To: Dean Hoiberg  
From: Steve Fales  
RE: Submission of Computation Advisory Committee Proposal (CAC)

Attached is a CAC proposal by Mullen, et al. requesting funds for computers in our agronomy Student Center for Interactive Learning and Study to help meet our growing needs for computer-intensive learning by students in our courses. As you realize, most of our crops courses have a primary service role to all students in the College of Agriculture. This proposal represents a benefit to all undergraduate students taking our classes, not just the small percentage of agronomy students enrolled in many of our main agronomy courses.

Appended to this proposal is the Agronomy Endowment support we have given to the innovative learning development for on-campus and distance learning in our undergraduate courses. We have an excellent facility in the Crops Learning Center (Room G525) for student learning and an excellent development lab in our Distance Master’s Technology Lab for continued technology development in teaching. For some time we have envisioned more student-intensive use of computers in active learning activities in our classes and our large enrollment introductory agronomy course is ready for this step next fall. Our departmental support has been significant for the development of innovative learning programs but we need support for computer hardware to realize the benefit of that investment to students. Student computer fees would be well served by funding this request and is evidenced by student feedback. I strongly support this proposal and encourage its funding.
I. ESTABLISHING A COMPUTER INTERACTIVE LEARNING ENVIRONMENT FOR AGRONOMY CROPS TEACHING

Department of Agronomy
COLLEGE OF AGRICULTURE

Dr. Russ Mullen, Professor of Agronomy
Dr. Gina McAndrews, Teaching Post-Doc.
Kerry Taylor, Crops P&S Coordinator
Bryce Lemke, Graduate Teaching Assistant
Ryan Rusk, Graduate Teaching Assistant
Bart Boehm, Undergraduate Teaching Asst

Dr. Steve Fales, Head
Department of Agronomy

Approval: College of Agriculture

Approval: Iowa State University

Project Leader:
Dr. Russ Mullen
1126 Agronomy Hall
294-3271
remullen@iastate.edu
II. Project Overview, expected Benefit and Innovative Features

**Project Background:** In June 2001, a two-year Agronomy Endowment grant (subject to annual renewal) was awarded to our department to establish a computer interactive learning environment for the introductory agronomy course and to gradually expand the expertise and facilities that currently exist in the Distance Masters Technology Laboratory to meet the resident educational needs of the department. (see Appendix summary of the funded project: “Enhancing Resident Education In Agronomy - Step 1: Transition Of The Distance M.S. Technology Lab To Meet Undergraduate Needs”). Progress on this funded project will allow us to offer computer enhanced learning in the introductory course starting next fall. (see Appendix, “Project Progress Report – February 2002”).

**Project Objective:** The objective of this CAC proposal is to request funding to equip the agronomy Student Center for Interactive Learning and Study with computers. This will allow students in the introductory course (Agron. 114, Principles of Agronomy) to utilize computer enhanced, multimedia learning modules that have been developed as part of the aforementioned funded project. The learning center also supports instruction in other main service courses in agronomy such as, Agron. 212, Grain & Forage Crop Mgt.; Agron. 317, Princ. of Weed Sci.; Agron. 334, Forage Crop Mgt.; and Agron. 392, Systems Analysis in Crop & Soil Mgt., which utilize supplemental course instruction outside of the classroom. In addition, the learning center’s computers will enable Agronomy instructors to expand computer interactive learning in their courses.

A. Description and Intended purpose for all Project Expenditures.

We are requesting funds from Central Pool to equip the agronomy Student Center for Interactive Learning and Study with 30 computers.

B. How proposed facilities will be made available to students.

1. **Specify the hours this facility will be available of general student use.**

The Student Center for Interactive Learning and Study (G525 Agronomy Hall) is an area of approximately 1000 square feet. This facility includes an individual study area, an enclosed area for taking quizzes, a demonstration area, and an attached greenhouse that is a designated area for teaching various aspects of plant growth and crop production. The learning center receives constant use by students and instructors in introductory agronomy course and in other crops courses. The learning center is open 35 hours per week under constant supervision by either instructors or teaching assistants.

2. **Identify the number of students that will be able to use these facilities.**

On an average daily basis, between 12 and 20 students per hour use the learning center. During peak use hours, we have as many as 26 to 28 students per hour. We expect even higher per hour use in Fall 2002. Beginning August 2002, we plan to incorporate the WEB based delivery system that we have developed into the Agron. 114 course. Students will have immediate computer access and delivery of course-
tutoring material and videos for all material taught in Agron. 114. This will allow us to discontinue the use of standard video players and videotapes that have been used for over 10 years and are wearing out. Chapter pre- and post-study quizzes for all chapters are also integrated into the computer interactive learning programs. The WEB based delivery system will give students interactive learning material designed to help them develop higher learning and problem solving skills, and the system will provide students more flexibility and speed to access video and other learning activities for initial and remedial study. Furthermore, students from other agronomy courses are expected to use the computers for supplemental and interactive learning. The current annual enrollment of students in Agronomy 114, 212, 317, 334, and 392 is approximately 1350 students per year. Computer use in Agronomy 114 is expected to be between 700-1000 student hours per week.

3. Identify the student population that should benefit from this proposal.

The majority of students benefiting from this project will be students majoring in the College of Agriculture. Over 90% of the students in Agronomy 114, 212, 317 are non-agronomy majors. A survey was given to students in the introductory agronomy class this spring asking them to evaluate a prototype of the computer interactive learning tools that are being developed. Student comments (n=71) were very positive. Of the students who used the computer interactive learning prototype, 97% agreed or strongly agreed that it enhanced learning of course material and 88% ranked the prototype among the top 30% of learning tools used they have experienced in all courses (see Appendix, “Agronomy 114 Interactive Learning Survey-February, 2002”).

C. Will the proposed project require new technologies?

Only computers are requested in this proposal to enable us to incorporate innovative technologies funded by another grant.

D. Identify university facilities that would be needed for the proposed project. Specify the building(s) and room number. A scaled sketch of the floor plan showing the location of equipment should be appended.

The Student Center for Interactive Learning and Study will house the proposed project and is located in Room G525 Agronomy Hall (see appendix, Floor Plan). Renovation of existing facilities would not be needed. However, student study carrels designed for computer learning are needed and will be funded by the Department of Agronomy.

III. Support and Maintenance - Anticipated costs for on-going operation.

Existing facilities (Room G525 Agronomy) and supervisory personnel are already in place and operated within the Agronomy Department’s annual operating teaching budget. The Agronomy Department’s has its own Computer Support Facility that will provide on-going technical support for operation and maintenance of computer equipment in this facility.
### IV. Budget

#### Table 1. Full Itemized Budget

Costs for the Entire Project: $48,300

<table>
<thead>
<tr>
<th>Description of Item</th>
<th>No.</th>
<th>Unit Cost</th>
<th>Total Cost</th>
<th>Funding Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hardware</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dell OptiPlex GX240 Small Form Factor</td>
<td>30</td>
<td>$1610</td>
<td>$48,300</td>
<td>Central Pool</td>
</tr>
<tr>
<td><strong>Software/Course Development</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEB course design, programming and graphic design for computer interactive learning modules for the introductory agronomy course. Project Cost: $104,000</td>
<td></td>
<td></td>
<td>$104,000</td>
<td>Agronomy Endowment Fund</td>
</tr>
<tr>
<td><strong>Computer Study Carrels/Tables and Chairs (Prison Industries quote)</strong></td>
<td>30</td>
<td>$385</td>
<td>$11,550</td>
<td>Agronomy Dept.</td>
</tr>
</tbody>
</table>

**Total Costs**

$163,850

**Total Request from Central Pool:**

$48,300 Central Pool

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#### Table 2. Minimum Feasible Itemized Budget From Central Pool*

<table>
<thead>
<tr>
<th>Description of Item</th>
<th>No.</th>
<th>Unit Cost</th>
<th>Total Cost</th>
<th>Funding Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year 1:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hardware</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dell OptiPlex GX240 Small Form Factor</td>
<td>25</td>
<td>$1610</td>
<td>$40,250</td>
<td>Central Pool</td>
</tr>
<tr>
<td><strong>Year 2:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hardware</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dell OptiPlex GX240 Small Form Factor</td>
<td>5</td>
<td>$1610</td>
<td>$8,050</td>
<td>Central Pool</td>
</tr>
</tbody>
</table>

**Total Request, Year 1:**

$40,250 Central Pool

**Total Request Year 2:**

$8,050 Central Pool

*30 computers is the minimum long-term, targeted need for anticipated intensive student use. Although not preferred, a two year phase in period would be possible with 25 computers needed the first year and 5 additional computers in the second year.
Figure 1. Ground Floor Plan of Agronomy Hall
Student Center for Interactive Learning and Study - Room G525

Figure 2. Learning Center Facilities
Funded Project Proposal

ENHANCING RESIDENT EDUCATION IN AGRONOMY - STEP 1: TRANSITION OF THE DISTANCE M.S. TECHNOLOGY LAB TO MEET UNDERGRADUATE NEEDS

Principle Investigators:
Russ Mullen (remullen@iastate.edu), Department of Agronomy
Kerry Taylor (ktaylor@iastate.edu), Department of Agronomy
Dan Dobill (ddobill@iastate.edu), Department of Agronomy, Distance Masters Program

Collaborators: Ken Moore, Department of Agronomy, Distance Masters Program
D.J. Toms, Baker Computer Support Lab, Department of Agronomy
Don Rieck, Instructional Technology Center
David Acker, College of Agriculture International Programs

Short Term Project for the Excellence in Agronomic Education and Extension Initiative

Start Date: June 1, 2001 for two years. Ending date June 2003

Funds Requested Each Year: Year 1 - $55,000; Year 2 - $49,000
Total Project Funds Requested: $104,000
Non-technical Summary:
The Excellence in Agronomic Educational and Extension Initiative has identified the need to establish an Educational Technology Enhancement Laboratory "to harness emerging technologies to improve learning and incorporate new innovations into resident and extended-campus courses". This project proposes a gradual evolution of the Distance Masters Technology Laboratory into the Educational Technology Enhancement Laboratory over a three-year period. This project proposes a small expansion of current staffing in the Distance Masters Technology Laboratory and to incorporate technology enhancement in the resident undergraduate course in fundamentals of agronomy because of the need for an equivalent course offered by distance and the current state of readiness of course materials for advanced technology enhancement. Prototype learning modules have been designed to engage students in active learning tasks, diagnose learning progress, provide remedial study, and provide exploratory learning including problem solving. The project will allow us to adapt current video instructional tapes into WEB-based streaming video incorporated within a computer-based learning environment. The course has traditionally been challenging to students that have little experience with agriculture. This project will help provide better self-learning tools for traditional and non-traditional students in a delivery package that can be easily utilized in a variety of educational programs and settings, both locally and at a distance. The learning modules developed under this project will allow us to offer a premier learning environment for resident students in the course and to distance learners at national and international locations.

This project addresses a four-fold need in the department:

1) To capitalize on the expertise and facilities that currently exists in the Distance Masters Technology Laboratory and to gradually expand those resources to resident educational needs of the department

2) To offer a fundamental course in agronomy using Distance Education Technology

3) To strengthen the on-campus introductory course in Fundamentals of Agronomy

4) To package resident course information and materials for new audiences and changing needs of students
Funded Project Budget:

The main financial request in this proposal is to provide labor costs for graphic design and multimedia development. A graduate student is needed that will provide day-to-day input needed in responding and supplying course materials to courseware developers.

<table>
<thead>
<tr>
<th>Category</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphic Design and Multimedia Developer</td>
<td>$25,000</td>
<td>$25,000</td>
<td>$50,000</td>
</tr>
<tr>
<td>(1.0 FTE)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Materials Coordinator, (Graduate Student - 0.5 FTE)</td>
<td>$16,000</td>
<td>$17,000</td>
<td>$33,000</td>
</tr>
<tr>
<td>Computers (2), Software, and Upgrades</td>
<td>$10,000</td>
<td>$3,000</td>
<td>$13,000</td>
</tr>
<tr>
<td>Supplies, Training, Telecommunications, and Computing Costs</td>
<td>$4,000</td>
<td>$4,000</td>
<td>$8,000</td>
</tr>
<tr>
<td>Totals</td>
<td>$55,000</td>
<td>$49,000</td>
<td>$104,000</td>
</tr>
</tbody>
</table>
PROGRESS REPORT - February 22, 2002

Project Title: Enhancing Resident Education In Agronomy - Step 1: Transition Of The Distance M.S. Technology Lab To Meet Undergraduate Needs

1. Goals:
This project proposes a gradual evolution of the Distance Masters Technology Laboratory into the Educational Technology Enhancement Laboratory over a three-year period. This project proposes a small expansion of current staffing in the Distance Masters Technology Laboratory to begin developing technology enhancement for undergraduate courses. The introductory Agronomy course, Agronomy 114 ‘Fundamentals of Agronomy’, is targeted for this initial phase because of the need and readiness to incorporate technology enhancement in the resident undergraduate course and because of the need for an equivalent course offered by distance.

2. Contribution to Departmental Excellence:
This project will help provide the experience needed for the Distance Masters Technology Laboratory staff to gradually evolve their ability and role to develop technology enhancement for undergraduate courses. The learning modules developed for this project will allow the Agronomy Department to offer a premier learning environment for resident students in the introductory agronomy course and an exceptional interactive learning course to distance learners at national and international locations.

3. Progress to Date:
a. The prototype* for computer and multimedia enhanced learning modules for each of the 13 units of course material has been completed. The prototype includes learner objectives, relevance of the material, digitized video tutoring of subject matter, key concepts of material to be learned, practice learning exercises, sub-unit and chapter self diagnostic learning quizzes, and problem solving scenarios including technical and ethical/environmental problems.

b. The template of web pages and scripting for course management for on-campus and distance learners is being developed for use beginning Fall, 2002. Roger Webb in the Distance M.S. Technology Lab has been assigned website programming and scripting for Agronomy 114. He is currently working on Chapters 1-7 (13 chapters total).

c. Final editing of all written material for programming covering the first seven chapters has been completed (approximately 500 pages of written material). Approximately 175 concepts of highly interactive practice learning exercises have been developed for the first nine chapters.

d. Nearly 13 running hours of the Agronomy 114 Video tutoring tapes developed for the course has been digitized and categorized into approximately 60 subunits of study. Presently, video is being edited for streaming video delivery on the web.

e. Graphics for all subunit study for the first seven chapters have been identified and catalogued for use by programmers. Emeritus Professor Dr. Detroy Green, who is
contribute his time free of charge, is conducting this effort. Graphics design and artwork for all subunit icons for the first seven chapters have been contracted for development with the Graphics Department at Iowa State’s Instructional Technology Center.

f. Authorware programming for highly interactive learning practices for the course has been subcontracted with the Instructional Technology Center. This has allowed Jee-Young Won in the Distance M.S. Technology Lab to concentrate on authorware development for distance M.S. projects.

g. Two computers have been purchased for this project, one for programmers in the Distance Learning Lab and the other for online testing of developed materials in preparation for fall use by on-campus students. A digital camera and tripod has been purchased for incorporating visuals in the learning modules for this project and for future use in other undergraduate courses.

4. Participating Project Personnel
- Dr. Russ Mullen, Professor of Agronomy;
- Kerry Taylor, Crops P&S staff;
- Dan Dobill, Manager of the Distance M.S. Lab;
- Dr. Gina McAndrews, Course Materials Development Coordinator;
- Emeritus Professor Dr. Detroy Green, Instructional Materials Developer;
- Roger Webb, WEB Programming and Scripting, Distance M.S. Technology Lab;
- Mike Wilson, Dave Pavlik, and Heather Brumm, Instructional Multimedia division of the Instructional Technology Center;
- Hourly help as needed, Distance M.S. Technology Lab; and
- Graduate Crops Teaching Assistants (as needed)

5. Course Implementation Plan
We recently purchased a computer as the projected prototype that students will use to access and manage learning materials developed from this project. With this new computer, we will test and review programmed material for online presentation and accuracy, and to verify the computer’s suitability for student use of the interactive learning units. This effort will begin in March 2002. Beginning August 2002, we will incorporate finished units of the project into the course (provided that the Plants Center can be equipped with student computers). As part of a WEB based delivery system, students will have immediate computer access and delivery of course-tutoring material and videos for all chapters and subunits within that chapter. This will allow us to discontinue the use of standard video equipment and videotapes that have been used for 12 years and are wearing out. Chapter pre- and post-study quizzes for all chapters will be available as part of the computer program as well. The WEB based delivery system will give students interactive learning material designed to help them develop higher learning and problem solving skills, and the system will provide students more flexibility and speed to access video and other learning activities for initial and remedial study. We will use second year funding to complete the remaining six chapters and get the material on-line for students as soon as each unit is finished. WEB-based course management will begin in Fall 2002 and will be finalized in 2003.
**Budget Progress Report:**

The main financial request in this proposal is to provide labor costs for graphic design and multimedia development. A graduate student is needed that will provide day-to-day input needed in responding and supplying course materials to courseware developers.

<table>
<thead>
<tr>
<th>Category</th>
<th>Budget Line: Year 1 (01-02)</th>
<th>Spent as of Feb. 25</th>
<th>Encumbered ending June 30, 2002</th>
<th>Year 2 (02-03)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphic Design and Multimedia Developer Contracted Services with the Instructional Technology Center Roger Webb, Distance Master’s Lab for Programming</td>
<td>$25,000</td>
<td>$827</td>
<td>$4000</td>
<td>$25,000</td>
<td>$50,000</td>
</tr>
<tr>
<td>Course Materials Coordinator, (Graduate Student - 0.5 FTE)</td>
<td>$16,000</td>
<td>$9,020</td>
<td>$8,287</td>
<td>$17,000</td>
<td>$33,000</td>
</tr>
<tr>
<td>Computers (2), Software and Upgrades, and Digital Camera</td>
<td>$10,000</td>
<td>$7,198</td>
<td>$1,000*</td>
<td>$3,000</td>
<td>$13,000</td>
</tr>
<tr>
<td>Supplies, Training, Telecommunications, and Computing Costs</td>
<td>$4,000</td>
<td>*</td>
<td></td>
<td>$4,000</td>
<td>$8,000</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>$55,000</strong></td>
<td><strong>$17,045</strong></td>
<td><strong>$33,287</strong></td>
<td><strong>$49,000</strong></td>
<td><strong>$104,000</strong></td>
</tr>
</tbody>
</table>

*Additional costs are expected
1. What is your major?
   a. Agronomy – 5.6%
   b. Animal Science – 25.4%
   c. Ag. Studies – 14.1%
   d. Ag. Business/ Ag. Education – 16.9%
   e. Other – 38.0%

2. Your academic classification is:
   a. Freshmen – 53.5%
   b. Sophomore – 25.4%
   c. Junior – 14.1%
   d. Senior – 7%

3. Your current GPA at ISU is:
   a. 3.5 - 4.0 – 18.3%
   b. 3.0 - 3.5 – 32.4%
   c. 2.0 - 3.0 – 42.3%
   d. 1.0 - 2.0 – 2.8%
   e. less than 1.0 – 1.4%

4. Which of the following explains your field or farm experience?
   a. farm reared with extensive farm-work experience – 70.4%
   b. extensive field or farm experience (6 months or more) – 15.5%
   c. some degree of field or farm-work experience (2-5 months) – 5.6%
   d. little or no field or farm-work experience (less than 1 month) – 8.5%

5. How many hours do you spend studying for this course per week?
   a. 1-3 – 36.6%
   b. 3-5 – 49.3%
   c. 5-7 – 9.8%
   d. 7-9 – 2.8%
   e. greater than 9 – 1.4%

6. After having the opportunity to work with the video and the interactive computer learning program, which one has most enhanced your learning of course material?
   a. video – 18.3%
   b. interactive computer learning program – 47.8%
   c. both are equally effective – 23.9%
   d. I haven't used either one – 9.9%
The following questions (7-9) relate only to the learning tool(s) chosen for question #6. Percentages are calculated according to the number of responses to each category in question 6.

7. How many hours per week do you spend using this learning tool(s)?

<table>
<thead>
<tr>
<th></th>
<th>Video</th>
<th>Computer program</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 1-3</td>
<td>76.9%</td>
<td>88.2%</td>
<td>76.5%</td>
</tr>
<tr>
<td>b. 3-5</td>
<td>15.4%</td>
<td>11.7%</td>
<td>17.6%</td>
</tr>
<tr>
<td>c. 5-7</td>
<td>7.7%</td>
<td>0%</td>
<td>5.9%</td>
</tr>
<tr>
<td>d. 7-9</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>e. greater than 9</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

8. This tool(s) has enhanced your learning of course material in Agronomy 114.

<table>
<thead>
<tr>
<th></th>
<th>Video</th>
<th>Computer program</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. strongly agree</td>
<td>30.8%</td>
<td>52.9%</td>
<td>41.2%</td>
</tr>
<tr>
<td>b. agree</td>
<td>53.8%</td>
<td>44.1%</td>
<td>52.9%</td>
</tr>
<tr>
<td>c. neutral</td>
<td>15.4%</td>
<td>2.9%</td>
<td>5.9%</td>
</tr>
<tr>
<td>d. disagree</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>e. strongly disagree</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

9. How does this learning tool(s) compare to tools used to help you learn in other courses?

<table>
<thead>
<tr>
<th></th>
<th>Video</th>
<th>Computer program</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Far above average (among top 10%)</td>
<td>15.4%</td>
<td>32.4%</td>
<td>23.5%</td>
</tr>
<tr>
<td>b. Above average (among next 20%)</td>
<td>76.9%</td>
<td>55.9%</td>
<td>70.6%</td>
</tr>
<tr>
<td>c. Average (among the middle 40%)</td>
<td>7.7%</td>
<td>11.8%</td>
<td>5.9%</td>
</tr>
<tr>
<td>d. Below average (among the next 20%)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>e. Far below average (among the lowest 10%)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Student Comments:

1. What features of this learning tool do you find most helpful?

- They allow us to take our time and learn the way we want to and at the pace we want to.
- I liked how you could be quizzed on the interactive program. It shows good pictures for examples. It really helped me learn the material.
- I really like being able to quiz myself over a big area like they do on the computer. The practice section is also very helpful.
- I like the part of the program that lets me practice the terms from the unit. It is helpful to have the questions and answers.
- You can study specific areas of the chapter, get hints and take quizzes.
- The activities and self-evaluations are helpful as a way to tell where you are at with the material.
- I like the simple operation by clicking and dragging.
2. In what ways could the interactive computer learning program prototype be improved?

Student comments relating to the need for development of all units:

- I was very disappointed that only chapters 1 and 2 were available on the computer. They were very beneficial in helping me study and learn the material.
- Make more chapters.
- Finish out all the chapters.
- I think it is good where it is, but have it for the rest of the chapters.
- More chapters available.
- Complete other chapters like the first two.
- Good so far, make available for all chapters.
- Have the complete set.
- Have all chapters.
- Have all sections ready to use.
- More chapters available.
- Finish the rest of the chapters.
- More chapters than two.

Student comments relating to improved accessibility of the program and the need for better computers:

- Faster running.
- More computers.
- Have program on faster and better computers.
- Speed up program.
- Newer computers.
- Faster computers.