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ABSTRACT

This brief paper describes a Macintosh computer program designed specifically to support the collaborative work of special education resource teachers. The increasing importance of collaboration between special and regular educators in serving the needs of students with disabilities is noted, as is the potential role of the microcomputer in aiding collaboration. The AIMS (Assessment and Instructional Management Support) CoPlanner has the following features: (1) worksheet and summary components to support collaborative planning; (2) an online mail system to facilitate communication; (3) online tools to support assessment and teaching tasks; (4) report planning and reporting features; (5) a thesaurus to help collaborating educators achieve consensus on the use of language in collaborative reports; and (6) situational "balloon helps" and an online manual for effective use of the system. A separate section containing the highlights of the AIMS CoPlanner is attached. (DB)

Technology to Facilitate Collaboration: AIMS CoPlanner

A paper presented at the 71st Annual International Convention of the Council for Exceptional Children, San Antonio, Texas, April 5-9, 1993.

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Technology to facilitate collaboration: AIMS CoPlanner

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In the last few years, "collaboration" has become the preferred mode of service delivery for mainstreamed students with special needs in the schools (Friend, & Cook, 1992). At the same time, the use of microcomputer technology has been a second increasingly important influence in changing teaching styles in the schools (Brown, & Logan, 1993; Fulton, 1993). While collaboration is defined as a "style" of service delivery and the computer as a "tool" for service delivery, each is seen in isolation in the literature. The computer has many features with potential for supporting collaborative teaching, even though so little is being written about those specific applications. The purpose of this paper is to review some of the characteristics of collaboration and to show how the computer could be employed as a tool to support them. A secondary purpose is to describe AIMS CoPlanner, computer software specifically designed to support collaboration.

Collaboration as a Way of Teaching

Collaboration as a concept has its origins in the literature on consultation or consultant services. Over the last few years, our understanding of collaboration has evolved (Cook, & Friend, 1990a; Dettmer, Thurston, & Dyck, 1993; Friend, & Cook, 1992; Idol, Paolucci-Whitcomb, & Nevin, 1986; Morsink, Thomas, & Correa, 1991) in practice to the point that Friend and Cook (1992) have recently defined it concisely and delineated its most important attributes. They define it as "...a style for direct interaction between at least two coequal parties voluntarily engaged in shared decision making as they work toward a common goal" (p. 5) and list the following "defining characteristics" for collaboration:

1) It is voluntary

2) It requires parity among participants

3) It is based on mutual goals

4) It depends on shared responsibility for participating and decision making

5) It requires individuals to share their resources, and

6) It requires that those who collaborate share accountability for outcomes
(pp. 7-8)

In reviewing these characteristics one notes that the first two are preconditions for collaboration; that is, educators must willingly participate and each must consider the other a professional peer, even though the professions differ. Unless these two preconditions exist, successful collaboration will not likely be possible. The other four characteristics or factors critical for collaboration all relate to mutual or shared responsibilities of the colleagues, and all seem consistent with our past experiences in deploying special education staff to work collaboratively. Those who clearly understood that they were mutually responsible for goal setting, decision making, and outcomes were much more likely to work together effectively. Those who saw their contributions as finite parts of the task were more likely to work independently. Ultimately, collaborative services are virtually always more effective than those planned and delivered by any individual educator functioning in

isolation. It is the broader perspective arising from the shared expertise of the cooperating educators which seems to be the critical factor--along with the quality of the collaboration--in successful teamwork.

As Friend and Cook (1992) have pointed out, educators who collaborate value that style of service delivery, establish mutual trust, and evolve a sense of community. They also note that pragmatic factors such as lack of time for collaboration, lack of space for meetings, and lack of staff and financial resources all reduce the probability of successful collaboration. Still, none of these constraints need prevent collaboration. The use of the computer may indeed save time and resources which can then be redirected to support collaborative service delivery.

The Computer as a Tool for Collaboration

The microcomputer has several attributes which make it attractive as a tool to support collaborative special education service delivery. First, the networking and mail capabilities of the computer can greatly facilitate communication, one of the factors most critical for collaboration. Second, the computer software can serve both as support for collaborative planning and as a means of capturing the ongoing results of planning. These results can then be made accessible to all team members. Third, assessment and teaching tools needed by the collaborating members can be made easily accessible on computer. Fourth, the two dimensional spreadsheet feature of computer software can be readily adapted as space for recording the results of collaborative planning. Fifth, the computer can be employed to great advantage in assembling the ongoing content of a report of the collaborative work, as well as a variety of on-line reporting formats. Sixth, the word processing features of the computer greatly enhance the task of reporting the results of collaborative work. Finally, the computer can be available as a tool 24 hours a day, seven days a week at local or remote sites. It can be accessed at any time by any or all members of the collaborating team.

AIMS CoPlanner as Computer Support for Collaboration

AIMS CoPlanner is a Macintosh computer program designed specifically to support the collaborative work of special education resource teachers (see appended "Highlights of AIMS CoPlanner"). **AIMS** is an acronym for **"Assessment and Instructional Management Support"**, the main role of the resource teacher, while **"CoPlanner"** indicates that the software is intended to support a collaborative approach to service delivery. CoPlanner has the following features:

1) A **CoPlanner Worksheet** and **CoPlanner Summary** to support educators planning and working collaboratively with a student with special education needs;

2) An on-line **Mail** system to facilitate communication during the times between face-to-face meetings of those working collaboratively;

3) On-line **Tools** to support the assessment and teaching tasks of those collaborating;

4) **Report Planning** and **Reporting** features to assist those collaborating to achieve consensus on when and how to report a student's progress and to actually produce the report;

5) A **Thesaurus** to help the collaborating members achieve consensus on the use of technical and non technical language in collaborative reports; and,

6) Situational **Balloon Helps** and an on-line manual or **Extended Help** to assist collaborating members to use the computer effectively as a tool.

Each of these features of CoPlanner harnesses some powerful attribute of the computer to sustain special education support staff working in a collaborative mode. Further, because CoPlanner is an **"open"** system, it can be readily adapted to any curriculum and any educator's personal style of service delivery. While it was originally designed to support the collaborative work of special education resource teachers, CoPlanner can also be used effectively by special education consultants, educational psychologists, speech therapists, social workers, counselors, nurses, doctors, parents and others collaborating with teachers in schools. Above all, CoPlanner is not an "expert" system which will remove educational decision making from educators; rather, it empowers educators to make more informed educational decisions.

Conclusion

Aims CoPlanner is one of the early efforts to utilize the power of the microcomputer to support collaboration as a style of special education service delivery. In many respects, CoPlanner is a logical merging of two rapidly growing phenomena in the schools. It seems clear that as more computers are purchased by individual teachers and computers also become more readily available in schools, they will be used more frequently to support the instructional planning tasks of teachers as well as the instruction of students. CoPlanner is one of the first of a number of computer programs which will likely be developed to support both the individual and collaborative instructional planning tasks of educators. Just as the quality of educational planning and decision making can be enhanced by collaboration, so too can technology support and enhance collaboration.

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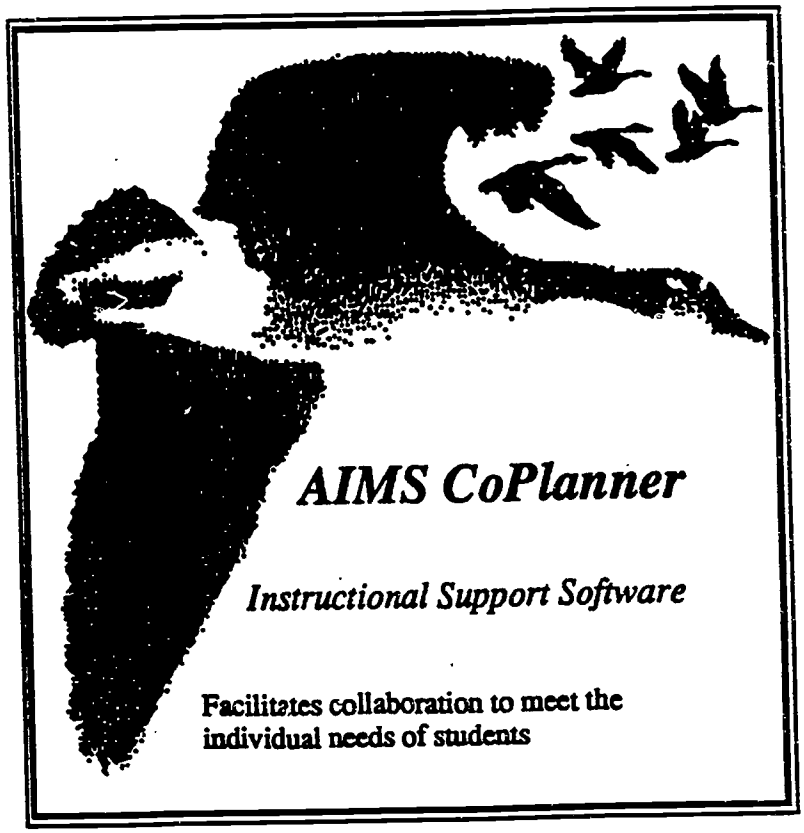
HIGHLIGHTS OF AIMS CoPlanner



AIMS CoPlanner is an interactive computer program designed to support the shared responsibilities of teachers and other educators working with students with special needs. The program facilitates communication, decision-making, and instructional planning among collaborating educators. Use of AIMS CoPlanner helps teachers to be systematic and thoughtful as they gather relevant information about a student, reflect on that information, plan teaching strategies, monitor student progress, and report on the progress of individual children and youth.

The Canada goose has been chosen as the symbol for CoPlanner because, in flight, a flock of Canada geese manifests many of the attitudes and behaviors essential in productive, cooperative teaching relationships. Migrating geese, flying in their characteristic v formation, share leadership, honk encouragement to their leaders, and support the other members of the flock in the slipstream. A pair of geese will always fall out of formation to accompany a sick or wounded bird to the ground. Above all, geese show great concern for the most vulnerable in the flock.

Purposes of AIMS CoPlanner

AIMS CoPlanner was developed to place computer technology at the service of teachers and instructional support staff, while leaving them in control of educational decision-making. The program is intended to support teachers' decision-making, capture the results of collaborative planning and teaching, and make student records readily available to those who need them to facilitate teaching. Besides supporting instruction, CoPlanner was designed to enhance communication among staff who share responsibility for the education of a student; to make assessment and teaching tools available on-line; to shorten the process and time needed for reporting student progress, and to reduce the work involved in keeping accurate, ongoing records for students with individual education needs.

While AIMS CoPlanner was initially developed to facilitate the preservice preparation of resource teachers, it will also be equally valuable for use by experienced resource teachers, special education consultants, educational psychologists, speech therapists, social workers, medical practitioners and any other consulting or support staff working collaboratively with teachers.

As an "open" or modifiable software support system, CoPlanner can be adapted for use with any provincial or state curriculum. Also, because CoPlanner is an open system, it has potential use in other educational tasks such as for self-directed learning for adults; for collaborative supervision of preservice teachers in field practica; for transitional program planning; for collaboration among school personnel, community agencies, parents and young adults making the transition from school to work or post-secondary education, and for home-school planning for students with special needs.

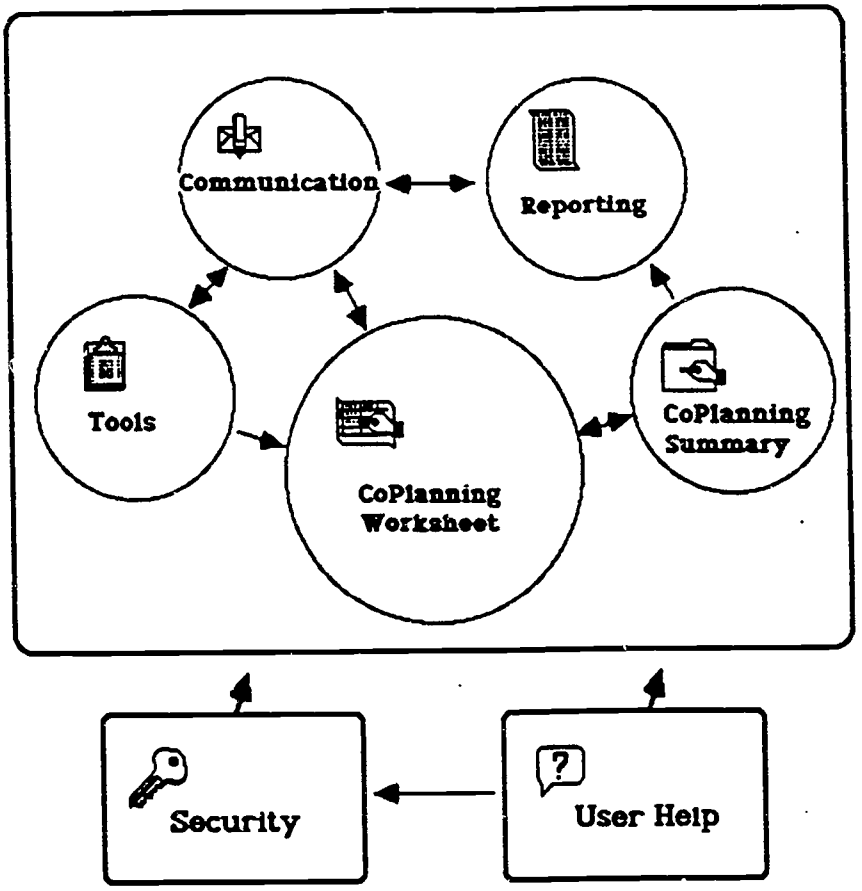
Using AIMS CoPlanner

AIMS CoPlanner has a number of features which make it convenient and easy for teachers to utilize. The first time a teacher uses CoPlanner, a personal password is entered to maintain the confidentiality of personal notes and work in progress. Built-in "balloon helps" and an on-line manual provide tutorial assistance at the exact times and places that the user needs them in the software. At the heart of AIMS CoPlanner is a "Project"or individual profile initiated for a student with special needs by a team of collaborating users. Only Project team members have access to the CoPlanning Worksheet. Through the project, each member of the team may contribute to assessing, planning for, and teaching the student. Each person may retain private notes, send mail messages to any or all of the others collaborating on the project, and use any of the on-line tools. The Report Worksheet aids the Team in planning for reporting, and the Report Generator converts Project Summaries into written reports.

Preservice resource teachers will use all of the features of AIMS CoPlanner as the bases for learning about the roles and functions of resource teachers. Fully experienced resource teachers (or other helping staff) will employ CoPlanner as an instructional support, using the tools and software features they require for their work.

Components of AIMS CoPlanner

AIMS CoPlanner has a number of features specifically designed to support interactions among teachers and to support personnel working with a particular student. These features are illustrated and described below:



- **CoPlanning Worksheet:** A scrollable window configured according to curriculum areas, and an instructional planning model contains space for on-going planning notes.
- **CoPlanning Summary:** Student biographical information and worksheet summaries can be converted into printed reports.
- **Reporting:** The Report Worksheet facilitates report planning; the Report Generator converts CoPlanning Summaries into printable reports.
- **Communication:** Users exchange Mail, retain Private Notes, and check vocabulary with the online Thesaurus.
- **Tools:** A database for Information Gathering and Teaching tools can be searched by tool properties and/or curriculum areas. Tool reports can be printed.
- **Security:** A Password System limits access to CoPlanning Worksheets, Mail, and Notes.
- **User Help:** "Balloon Helps", an online manual, and a printed manual provide user support.

History and Current Status of AIMS CoPlanner

AIMS CoPlanner was developed in the Department for the Education of Exceptional Children, University of Saskatchewan, by a working group consisting of the following:

Leonard Haines, Associate Professor and Project Leader
Robert Sanche, Professor and project member
Gladene Robertson, Associate Professor and project member
John Montbriand, Computer Programmer
Margareth Peterson, Extension teacher and project member

AIMS CoPlanner has been developed under a grant from The **Apple Canada Education Foundation.** Prior to its release by the Fall of 1993, the program will have undergone extensive formative and summative evaluation in field test sites in Canada, the United States, and Australia.

Funding to support development and field evaluation of AIMS CoPlanner was provided by the **Saskatchewan School Trustees Association**, the **Saskatchewan Teachers' Federation**, the **College of Education**, the **University of Saskatchewan** and **Saskatchewan Education.** Technical support was provided by staff of the Instructional and Research Applications Division of the **Department of Computing Services,** University of Saskatchewan. Equipment for developing and field-testing the software was provided by the **Apple Canada Education Foundation.**

Hardware and Software Requirements

AIMS CoPlanner was designed for Macintosh computers using System 7 operating software. The computer needs a hard drive and at least 2 Mb of RAM. Adaptations have been made to allow for use with System 6 software. CoPlanner itself requires less than 350K of RAM.

Who To Contact About AIMS CoPlanner

All correspondence and enquiries about project AIMS/AIMS CoPlanner should be directed to:

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