

THE EFFECTS OF CHOICE AND CONTROL IN COMPUTER-ASSISTED
LANGUAGE LEARNING IN TEACHING SUPPLEMENTARY GRAMMAR TO
INTERMEDIATE STUDENTS OF ESL AND TO REMEDIAL ENGLISH
STUDENTS AT THE COLLEGE ENTRY LEVEL

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One of the greatest hindrances to conducting research in CAI at this stage of its development is the difficulty, particularly in Hawaii, of finding students with access to computers. Therefore, I am indebted to certain teachers and staff members at Hawaii Loa and Leeward Community Colleges, without whose cooperation in this project the experimental portion of this thesis would not have been possible.

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ABSTRACT

This thesis project was created with three major purposes in mind: (1) To show that an ESL instructor could create viable educational software using a courseware authoring language learned from scratch. (2) To create software that would be a credit both to ESL and to CAI. (3) To learn something about what makes CAI effective (i.e. about variables within CAI itself).

Toward these purposes, two CAI lessons were created, each teaching the use of gerund and infinitive complements with the matrix verbs stop, remember, forget, and regret. The lessons varied only in that one (PDL) allowed the students to exercise the independent variables choice and control, whereas the other (REG) didn't.

Four hypotheses were tested in the experimental portion of the thesis:

H1: That both CAI lessons would be effective in teaching in each experimental situation.

H2: That the PDL lesson would teach more effectively than the REG lesson.

H3: That use of CAI would result in favorable attitudes from the students.

H4: That students working the PDL lesson would have more favorable attitudes than students working the REG lesson.

Two experiments were carried out, one with non-native English speaking ESL students (NNS), and the other with native English speaking remedial English students (NS). After applying t-tests to compare means of pre and post tests, H1 was accepted only for the NS students and H2 was rejected in each case ($\alpha = .05$; however, the PDL lessons were shown to be more effective than the REG lessons with the NNS's at $p < .10$). H3 and H4 were both accepted on the basis of qualitative data.

The results indicate that CAI is an effective means of instruction for NS's, and they suggest that it can be effective also for NNS's, especially if choice and control are allowed by the programmer. Although the variables of choice and control were not shown empirically to enhance the efficacy of the CAI lessons, the researcher feels that the results do suggest that these variables warrant closer attention in future research.

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ABBREVIATIONS

Abbreviations used in this thesis:

CAI	- Computer-Assisted Instruction
CALL	- Computer-Assisted Language Learning
CBI	- Computer-Based Instruction
CMI	- Computer-Managed Instruction
CTL	- Experimental Control Group (or) Treatment Given the Experimental Control Group
ESL	- English as a Second Language
HumRRO	- Human Resources Research Organization
HLC	- Hawaii Loa College
LCC	- Leeward Community College
NS	- Native Speaker of English
NNS	- Non-native Speaker of English
P.A.S.S.	- Program for the Advancement of Study Skills
PDL	- Experimental Paddle Group (or) Treatment Given the Experimental Paddle Group
PI	- Programmed Instruction
REG	- Experimental Regular Group (or) Treatment Given the Experimental Regular Group
TG	- A Manufacturer of Game Paddles

CONVENTIONS USED IN THIS THESIS

The author is aware of the controversy surrounding consistent use of the masculine pronouns "he", "his", and "him" when referring to members of a group who could be either masculine or feminine. However, as English does not provide a suitable vehicle for communicating this awareness, the author has used masculine pronouns rather than resorting to awkward constructions such as "his/her". Any bias therefore is more the fault of the language than of the author, and is in any case not intended.

Linguistic items (i.e. strings varying in length from one to several words) are enclosed in single quote marks.

PREFACE

Educators have recently been showing increasing interest in the applications of computer-assisted instruction (CAI) to their respective curricula. This interest is apparent in the proliferation of trade and professional journals devoted to computers in education, in the increasing number of conferences devoted to CAI, and in the greater attention given to CAI at existing conferences.

Recent developments in TESOL (Teachers of English to Speakers of Other Languages) provide a good example of this eagerness to learn more about CAI. At the 1981 TESOL Convention in Detroit, there were only three or four presentations on the subject of CAI. The next year, in Honolulu, there were eight CAI-related events listed in the program for the convention. At the most recent convention, in Toronto, there were 17 separate events scheduled for CAI, a number resulting in there being at least one presentation on CAI practically every hour of the convention. In addition, a substantial portion of TESOL's 34th Annual Georgetown University Round Table on Languages and Linguistics, held just prior to the Toronto convention, dealt with CAI.

One of the 17 CAI-related events at the Annual Convention in Toronto was a plenary address. Another was a symposium on CAI in ESL. Held on one day preceding the convention in Toronto, the symposium generated enough

subsumed with CAI under the larger heading of CBI, or computer-based instruction (Milner, 1980). These terms all appear in the literature concerning computers used in education, but the term CAI is most appropriate for this thesis.

This thesis will discuss what effects the variables of choice and control have on the efficacy of CALL lessons into which these variables are programmed. The first chapter establishes a theoretical base for development in the medium of CAI. The second chapter applies these principles to the creation of the CALL materials used. The third chapter provides a linguistic analysis and pedagogical description of the grammar point dealt with in the CALL lessons. The fourth chapter describes the lessons themselves. The fifth chapter describes the instruments for measuring the variables under study in the experiment. The sixth chapter discusses the experimental procedure. The seventh chapter reviews the ideas in the first and second chapters in light of discoveries made in the course of conducting and analyzing the thesis experiment.

The author has, in addition to this thesis, published further material on the subject of ESL courseware evaluation (Stevens, 1983).

interest to motivate scheduling a similar event for two days in Houston in 1984. At the Toronto symposium, those present formed an interest section within the TESOL organization and voted to designate this interest section CALL-IS. CALL is an acronym for Computer-Assisted Language Learning. This acronym will be employed where appropriate in this thesis to refer to CAI used specifically in language learning, and in this regard, it should be kept in mind that principles which hold true for CAI hold true for its subsets, e.g. CALL, as well.

Workers in the field acknowledge a subtle distinction between computer-assisted instruction and computer-assisted learning (as in CALL). The latter term, which is more widely used in the U.K. than in the U.S., focuses whatever happens between learner and computer on the learner, while use of the term "instruction" is felt by some to imply that the computer is the main focus of the entire process (as pointed out, for example, by Rowe, 1983). Still, CAI is the term most prevalent in the literature; accordingly, this term will be used here to describe the instruction and learning done by the computer and student, respectively.

The term CAI refers only to the instructional component in a curriculum of computerized lessons, the management of which may in turn be governed by the computer. This latter function, known as CMI (computer-managed instruction), is