EarthEd Online, Version 3
Workshop Manual, Teacher Perspective

By William Prothero

Introduction

This document will describe the EarthEd Online system from the teacher's perspective. EarthEd has been designed with large classes in mind, so efficient methods of assessing student performance and providing feedback have been implemented. For the course setups, we are working on a teacher's interface to enable easy course configuration. It should be ready for teacher use by the end of the summer.

Grading student work

There are 3 modules that provide an assessment and grade assignment interface. These are the *Setups* module, the *Mail/BBS/Chat* module, and in the *Writing* module. The grade assignment features are only available to the course teachers who are specified in the course configuration files.

Setups Module

Access this module from the *Office* screen.

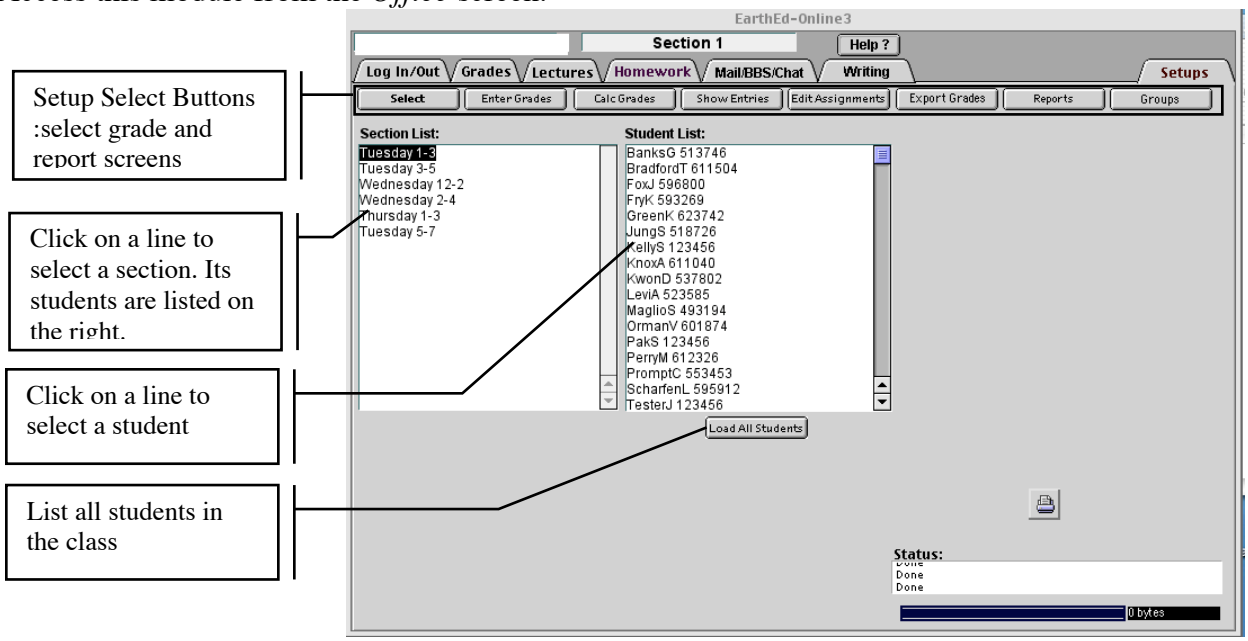


Figure 1. Setups index screen.

Each of the screens that are accessed by the *Setup Select* buttons will be described below.

Students are identified in the system by their first and last names, and a 6 digit ID number (at UCSB this is called the "perm number"). The last name is followed by the first character of the first name, then the 6 digit ID number. For example, if William Prothero had an ID number of

123456, the name would show up as *ProtheroW 123456*. Long last names are truncated to 8 characters. This limits the length of various filenames that include the student identification.

Enter grades:

Click on the *Enter Grades* button. Figure 2 shows the screen that will appear. Depending on which checkboxes you have selected, you can enter grades for a single student a section of students, or the entire class. Grades are entered into the "Entries" text field before being stored.

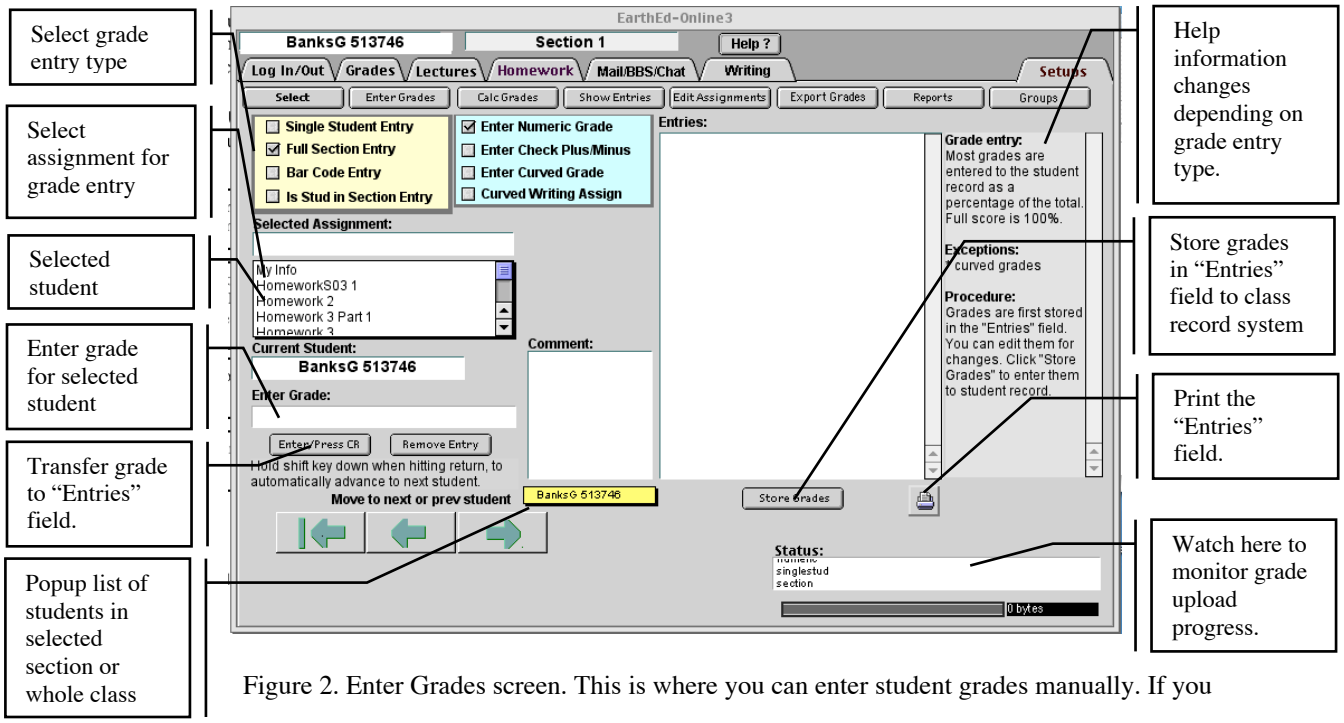


Figure 2. Enter Grades screen. This is where you can enter student grades manually. If you

As each grade is entered, it is transferred to the "Entries" field. When you have chosen "Single Student Entry" or "Full Section Entry", you can enter all students in a class, a section, or selected students. The yellow popup menu allows you to quickly select individual students without returning to the "Select" screen. This popup menu will contain only students in a selected section unless you have chosen the "List All Students" on the "Select" screen.

Changing an entered grade: You can click on a line in the "Entries" text field and the grade will appear in the "Enter Grade" field again. You can change it and click the "Enter/Press CR" button and the modified grade will be changed in the "Entries" field.

Bar Code Entry: The bar code entry screen was designed for entering grades for an entire section or class of students. Grades are assigned as 100% if an entry has been made, or 0% if an entry has not been made. It is particularly useful for taking attendance at a section or lecture. I make a label sheet of bar codes, one for each student, with the student's ID number on each label. These are distributed to students at the beginning of the course. Students put their bar code label on "Questions of the Day" that I use in lectures, and on an attendance sheet in the lab sections. The labels can be quickly scanned and a students get credit for participation in lecture activities and the lab section.

The bar code scanner is, in effect, a keyboard that automatically types the bar code text. The scanning process has the same effect as typing the number. So, the mouse is clicked on the bar code entry field and each code is scanned in, making a list of student ID numbers. Numbers can also be entered from the keyboard. When the "Process Bar Cds" button is clicked,

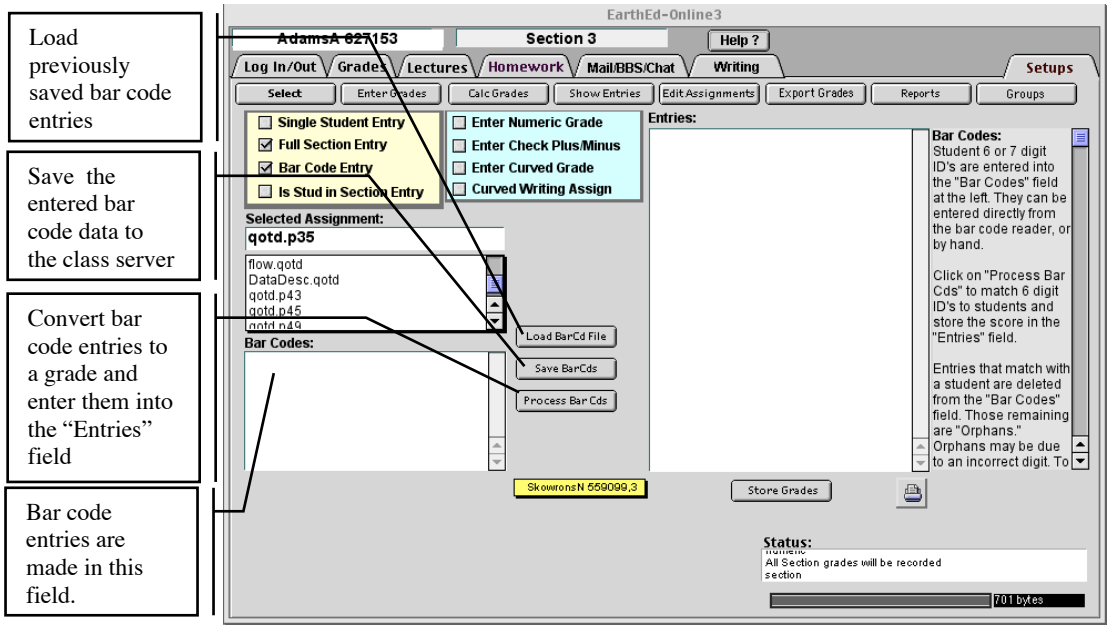


Figure 3. "Enter Grades" screen, with the "Bar Code Entry" checkbox selected.

the section or class list is loaded and student ID's are compared to the bar coded ID entries and the grade is assigned. These can be edited in the "Entries" field. They are stored to the class record system by clicking "Store Grades".

Check Plus, Check, Check minus grades: Often, it is appropriate to grade an assignment simply as "Exceptional", "Acceptable", or "Below Average". The check plus/minus system allows this. The scores assigned to these options is set in the class configuration file. Student selection and grade entry is accomplished by stepping through the students and clicking on the appropriate checkbox. Corrections can be made by clicking on the student's entry in the "Entries" field and checking the new grade. The change will be made to the "Entries" field. Click "Store Grades" to upload the grades to the record system.

Curved grades: It is sometimes impractical to grade an assignment according to an absolute grading system. For example, a multiple choice quiz given to the entire class may need to be curved. Curved grades can be entered individually, or imported from an Excel file. The help field explains how to do this. Before entering the grades, you need to set the grade cutoff points. The max points, A/B transition score, B/C transition score, C/D transition score, and the D/F transition score.

Curved Writing Assign Grades: The rubric scores for the online writing assignments do not directly give a grade that the system can use. This option gathers the rubric scores for a selected

writing assignment and assigns a grade based on the cutoffs specified in the “Grade Cutoffs” field. Instructions for scoring the writing assignments are shown in the help text on the screen.

Calc Grades:

Click the “CalcGrades” button to get here. This screen allows the teacher to calculate the selected student’s grade. The “Assignmeng Grades” field is a list of each assignment and its grade. The “Grading Notes” field provides detailed information where assignments were given late penalties.

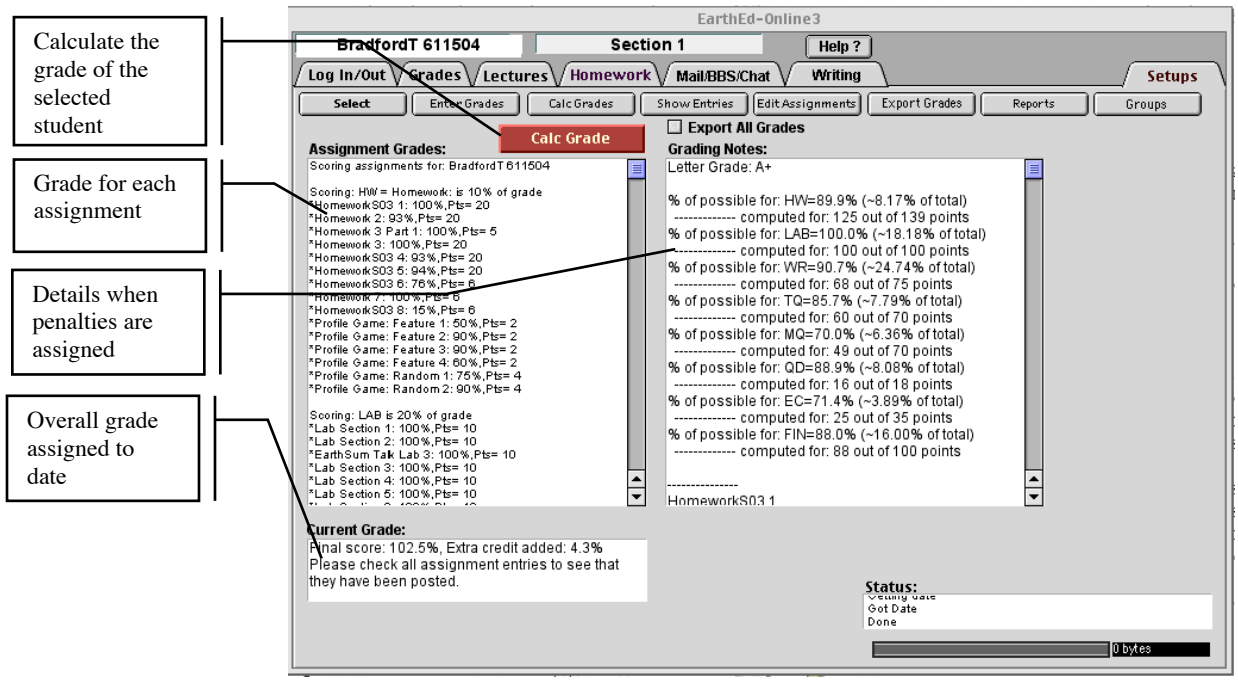


Figure 4. Teacher grade calculation screen. It calculates the grade of the selected student. The student sees the same information when calculating his/her grade.

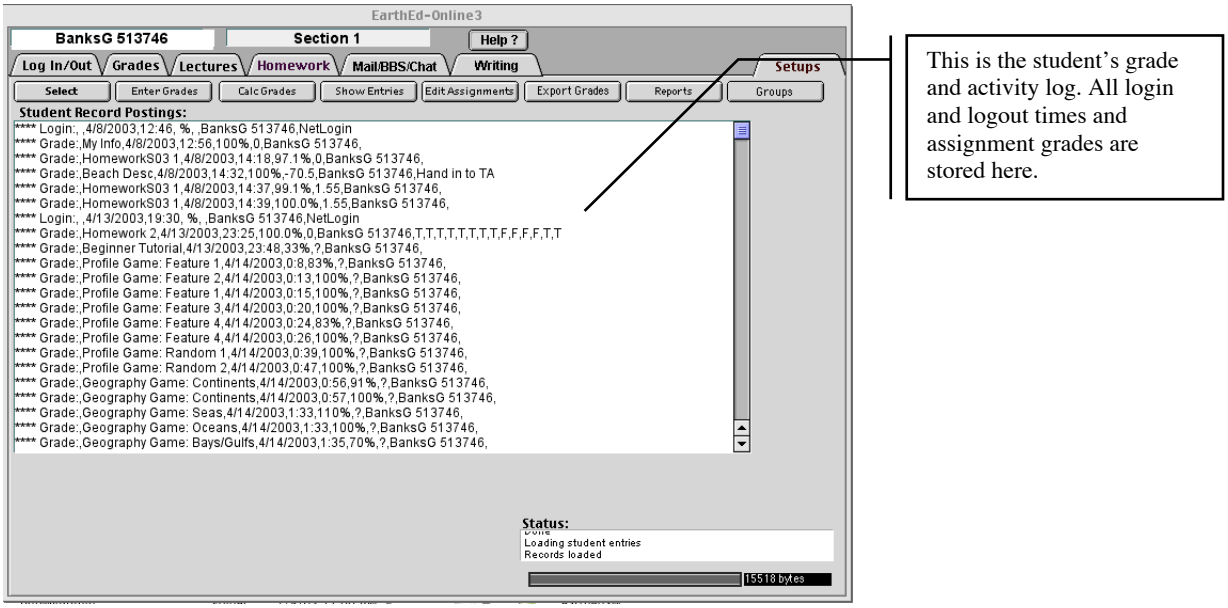


Figure 5. Listing of student’s record.

Show Entries:

Figure 5 shows a listing of a selected student's grade record. I use this the check how often a student has logged into the system, and their general activity level.

Edit Assignments:

This screen provides a rudimentary editor for the course and assignment configuration. It allows the instructor to quickly make modifications to the course configurations, late penalties, assignment points, etc. It is very useful for making changes when an error has been discovered in an assignment answer.

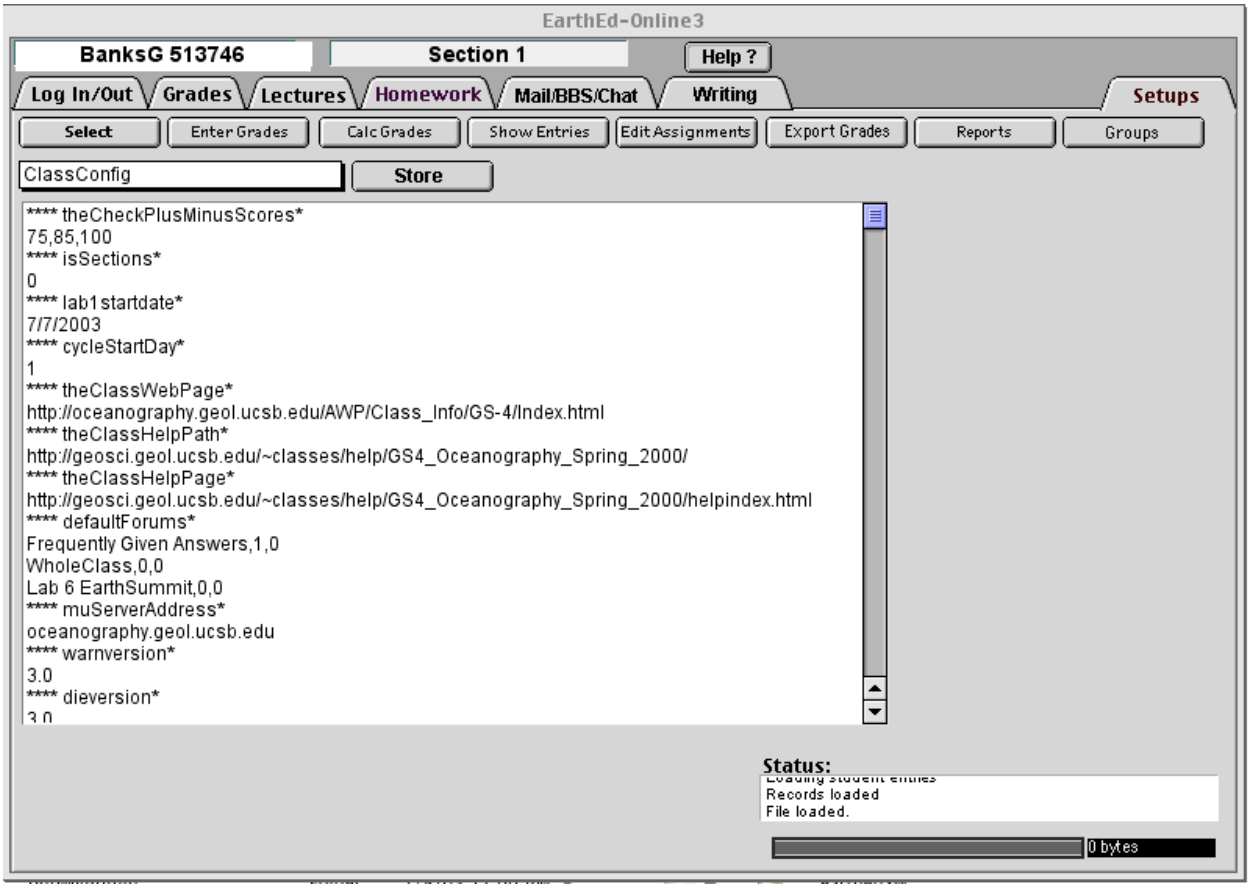


Figure 6. Assignment configuration editor.

This is system is not meant for general use, as it is easy to make changes that will have unexpected consequences. It does show how the assignment configuration files are formatted.

The distribution version of EarthEd will use the Configuration Editor for all configuration changes, so this screen, and the assignment formats are not discussed at length.

Export Grades:

When you get to this screen, click the "Export Grades" button to get a tab-delimited file of all student grades. When all of the grades have been computed, you get a file dialog so you can

choose where to put a tab-delimited file. You can import this file into Excel. I use this for a paper record of student assignment scores and the final grade.

Reports:

This screen creates a report summarizing scores for a particular assignment. Figure 7 shows a simple report for HomewordSO3 4, which is a homework I assigned for the 4'th week of my class.

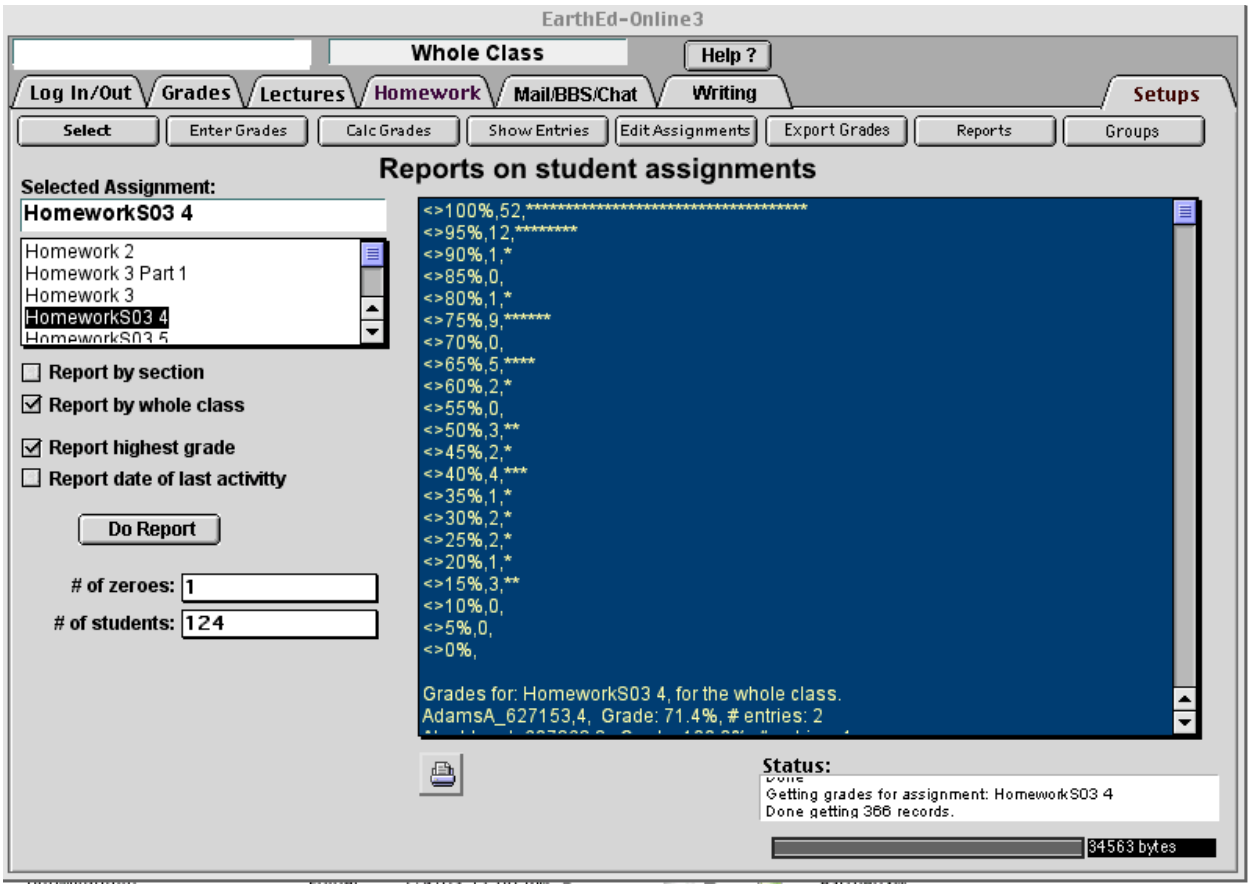


Figure 7. Reports screen.

It would be useful to be able to report on how students did on each problem in a particular assignment, so the teacher can provide remedial instruction. This capability is partially implemented and will be included in the distribution version of the software.

Groups:

One of the goals of the EarthEd development project is to allow students to work in groups, online. In UCSB oceanography, students group by country. They then conduct many of their course activities by representing the viewpoint of their country group.

Currently the online group work capability is incomplete. In the first section in the live version of the course, students choose a group during their first section. In the online environment, students will choose groups themselves. The purpose of this screen is to allow the instructor to assign specific countries to each lab section and to assign or change students' group assignments.

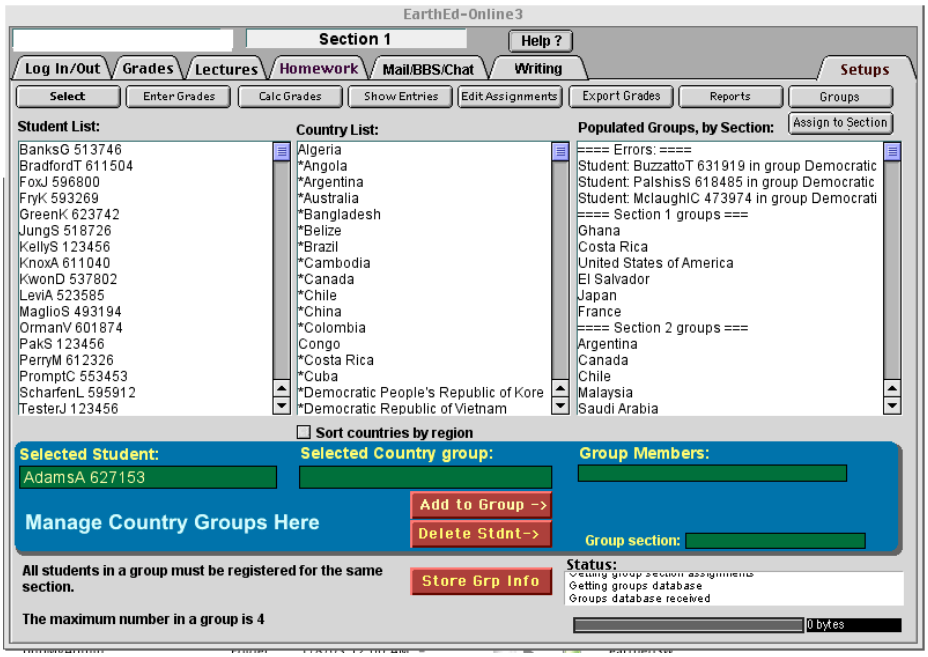


Figure 8. Group assignment screen.

Mail/BBS/Chat grading:

As currently implemented, the grading system for forum postings is oriented toward the thought question assignments. When a student selects one of the thought question assignments from the homework list, she/he is taken to an answer entry screen. When all of the answers have been entered and submitted to the system, the student is then able to access a forum for the selected thought question assignment where he/she can review and respond to the answers of others.

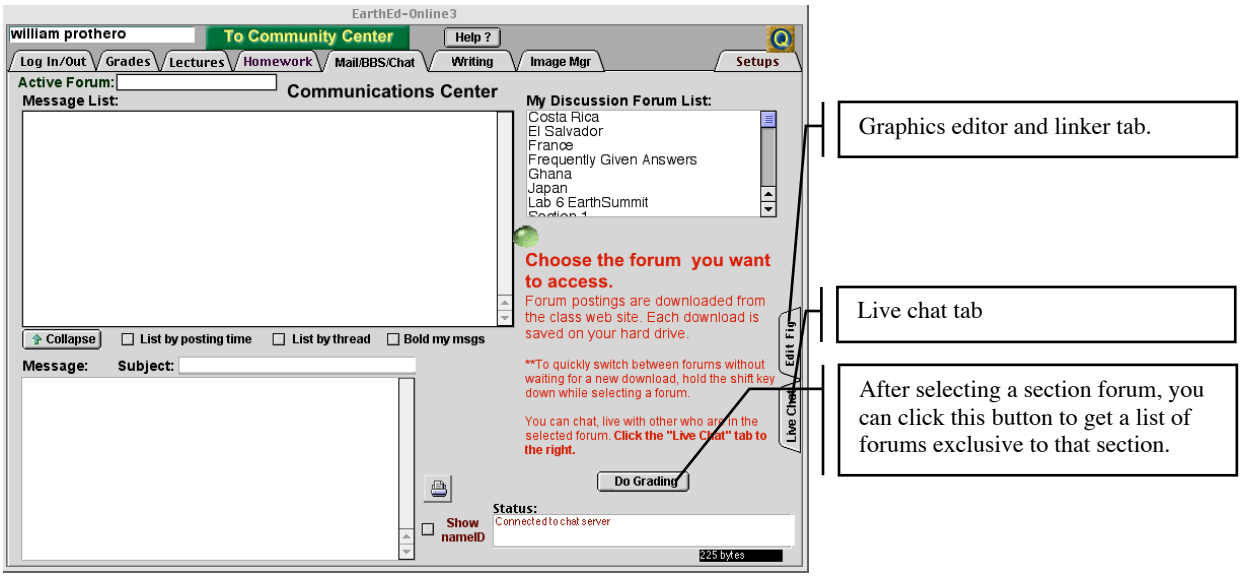


Figure 9. Mail/BBS/Chat screen when the teacher accesses it.

I want to encourage more community among the students. One idea is to require students to make 2-3 replies for each posting that they make. Another is ask students to rate their peers'

postings, and to give them credit for the ratings. Currently, only the thought questions can be conveniently graded using this screen, but a small modification will allow all discussion forums to be graded in the same way. I also plan on implementing a rating system that is available to students as well as teachers. Students will get credit for giving feedback, and will get some credit according to the rating of their postings. I will implement a 5 star rating system. When each posting is displayed, the rating is also displayed. Students can click on the number of stars they want to give, and the teacher/TA can also rate the postings, and this would interact with the grading system in a different way so that peer ratings would be separate from teacher ratings.

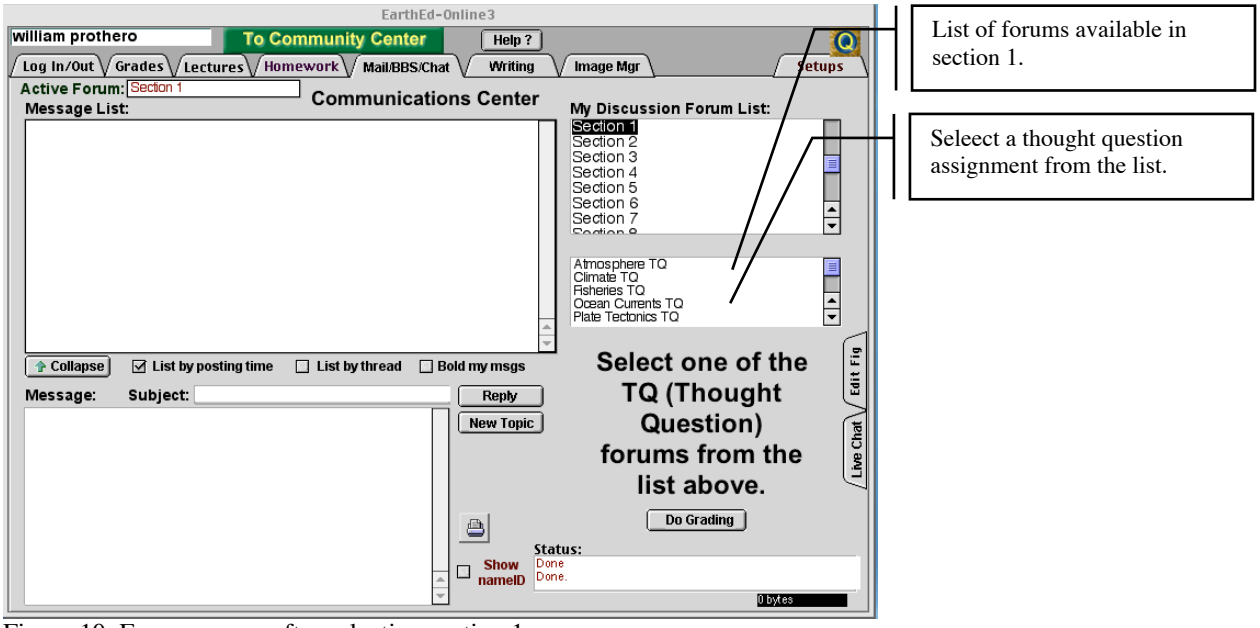


Figure 10. Forum screen after selecting section 1.

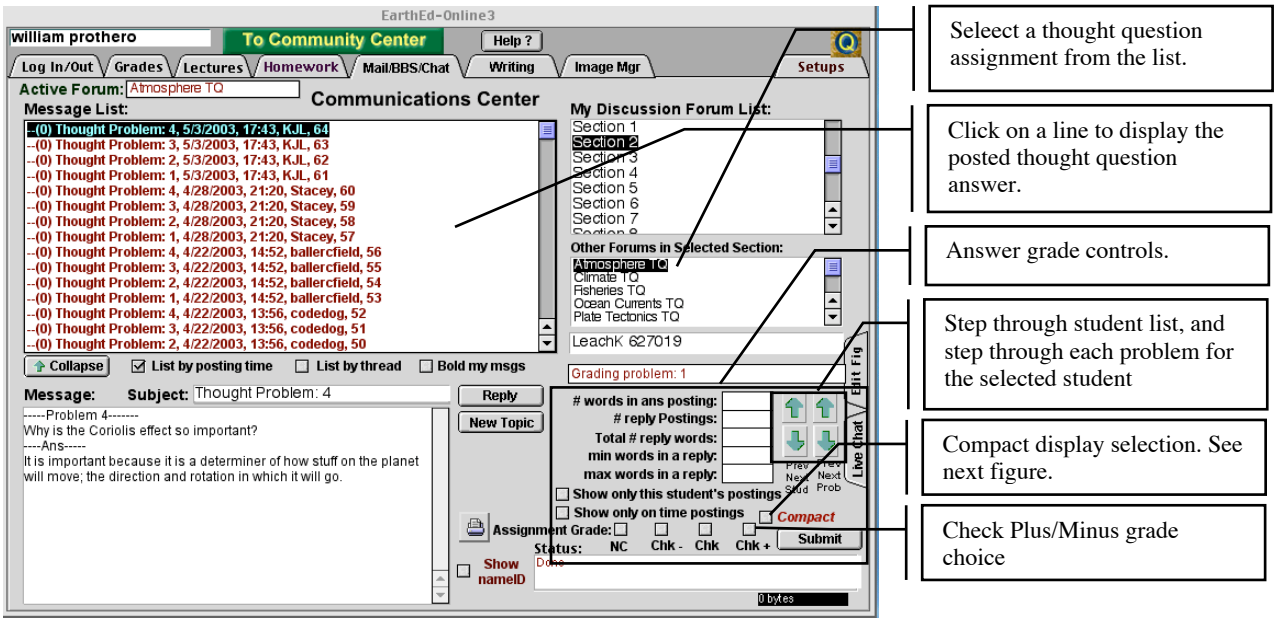
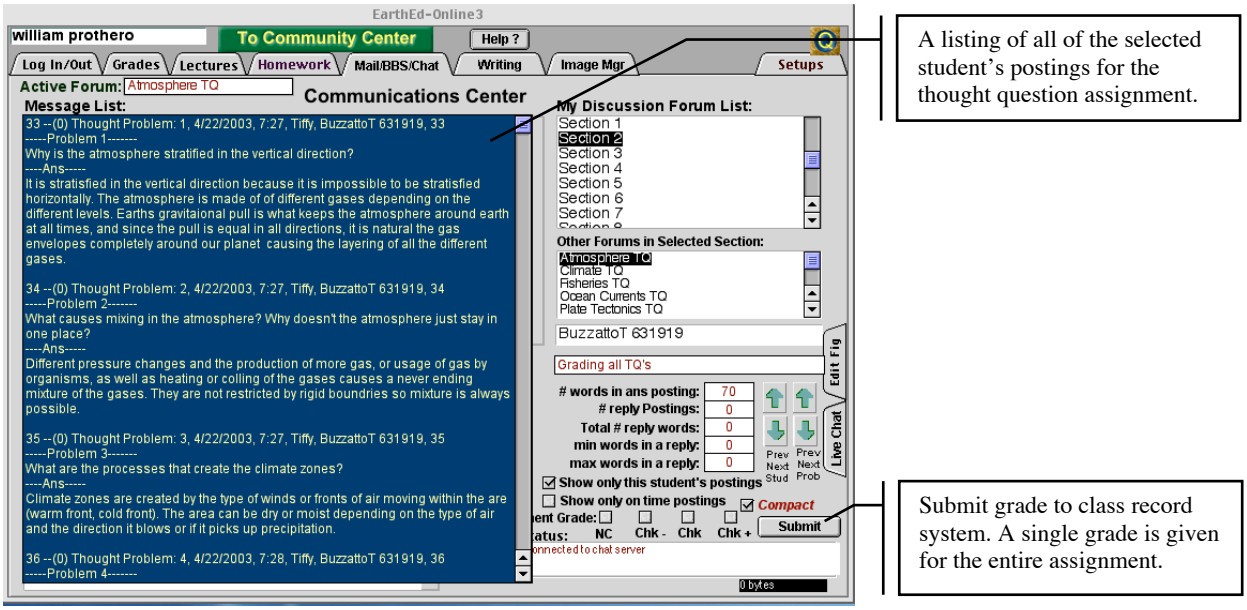


Figure 11. Forum screen after the Atmosphere TQ forum was selected from Section 1.

Figure 9 shows the Mail/BBS/Chat screen when a teacher accesses it. Notice the list of forums. The forums can be set to read only (for teacher postings), available to all students in the class, or available only to a specific section. After selecting a particular section forum from the list, the screen of figure 10 appears. Then after selecting the thought question assignment from the list, the screen of figure 11 appears and assessment can begin. The student selection arrows select each student for evaluation. His/her postings are shown in the list in bold face type.

A better way to see each student's postings is to click on the "Compact" checkbox. Figure 12 shows the screen for student Buzzatto, thought question assignment "Atmosphere TQ".

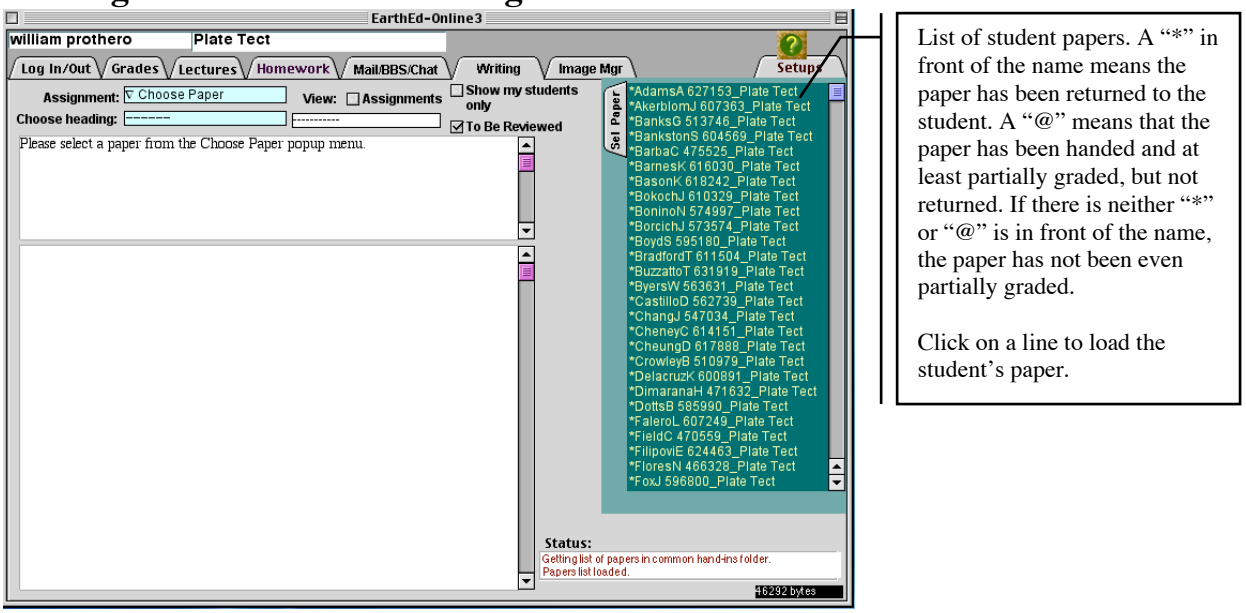


A listing of all of the selected student's postings for the thought question assignment.

Submit grade to class record system. A single grade is given for the entire assignment.

Figure 12. Forum grading screen with "Compact" selected.

Writing Assessment and Scoring:



List of student papers. A "*" in front of the name means the paper has been returned to the student. A "@" means that the paper has been handed and at least partially graded, but not returned. If there is neither "*" or "@" is in front of the name, the paper has not been even partially graded.

Click on a line to load the student's paper.

Figure 13. The writing screen after the "To Be Reviewed" checkbox has been selected, the "Plate Tect" paper has been selected from the "Assignment" popup menu, and the "Sel Paper" tab on the right has been clicked on.

When a student hands in her/his paper, it is stored in a folder on the class server named ‘HandIns”. It is also registered in the server resident “resourceRegister” file as handed in. When the TA or teacher accesses and makes comments or enters grades, the paper is normally saved to the network holding area first. This allows the TA or teacher to grade the papers and refine the scoring before returning them to the student. The “resourceRegister” file keeps track of where the most recently modified paper has been stored. Only the last paper saved is shown in the paper select list.

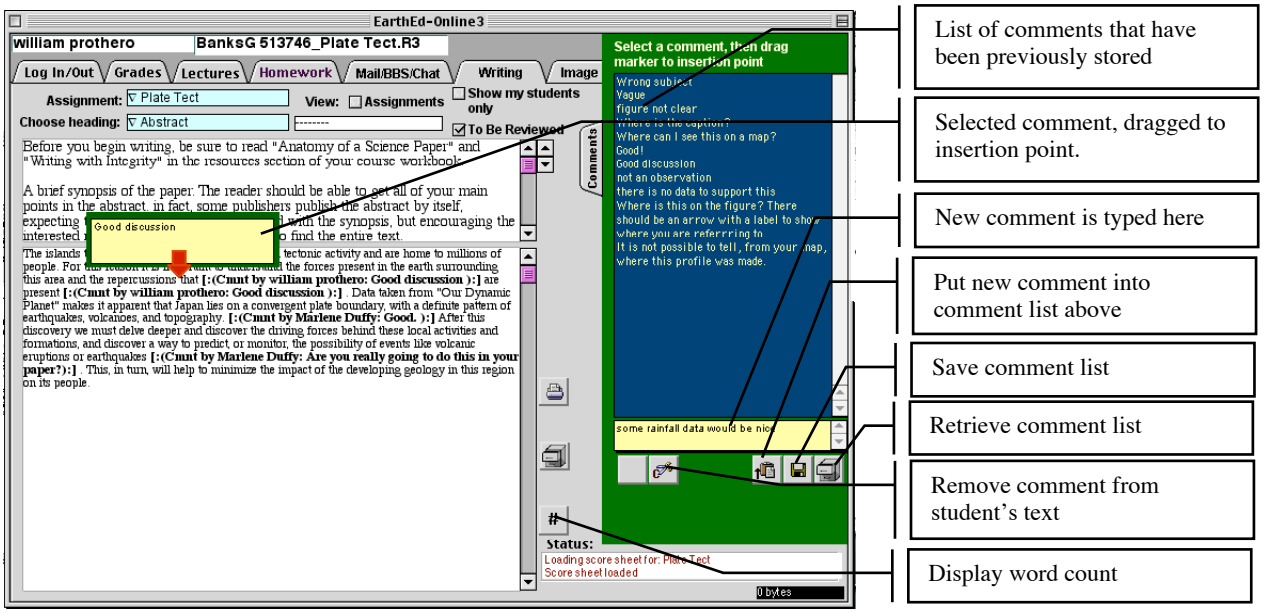


Figure 14. Writing screen where the “Comments” tab has been clicked. A comment can be dropped into the text by clicking on the comment and dragging it to the insertion point. Comments can be entered and saved to the class server.

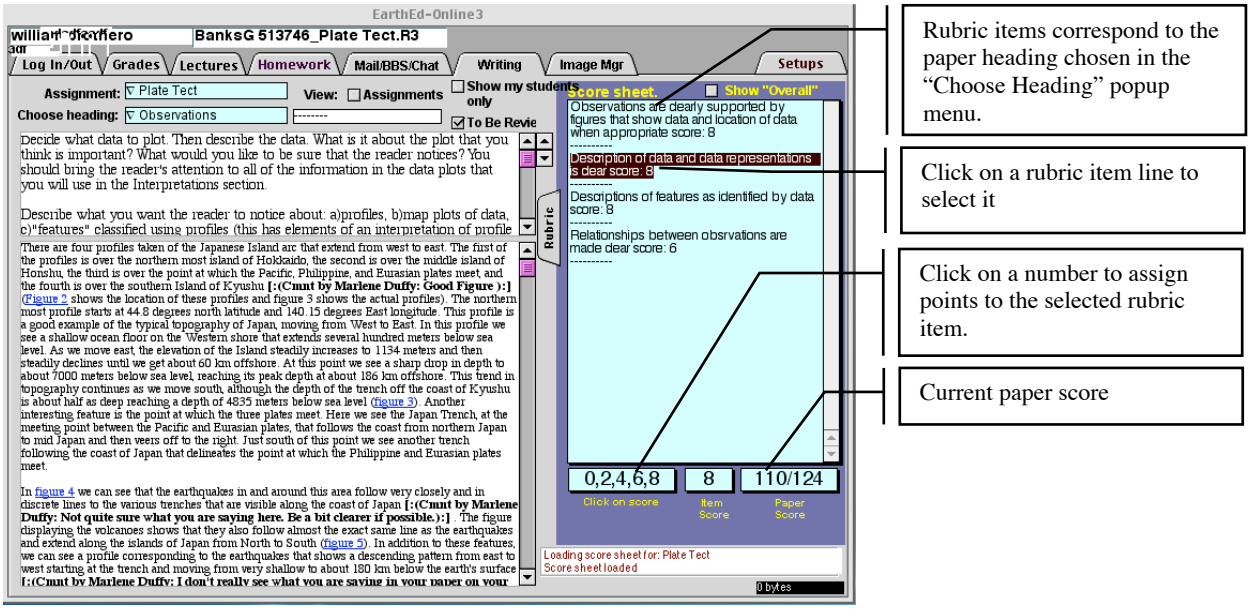


Figure 15. Writing screen with rubric score entry panel showing.

Figure 14 illustrates the commenting system. Each TA and the prof makes a list of comments, that are stored to the server. Comments are inserted by simply clicking on the comment line in the comment field and dragging it to the insertion point in the student's paper.

Figure 15 shows how rubric item scores are accessed and entered. The rubric is stored on the server as part of the writing assignment configuration. When the paper is returned to the student, the rubric item scores are included so the student can see how his/her grade was computed.

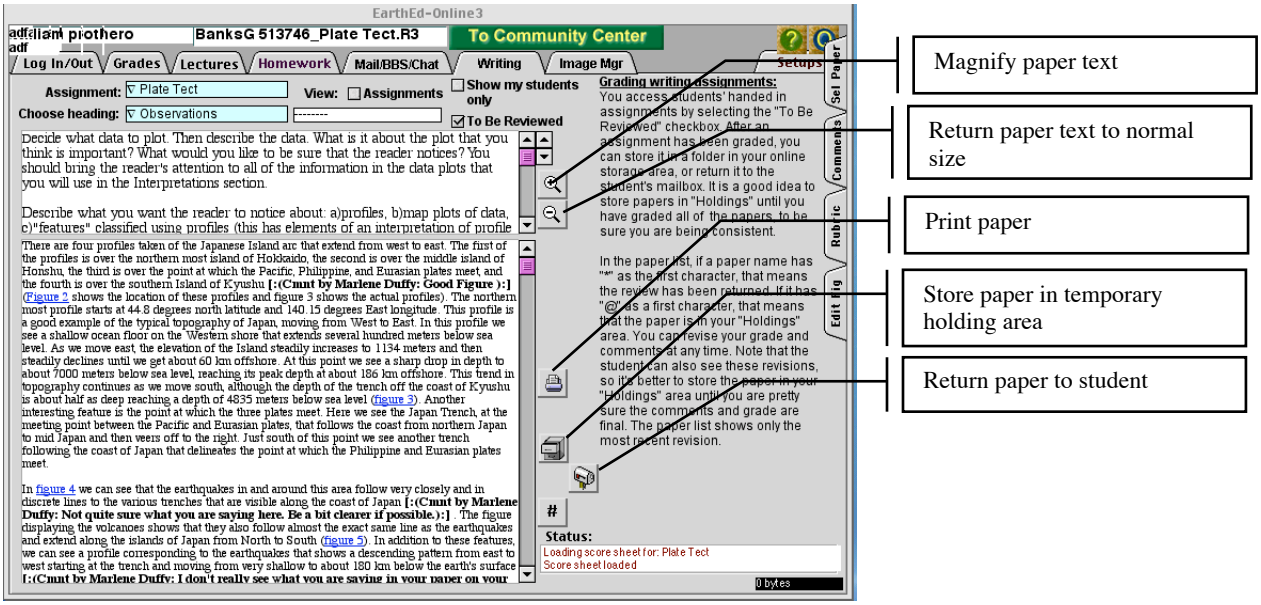


Figure 16. Writer screen where paper has been commented and graded.

After all of the papers have been handed in, the grades are finalized in the "Setups" screen, which has been discussed in earlier sections. To decide on the transition values for the letter grades, I read some of the papers from each teaching assistant and attempt to determine how their rubric scores relate to what I decide is an A, B, C, etc paper. After determining the cutoffs, which may be different for each TA, I then use the "Setups" module to enter them, section by section.

I really love the writing module. I can monitor TA paper grading progress, give the TA's feedback on their grading, and I have a computer resident copy of the original and graded papers. This allows me to cross-correlate student papers text to discourage cheating. The cross-correlation is a partially completed project. However, I love it that I have a record of each paper, including TA comments. The expense and burden of keeping these records was prohibitive in the past. It also makes the papers available for research on learning.