resources, travel abroad and other opportunities to use the language, and several other types of experiences that would be expected to provide an adequate and appropriate learning environment for the student. Within this environment,



some or all of these resources would be used in different but integrated ways, based on the particular instructional strengths of each type of resource and the overall learning objectives of the program. For example, given the fact that present computer equipment and programming capabilities do not readily permit computer-assisted practice in speaking, it may be more appropriate, from a "systems" point of view, to defer attempts to implement CALL in the student speaking area, at least for the time being, and to assign this important role quite frankly and legitimately to the classroom teacher. On the other hand, the obvious strengths of the computer in providing practice in and reinforcement of various aspects of grammar, vocabulary development, reading comprehension, and so forth, would suggest that these particular aspects might be largely delegated to the computer, with a resulting overall increase in the efficiency and learning yield of the total instructional process.

Although a thoroughgoing systems-analytic approach to foreign/second language learning--which would include CALL as well as many other techniques and resources as potential components--has yet to be fully developed, the general concept is a useful one and may help to identify the most effective place for computer-assisted techniques within the framework of language instruction as a whole.

#### Evaluating the Results of CALL

It is fair to say that, although the potential effectiveness of CALL in enhancing student language achievement is generally accepted, little experimental evidence addresses this assumption. In an important recent study, Robinson (1985) found that students who underwent each of a variety of language learning exercises on a microcomputer performed in virtually every instance at a higher level than a control group. Dunkel's (in press) view of research on CALL concludes that the evidence so far on CALL as a supplement to regular instruction is positive, although some studies document poor retention levels.

The overall impact of CALL on the total language learning experience has yet to be investigated in a scientifically rigorous manner. This investigation will probably have to await the development of CALL software that is integral to the instructional program rather than simply providing occasional or supplementary assistance to the classroom teacher. In addition, such research represents a major evaluative task that will require substantial technical and financial resources. In the meantime, the best approach to implementing and evaluating CALL technology in the foreign/second language teaching field will probably be for teachers, supervisors, and others involved in the instructional process to simply exercise good will and good sense in considering the potential applications of CALL in their own particular teaching situations.

### English through Content

Procedures for the integration of subject matter content and language instruction are of potential interest to all language teachers, but especially to those teachers of English as a second language (ESL) who are responsible for helping language-minority students acquire the linguistic skills needed to profit fully from academic instruction in English. This concern has increased with the influx of limited-English-proficient (LEP) students from all over the world into the United States school system. In Philadelphia's public school enrollment, for example, 74 language backgrounds are represented (Benevento, 1985).

The heightened interest in content-based language instruction comes at a time when language acquisition research is seriously questioning the efficacy of instruction that focuses on linguistic rules taught in isolation from subject matter (Mohan, 1986). As with proficiency-based foreign language instruction, the primary characteristic of content-based English language instruction is its emphasis on the use of the language in meaningful and relevant contexts, which in the latter case is the language of the subject matter classroom and textbook.

#### The "Sheltered-English" Approach

The "sheltered-English" approach--ESL that specifically addresses the content areas of math, science, or social studies--can aid the transition of LEP students into the mainstream of U.S. education, especially in comparison with the more typical ESL instruction that focuses only on general or social language. A major advantage of the sheltered-English approach is that the students receive specific practice in understanding and using academically oriented discourse, a type of language that many of them have not encountered before even in their native languages.

Cummins (1981) draws an important distinction between general socio-linguistic abilities, which he terms basic interpersonal communication skills (BICS), and the kinds of language called for in school settings, which he designates as cognitive academic language proficiency (CALP). Particularly characteristic of CALP is the ability to understand and use written language and even oral language in environments where little support of the meaning is provided by nonverbal or visual cues or through shared background knowledge. Although BICS can be developed through conventional ESL instruction, augmented by the student's own exposure to and practice in using social language outside of the classroom, the acquisition of CALP is viewed as a longer-term effort that requires a schoolwide, team-based approach for the greatest effectiveness and level of success.

#### The Team Approach to Content-Based Instruction

Since virtually every school in the United States has some number of LEP students, it is vitally important to establish close cooperation and

joint curriculum planning and teaching between ESL teachers and content area teachers. Although content area teachers may be uncertain regarding their role in the language development of LEP students and may initially resist becoming involved in such a venture, this may be overcome in large part by emphasizing the need to focus on students' academic skill deficiencies in all aspects of the school curriculum, regardless of the subject being taught in a particular classroom. The cultural diversity and linguistic richness the LEP students bring to the school should also be stressed as a positive factor.

A variety of inservice and preservice activities can be implemented in a team approach to content-based language instruction. For example, by observing trained ESL teachers, content area teachers can learn to modify their own classroom language to avoid complicated constructions and obscure expressions, as well as to give visual support for the meaning of the language by conducting demonstrations, increasing the number of visuals they use, and so forth. ESL teachers, for their part, can plan their classroom work in consultation with the content area teachers in order to coordinate their instruction with the particular topics being taught in the subject matter classes. Vocabulary development, in particular, can be pursued in a pre-planned, consistent manner in both ESL and content area classes. This is an especially important undertaking since a student needs repeated exposure to new vocabulary items in a wide variety of contexts in order to thoroughly master the words' visual, auditory, and semantic attributes. Both ESL and content area teachers must also become sensitive to students' varying linguistic and cultural backgrounds so as to avoid, for example, inadvertently using an inappropriate form or style of address when calling on a student in class. Close attention to these small but significant matters can be fostered through properly designed preservice and inservice training.

Chamot (1985) offers the following guidelines for program planners interested in developing an effective program of content-based language instruction:

1. Clearly define the instructional objectives of the program, with a major focus on having the LEP student, by the end of the program, fully able to participate in regular "nonsheltered" environments.
2. Plan curriculum and course content based on the instructional objectives.
3. Plan and conduct joint inservice training with ESL and content area teachers.
4. Develop or adapt teaching materials as necessary to support the instructional program.
5. Plan and implement appropriate assessment procedures.

### Promoting Interactive Opportunities

Chamot and Arambul (1985) illustrate the ways in which the science classroom can lend itself especially well to LEP student language development. For example, when students are physically involved in scientific experiments, they have natural opportunities to discuss what takes place in these experiments. When LEP students make oral or written reports, their teachers can focus on the conceptual content and not be overly critical of language errors. By the same token, nonverbal responses such as student-produced sketches and charts allow beginning-level LEP students to display their cognitive capabilities while control of the language is still being developed. When science is taught in a hands-on, interactive way, LEP students can share knowledge, hypotheses, and experiences with their English-speaking peers in creative, functional ways at the same time as they develop higher-level thinking skills.

### Materials Development Needs

A recent major seminar sponsored by the U.S. Education Department-supported Center for Language Education and Research (Crandall, Willetts, Mohan, & Curtain, 1986) concluded that in addition to the need for establishing effective inservice and preservice training programs for content-based language teaching, there is a critical need for instructional materials specially designed for the content-based programs. Although the writing or adapting of existing materials at the local level may provide an interim solution, this procedure is not an effective use of staff time and resources from the global, long-term point of view, since it involves reinventing the wheel in each particular setting. What appears to be needed is the involvement of major publishers in producing textbooks that parallel or supplement current texts and can be used in a sheltered-English context while LEP students are developing their English language skills. However, since these students will eventually exit to a regular academic environment, the subject matter content of these texts must not be diluted--such an approach would deprive the students of the academic boost that the sheltered-English approach is intended to provide. In this regard, it should also be emphasized that a properly planned "sheltered-English textbook" series would need to incorporate increasingly sophisticated language so that, on completion of the program, LEP students would be in a position to handle native speaker materials as easily as their native-English-speaking classmates.

### Future Directions

Although the future of foreign and second language teaching efforts in the United States cannot be predicted in detail, the general outlines can be conjectured, assuming that each of the three major initiatives described here continue to develop and expand appropriately. If so, the 1990 edition of this Yearbook might contain the following observations:

The "proficiency movement" has led to widespread adoption of verbally defined levels of language competence as a "common metric" of achievement in second language learning. Students, teachers, parents, school board members, college admissions officers, state and federal agencies, multinational corporations, and other individuals and organizations have all developed a good working familiarity with the real-life performance ability represented by each level of the proficiency scale. This information is used extensively in connection with student course placement, curriculum design, teacher certification, language program evaluation, employment applications for jobs requiring foreign or second language competence, and in a variety of other settings. Periodic surveys of the proficiency levels attained by high school and college graduates give clear and readily interpreted statistics showing the "national yield" of language-competent Americans.

Developments in the area of computer-assisted language learning, together with the constantly increasing availability of microcomputer equipment, have made the computer virtually as commonplace as the textbook in the nation's language classes. Despite some earlier fears, the computer, far from replacing the live teacher, has freed the teacher to concentrate on facets of the overall language learning process for which human interaction is of the greatest importance, including especially face-to-face conversation. The computer, for its part, has taken over the task of providing the student with a wide variety of opportunities for individualized practice, especially in reading and listening comprehension, in the methodical, tireless manner that is the hallmark and true strength of CALL.

A valuable byproduct of the advent and increasing use of CALL is the fact that teachers and school systems have begun to think of language teaching and learning as an integrated process involving not only the teacher and the computer but also many other types of learning media and opportunities. Both computer-based and noncomputerized self-study materials are increasingly developed and used in both formal and informal settings. Thanks to satellite technology, television programs from other countries are widely received and used for language practice in both schools and homes. Opportunities to travel and study abroad are used to greater advantage as a result of predeparture instruction in how to maximize the language learning yield of these experiences. In sum, bringing the computer into the instructional picture has encouraged teachers, curriculum planners, and others to broaden their view of the language learning process to include many other highly effective practices that might not otherwise have been considered.

In the nation's classrooms, a large majority of the teachers of math, science, social studies, and other subject matter have received explicit training to be able to conduct their classes so that they facilitate comprehension by limited-English-proficient students at the same time as they maintain full pedagogical rigor. ESL teachers, for their part, are fully knowledgeable about the content and sequencing of instruction in the other areas of the curriculum, and plan their own teaching so as to emphasize



the particular vocabulary and other aspects of the language that are most relevant to the other subject matter areas at any given point in the school year. As a result of this planned, synergistic approach, students whose native language is other than English have the opportunity to learn English rapidly and effectively while simultaneously acquiring the subject matter skills being taught in the regular school curriculum.

Taken together, advances in the three areas of proficiency-oriented language instruction and assessment, computer-assisted language learning, and cooperative, contentbased ESL and subject matter instruction have added up to a large and continually growing number of language-competent U.S. citizens. These individuals have attained a pragmatically useful level of functional competence both in English and in at least one other language that is of economic, social, or cultural value to themselves and--by the same token--to the nation as a whole.

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