CLASSTALK®

Quickstart Manual

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NOTES:

System Requirements for Classtalk

- **Instructor's Macintosh Computer:**
  Can be any model with the ability to handle dual monitors.Some macs come with this built in others require an additional video card. Check to see if there is a vacant slot where a second video card can be added. Finding a second video card for older Macs may be a problem, many are no longer manufactured. Cards for Macs with PCI type slots are easily found and inexpensive.
- **Memory required**: 16Megabytes minimum,
- **Disk space required:** requires approximately 6 Megabytes initially,
- **System Software:** For the latest Classtalk release 2.0 we recommend that you have System 8.0 or greater installed. We do have versions of Classtalk that run on older operating systems available. Talk to us about your needs.
- **Instructor's Display(s):** At least a 640x480 color display compatible with Macintosh Analog RGB output. Sometimes it is desirable to have a second display so that you can easily see what the students see.
- **Projection Device**: Use a color LCD projector, an LCD Panel or a Scan Converter w/ TV. The projection device you choose should be able to handle a resolution of at least 640x480.

NOTES. . .

- *We recommend a Blue and White G3 in a rollable instructor's station or a G3 laptop works great-- you can take it back to your office or home to peruse your data or make up new questions for next time. The G3 lombardo laptop comes with the ability to handle dual monitors and TV&S-video out. This means if you ever want to use a television for your projection device you won't need a scan converter.*
- *If you plan to use a lot of other programs along with Classtalk, you will want more than16M of memory. We're quite happy with 16M for most classroom use. Classtalk runs fine with RamDoubler(tm). but don't expect speedy performance if you're pushing the limits of doubled RAM.*
- *What you actually need in disk space depends on how much you will be using Classtalk, and how big your class is. With a class of 100 students, expect to consume about 50K per question. The amount scales with class size. Classtalk warns you if free disk space falls below 1M.*
- *Conflicts? Classtalk uses the serial port to communicate with the network. If you have other software that uses that port (e.g. modem-ware), you will want to disable it while using the Classtalk network, but you should have no problems in "office mode" (without the network). Also, if you only have one serial port, make sure that Appletalk is either switched off or directed to another port.*
- *Find out what resolution you will be projecting to. If you have a second display it should be able to handle at least that resolution.*
- *A device for projecting graphics is very important. Showing the students the histogram after each task keeps them interested.*

A good way to arrange CT files...

Classtalk a folder containing the following...

CT 2.x the Classtalk application program

Instructor's List a text file with passwords for authorized instructor-users. Use SimpleText or TeachText to custom-edit this file for your own use, or just use the default password 'R'.

Classroom.config a special text file containing layout information for the classroom. Please select one that closely matches your classroom from selection depicted in Appendix A

Classroom preferences a special file potentially containing instructor customizations of the Classtalk program operations & interface.

Task Template a Task file that contains generic tasks or "template" tasks that you can use to speed up creating new tasks. Individual questions or question sets in the Task Template file are accessed from the "Task fields" window or QS settings window.

Quick Qns a Task file that contains generic tasks for you to use "off-the-cuff" in class. Choose these questions or question sets from the "**Quick Qn"** Menu.

DEMO CLASS this is sample classfile for you to explore. Throw it out when you get tired of it.

SF for DEMO CLASS this folder contains sessions for the DEMO classfile. You can explore. what happened in the DEMO sessions by opening them with "Open SessionFile".

SP For DEMO CLASS is a folder that contains student pics for students in DEMO CLASS. If you click on a student in the room view you can see their picture.

DEMO CLASS.dbg This text file contains a log of unusual network activity, which is helpful for troubleshooting network difficulties.

Tasks this folder contains some samples of tasks in a few different taskfiles. It's a good idea to put your own taskfiles in this folder because it's so easy to find.

Once you've started your own classfile,

you will have files and a folder like these in your Classtalk folder...

PHY103 F'99
SF for PHY103 F'99
PHY103 F'99.dbg

These will contain the information about your class over the course of a semester or quarter.

Other important files & folders

• CT Network Tools: a folder containing...

testnet A an application program for independently testing the CT network

sna updater an application for uploading network software into the network boxes' memory chips.

SNA V2.6HEX the actual code used by the network boxes during Classtalk operation.

Notes:...

- *Classtalk uses quite a number of different files. It needs to be able to find the files when it is starting up. Since more than one instructor may use a Classtalk (for different courses) on the same Macintosh, you may want to separate course-specific files into separate folders. For each course you teach, we think you will want its "classfile" and session folder to be located within an appropriately labeled course folder. You may also want a classroom configuration file if other instructors use different classrooms.Other template & config files can be customized and kept in your course folder as well.*

- *Customize the task template file by opening it as a task file and adding, deleting or modifying tasks as you see fit.*

- *Customize the Instant Question file as described above for the Task Template file.*

- *We suggest you choose a name for your Classfile that indicates unambiguously the course and semester. The Session folder and Debug files are named automatically based on the Classfile name.*

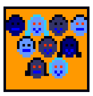
- ***TI** USERS NOTE: These files are not applicable to the BLACK BOX version of the Classtalk network. And so may not be included on your diskette.*

Trying out Classtalk...

- **Setting up:** Make sure you have loaded the appropriate files into a suitably named folder (See p.2 for a listing of files & folders).

If you have an Office Network or are working with a class-room CT Network...
Connect the serial cable between your Macintosh's Serial port (marked with a telephone icon) and the Classtalk network box. Connect the box to it's power supply THEN plug the power supply into the an AC outlet. Power-on AFTER cabling!

For this QuickStart Session, *we're assuming you are using Classtalk with a network so you can try out how the system really works in class.*



Starting up the DEMO Class...

Double click on the Classfile Icon labeled "DEMO". *When you have a classfile for your own class, you can start Classtalk for that class by double clicking on its Classfile icon.*

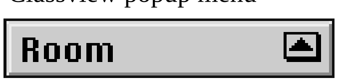
Welcome to Classtalk (a Dialog Box)
We've provided a temporary password for your use.Type the letter R (capitalized)in the password field and click on "OK" (or press <Return>) to proceed with the Classtalk session.

Open Login In a moment, you will be asked if you want to open Login (so members of the class and can connect to the network and answer questions.) Choosing "Allow new students" will enable "new students" to create their own new accounts in the DEMO Classfile.

Setting the Login timer Next the timer window will open so you can choose how long to leave "login" open. The default is 20 min, which is usually enough (except on the first day, when you may wish to leave it open longer). Set the time and click "START" or press [Return].

Logging in students You should now see a classroom laid out in the main window. Seat locations are represented by "empty seat" icons.

Classview popup menu



Use the "Classview popup menu" to select "Roll list" in order to see who's registered in this DEMO class. Students who are already on the Roll can login by entering their seat location, handle, and password (for HP95s, also the Hardware ID#).

Once you have three or four DEMO students logged in, you should try sending some tasks to get a feeling for the students' view of classtalk as well as the instructor's view.

Notes...

- *This "connect-then-power-up" sequence minimizes the chance of damaging either the computer or the Classtalk network with transient shorts or voltage spikes.*

- *If you don't have a network to try out, you can proceed, but will be unable to Login students, have them send in answers & view feedback, or review their responses to an "Active Task". Otherwise things should work OK.*

- *Eventually, you will have a separate classfile for every course-section that you teach using Classtalk, unless the exact same students are taking more than one course from you.*

- *In this dialog, be sure to check "office mode" if you are operating without a network-- otherwise the program will spend a minute waiting for the network to respond.*
- *Eventually you will want to edit the password file "Instructors List" to add a more secure password.*
- ***If you don't have a network...*** *The "Task list" window should be open before you, showing you the currently selected task called "Question_1". This is a blank task created in a default Taskfile named "Untitled 1" This is a great place to begin making new tasks. Or you can open a taskfile and edit some previously composed task. We suggest you turn to that section of the Quickstart manual at this time, or learn to review "Records" of past sessions.*

- *As students "Login," these seats will darken, and you can click on them to pop up a small box of information about that particular student.*

- *Refer to the Student User's Guide for your type of Student device for instructions on " logging in".*
- *Up to four students can share a single student computer. Each student logs in with his/her own seat, handle and password. The instructor chooses whether students must answer individually, or was a group (and whether dissent is allowed for group answers.)*

What is a "Task"?

A Task is a question or set of questions.

- "Questions" are the raison d'etre of Classtalk. Classtalk uses a type of document called a "Taskfile" which may have just a single question, but more likely contains a group of five to ten questions with some common linking theme--topic, concepts, scenario, etc.

Using an Existing Task

- **Getting & Previewing a task**

  To use a prepared question, you must first open the taskfile that contains it, and then select the question (from the list of questions in the file) by clicking on the Question title, or by choosing the Question from the popup menu of Question titles.
  There are several windows for viewing the details of a Question, Here are step-by-step instructions...

- **Opening a Taskfile**

  Use the main **Files** menu to select "Open Taskfile"
  i.e **Files ->Taskfiles->Open Taskfile**
  Use the "file selector" dialog box to choose a taskfile: e.g. open the folder called "*Tasks*" and locate the taskfile "DemoTasks". Double click on the name "DemoTasks" to open the taskfile.

- **Selecting "New Tasks" Mode**

Mode Panel

  Click on the bottom left "Mode Panel" to switch the Classtalk program into the "New Tasks" mode. Use this mode whether you are selecting a task to send to your class, or are creating a new task, in class or out.

- **Different views of a "Question"**

Shows a list of all Qns in the taskfile;

Press the "List" tool-button when you want to see a list of all the titles of questions in a taskfile of new tasks (or in the records of a particular session).

Shows the Qn screen (will be projected)

Press this tool-button when you want to see (or edit) the selected Qn's screen that will be projected for the whole class to see (on TV or LCD panel).

Shows Qn info fields (range, feedback etc.)

Press this tool-button if you want to see or edit the Qn's data fields (that contain question and answer specific settings and data). This window shows the text that students read on their units (hot text and answer-specific feedback), question type (MC, Nu, Wd, Tx and Algebraic) and bin specifiers.

Notes...

- *Most likely in any one class session you will want to ask several Classtalk questions. You might gather questions that have been prepared ahead of time in a single taskfile so they're easy to get to.*

- *From the "New" menu in this mode panel, you can create a new question anytime, and it will automatically be added to whatever Taskfile you are working in.*

- *Questions can be reorganized in the List view by dragging them up or down the list. You can also copy selected tasks from one taskfile and paste them in another.*

- **The Task Cycle...**

  Once you decide to use a task, there is a series of stages it goes through before you and the class are finished with it. We call this the “task cycle” since it may lead back to another new question.

  1) First a “new task” is sent to the students’ computers, becoming an “active task”

  2) as soon as you start the task timer, the students may answer, Usually you will want to see their answers come in so you see how they’re doing.

  3) You will want to see how the class did in aggregate. This “Analysis” is in the form of a histogram, or a list of answers.

  4) your students will appreciate seeing the “Analysis” too, to see how they stand in class.

  5) After discussion, perhaps you’re ready for another task. Clicking “Done” or sending another task moves the “Active” task into “Records” where you can find it later should you need it.

- **Sending a task**

  There are three steps in launching a task...

1) Select the task or question set by clicking on it in the task list window, or selecting it in the “New Tasks” mode panel popup menu);

2) SEND **Send” the task** out over the network using the “Send” button in the tool strip;

3) 0:02:00 **Set up the timer** so the task will run for a reasonable amount of time (use the preset times, type in, or use the arrows to increase or decrease the Qn time.While you’re at it, double check Grouping and Feedback modes (see below);

4) Start **Start the timer** running so that the students can see the “Hot text” on their computers and begin sending in their answers.

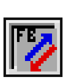
- **Modes for answering**

  Grouping: Classtalk allows you, the teacher, to decide how you want your students to answer the active question or questions. Answers may be Individual, “Group” and “Group w/ Dissent”

Use this button to set the grouping mode, or use the timer controls:

☒ Grouping
☒ with dissent?

Feedback: Feedback can be disabled, or enabled. Normally FB is shown after the time is up, but you may choose to make it available immediately after answering. Use tool button, timer setting, or menu (under **Task**) to set the feedback mode you desire.



tool button ☒ FeedBack is al... ☐ Immediately? *in timer.*

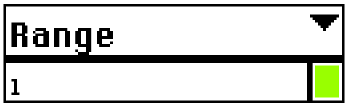
Notes:

- *This cycle is so universal that we’ve designed an “Autocycle” feature so you can progress through this cycle automatically just by pressing the [Return] key or by clicking repeatedly on a single Tool-strip button which changes meaning as you move through the cycle. Of course you can break out of the cycle anytime.*

- *“Sending” the Task screen so you can go over the question with the class before they begin to answer it.*

- **Automatic "binning" of student answers**

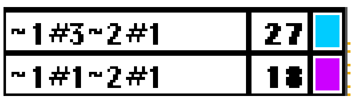
As student answers arrive at the teacher's computer they are categorized-- sorted into either predefined bins, or automatically created bins. Each bin has a designated color code, so students who's answers fall into the same bin are shown in the same color. **Bin Key Panel** (to the right of the main window) shows the color code for the various bins along with a descriptive field (e.g. "range"



Bin key & popup menu

Use the popup menu to select which of the bin-specific fields to show along with the color code (the choices are Range, Feedback, Notes, & Score)

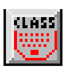
Autobin & Question Set Bin Key is slightly different from preset-bin key. These bins are created automatically from the student answers.



Question Set bins

Question set bins group students by their series of answers to all the questions in the question set.The key shows question number and bin number for each question in the set, and tallies the number of students who answered with this set of answers.

- **Monitoring incoming responses**



"Classview" shows individual responses.

"Classview" is a view of individual data laid out either in a representative "room" (showing answers by seat location) or in a list showing student names and answers, called "List & Answrs".

Classview popup menu

Use the "Classview" popup to change between "Room" and "List & Answrs".

- **Analyzing Class response**

or

"Analyse" & "Anlz" buttons

Use the "Analyse" autocycle button or the "Anlz" button in the toolstrip to bring up a summary histogram of the class' response to the question.

Analysis controls

Use the analysis popups to choose among various analysis displays. Source settings let set different sources for up to two simultaneous analyses.

- **Sharing the Analysis (or other screens)**

or

"Project" & "Proj" buttons

"Project" puts the analysis on the 2nd monitor

Notes...

- *In this example,there were two questions in the question set. Twenty seven students sent in answers to Qn 1 that fell into Qn 1's 3rd bin, along with answers to Qn 2 that fell into Qn 2's first bin.*

- *Projecting the class response help the students appreciate how the class response is divided, ad where their own answers fit in the whole picture. Most students really appreciate seeing this screen.*

On to the next task

DONE or New Tasks

Once you and the class are finished with an active task-- they've looked at their feedback and seen the Analysis histogram, and you all have puzzled out the meaning of different answers-- use the "Done" button to transfer this task into "Records" and get ready for another task.

"Quick Questions" for unanticipated queries

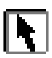
In class, when you have a simple question and you want a quick answer try using the "Quick Qn" menu to select a generic question from the Quick Qn Taskfile. We've provided a number of useful generic questions: true-false, yes-no, multiple choice(A..D) and various others which you can use with an overhead slide, a board drawing or just a verbal question. All you have to do is choose the question and set the time.

Modifying Existing Questions

It is easy to modify a question to make it better fit your needs. The graphical objects and text that are projected can be moved, re-shaped, or edited using graphical tools in the "Task screen window". "Hot text" and feedback that the student receive on their computers is editable in the "Question fields window"

 *tool button brings up the Task Screen*

Press this tool-button when you want to see or edit the selected Qn's "Task screen."

 The pointer tool is used to select graphical or text objects and to move or resize them (by dragging one of the corner "handles"). Clicking with the pointer tool within an already selected text region places the cursor within the text for editing.

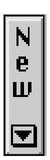
 *tool button brings up Question Fields*

Press this tool-button if you want to see or edit the selected Qn's "Question fields" such as "title", "time","hot text", answer-specific "feedback", "question type" "bin range(s)", "prompt", "bin score(s)" and the various descriptor & note fields.

Type
MC ▼ *changing "Type" replaces bin fields*

WARNING:every question has a "type" If you change a question's "Type" you will lose the information in the bin fields

Creating a New Question (Qn)



Use the "New" popup in the "New Tasks Panel" to create a new Qn, Question set, or Slide

Notes:

- *"Done" also clears the question and feedback from the students' computers, so there is nothing for them to look at or do unless login is still open.*
- *If you have a favorite type of generic question that we haven't provided, you can edit the Quick Qn Task file just as you can edit any other task file. This will give you instant access to your own "Quick Questions".*
- *"Quick Ons" do not show question-specific text either on the projector or on the student devices. You, the teacher, must "talk" the question, or write it out.*
- *The "Header" of a QnSet only shows only special QnSet controls. You can edit individual questions within the QnSet by selecting them individually.*
- *Creating a "New" question will automatically open the "Question Fields window so you can begin entering the field information you need.*

Apply template ▼

popup menu
"Apply Template" lets you start from a pre-defined question from the "Task template" task file.

Working with Question Fields

"Question fields" contain vital details that put the powerful computer analysis to work for you.
Press this tool-button if you want to see or edit the "Question fields" for the selected Qn: "question type", "title", "time","hot text", answer-specific "feedback", "bin range(s)", "prompt", "bin score(s)" and various descriptor & note fields.

- **Choosing a question "Type."**

Type
MC *"Qn Type" field selector pop-up...*

Use the popup menu to select the desired question type. Currently, Classtalk supports four types of questions:
1) Multiple choice (MC) questions are answered with a single character. You may use a series (A,B,C...E etc. or 1, 2, 3...9) or you may use mnemonic characters e.g. T & F (true & false) or Y and N (yes and no).
2) Numeric (Nu) questions are answered with a number entered in a valid numerical syntax. 0, 1, 2, 3.14, .00375, 6.02e23 (i.e. 6.02 times 10 to the 23rd).Valid numbers are between ±1 e ±38.
3) Word (Wd) questions are answered with a word or words totalling up to 40 characters. Case is not significant. A few characters are not allowed--
3) Text (Tx) questions are answered with words, word lists, sentence, paragraphs or small essays. Currently Tx answers must be less than 2,400 characters (about 1 full typewritten page). Case is not significant. A few characters are not allowed--
4) Algebraic (Al) questions are answered with an algebraic expression (up to 38 characters). Operations supported are addition (+), Subtraction (-), multiplication (*), division(/), grouping (parentheses), integer powers(e.g. ^2, ^3
Case is not significant. A few characters are not allowed--
Classtalk supports multicharacter variable names A1, Pi, Tau are all OK.

Implied multiplication is supported only for parenthetically grouped terms...
A*(B-C) is evaluated the same as A(B-C), but AB(C-D) is treated like Ab*(C-D) as if AB is a single variable's name.

- **Entering or editing a title**

Title
Question_1 *"Qn Title" editable field...*

Edit the default title text just as you would edit text in any database field--click in the field with the pointer, drag to highlight any text you wish to delete or replace, and then type in the text you wish to have in the title.

Notes:

- *The Question Fields window gives you instant access to all the hidden details of a question, and to notes and recommendations that the question's creator may have provided to help you use the question effectively*

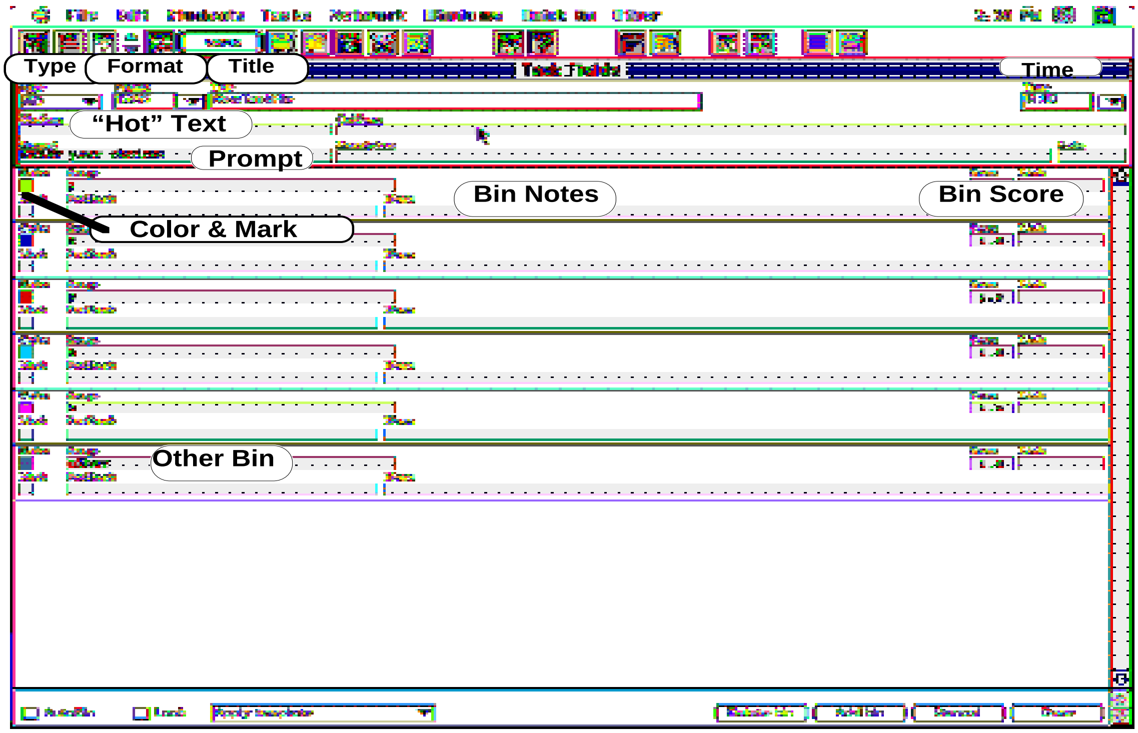
- ***For every new question you make, you MUST select a "type" (or use the default MC).***
- ***We strongly recommend that you also enter...***
  - -a title (with key words first);
  --text for the students to read (Hot text) that at least describes their choices
- ***It is very helpful to set up useful bins.***
- ***We recommend assigning some score to each bin-- say 1 point for all answer except 5 to 10 points for correct answers.***
- ***Feedback is valuable, but time consuming to write. Add it if you have the time.***

Format
A..D *"Format" field editable pop-up...*
Format is used primarily to let you set up MC answer bins quickly and easily. The popup allows you to select other sets of answers, or you can type in your own set (e.g.1..9)

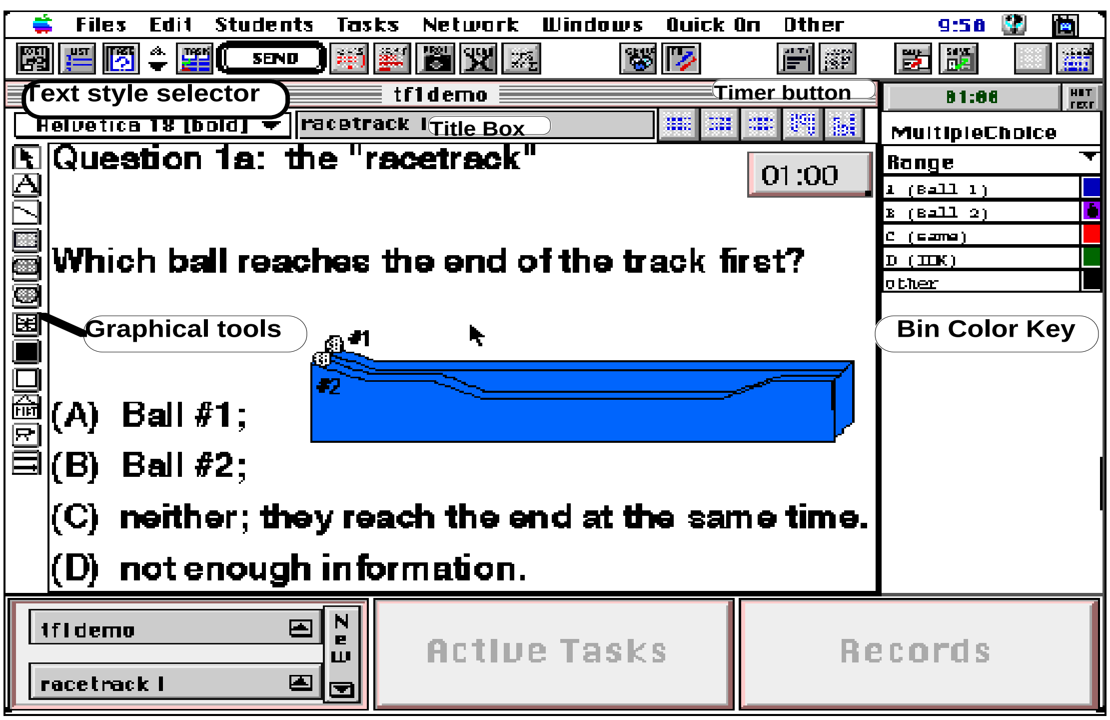
- *TEMPORARY LIMITATION: TI's are limited to 15 character Tx answers just for the first release.*

- *You can edit the title from either the Qn Screen window, or from the Qn Fields window.*

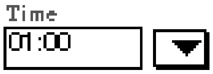
Task Field Window



Task Screen Window



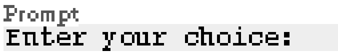
- **Setting or changing the Task time**
  Every Classtalk question or set of questions ("Task") is timed--i.e once a task is started, students can work on it for a set amount of time.



"Task Time" editable popup...*

You can preset the Task time in the "Time" field of the Qn Fields window by typing in another value, or by selecting a value from the popup menu.

- **Editing the Question "Prompt".**
  Every question has a "prompt" that appears on the students' screens right next to where they type their answers.



"Prompt" field...

Customize any Qn's prompt by clicking in the "Prompt" field and editing the text as desired.

- **"Hot Text"--text for the students' displays**
  Every question can include "hot text" which is sent to the student units and viewed by the students once the task is started.

"Hot Text" expandable feedback field ...

Click in the field and begin typing whatever text you wish the students to read while they are answering. The "Hot text" field expands as you add to it, up to a maximum of 4,000 characters (about 1 full typewritten page).

- **Question specific Notes & Descriptors**
  A "Qn Notes" field is provided to display information to the instructor that will help him or her use the question effectively in class. We recommend that you include such information as...
  1) Scenario for using the question;
  2) Story to tell related to the question;
  3) Purpose/value of asking the question
  4) Helpful tips & hints related to using the Qn.
  The "Descriptors" fields should include searchable terms that help identify the Qn, the topic or subject matter, and the context for using Qn in class.

- **"Code" field for courseware**

" editable "Code"field for courseware...

The "Code" field is intended for courseware developers to provide a way to link related questions together in an instructional framework. Software supporting the use of the"Code" field is under development.

Notes:

"Timer" button

Task time can also be preset from the Qn Screen window by clicking on the timer button (which brings up the timer window).You can always change the task time from the timer window just before sending the question to your class, or you can add (or subtracting) time while the task is being answered.

- *TI systems-- the prompt only appears when the students use the "Screen editor". Be sure the prompt information is redundant or they might miss it. But don't leave it blank, because its their only reminder of what to answer from the "Screen Editor".*

We suggest you use "Hot text" to briefly restate the question, and enumerate the choices or how the students should answer. It's wise to keep hot text to 9 or fewer lines since longer "HT" takes time to send, and requires that the students scroll their displays to see all the text.

"Hot Text" button for instant access to HT...

You can also view & edit the HT directly in it's own window by pressing the "Hot text" button.

- *You can select & copy "Hot text" in the Task Fields window, to paste into the Task Screen window.*

- **“Bins” categorize each student answer, & individualize the feedback to the students.**

Each “bin” includes the following fields:

“Range”:delimits which answers are in the “bin”.

Range
A *a typical MC Question “Bin Range”*

For MC Qns, each letter can have it’s own bin, or a group of letters can share one bin (e.g. “B,E,F”)

Range
3.140:3.142 *a Nu Question “Bin Range”*

Numeric Qns are binned between minimum and maximum values. e.g. “2:2” accepts only “2” or “2.0...” (any number of zeros is OK

Range
Aristot?? *a Wd or Tx Question “Bin Range”*

Wd and Tx Qn bins look for an exact match or search for words within the answer. In this example, “aristotle” or “aristot” with any other letters at the end would be found anywhere in the answer text. You can also specify combinations of target words, or multiple target words.

Range
Other *Range setting for catch-all “Other” bin...*

Every Qn has an “Other” bin to catch unanticipated answers. **DO NOT ATTEMPT TO DELETE IT!**

“Color”: color tag identifies students by answer

Color
popout menu of bin color choice...s

The “bin color” is used on the class seating chart, in answer lists, and for the Analysis histogram bar.

“Mark” (e.g. √ or x) reminder of significance.

Mark
√ *“Mark” bin, a single character for a reminder.*

This mark is “private”--for your eyes only, to remind you of the significance of the bin.

“Feedback” text to read after answering;

Feedback
field for answer-specific feedback.

Feedback (FB) is available (if present and enabled) when the task is over or, if allowed, immediately after answering (immediate FB)

“Notes” describes the significance of the bin

Notes
field for labels & notes on bin meaning...

This field may be used to label or describe the significance of the answer bin. For example “forgot to divide by 2” or “used wrong units.”

“Score” points assigned an answer in this bin.

Score
1.0 *Score-- 3 char number between -99 and 100*

Score for answer (does not have to be an integer)

“**Link”** field for courseware developers.

Permits linking specific answers to related questions. “Link” field is under development.

Notes:

Student answers are grouped (categorized) so that each answer falls into one out of as many as ten “bins”. You can customize the bins so that a particular bin contains answers from students with specific misconceptions or variant points-of-view. For example, if you want to group together students answering “A” and “C”, you can list both in the “Range”, separated by a comma. Other logical specifiers are available.

- *Use Option -v to get a nice √ mark*

- *We suggest you provide feedback that encourages the students to rethink their answers so that they come up with the correct answer themselves, rather than being told “NO--the correct answer is...”*

- *We’ve found students are more engaged if they get some credit for any answer (e.g. 1 point), and more credit if they get the answer partly or entirely correct.*

Working with the Task Screen

Press this tool-button when you want to see or edit the selected Qn's "Task screen."

- **Entering or editing a question title**

  Question_ 1 *Question title editable field..*

  Click on the title and begin typing-- this will replace the current title. To edit a portion of the title, highlight the portion of text to be replaced, and type in the new text.

- **Creating & editing a text region**

   *"Text" tool button*

  Click on the "text" tool button, then "Click & Drag" a text region rectangle the size of what you want to type in. You will be able to reshape this region later if you don't get it quite right.

  Helvetica 18 [bold] *"Style" popup*

  You can use any preset style-set (font, size & style) or select or change specific text attributes including text color form this "Style-set" popup menu.

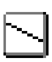
  Type in the text you want the students to see projected on the TV or LCD screen.

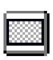
  Once you're in a text region, you can select or edit text just as you would in a drawing program like MacDraw(tm).

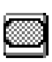
  To resize a text region...

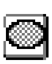
  Click outside of the region until you get an arrow pointer. Then click once anywhere in the text region you wish to resize. Little "handles" will appear at the four corners of the region. Use the handles to resize the object. You can also drag a selected text region just like any graphical object.

- **Creating and modifying a graphical object**

   *"Line" tool used to create straight line, and single or double-ended arrows;*

   *"Rectangle" tool used to create boxes;*

   *"Rounded rectangle" tool;*

   *"Circle & oval" tool.*

  Each of these tools makes a graphical object that can be selected, copied & pasted, resized, or relocated like graphical objects in drawing programs like MacDraw or ClarisWorks(tm). Color and line thickness, and position (in front or behind other objects) can be altered for all of these objects. Shapes (circles, rectangles etc) have selectable "fill" color and pattern (see below).

Notes:

- *Questions can be quite simple, or they can be rather complex. There can be a part that is "projected" for the whole class to see on a TV or using an overhead projector & LCD panel. There can be "hot text"-- text for the students to read before answering the question. And there can be "Feedback"--text that is shown privately to students or groups that relates to the answer they "sent in". BUT you don't have to have all of these component parts in every question... It's up to you, the instructor, to decide just what parts you need and what parts are unnecessary.*
- *If you've already written out the question in "Hot text", copy it from the Task Fields window, and paste it in a text region in the Task Screen. You'll want to resize it.*
- *We recommend you use 36 or 48 point text to ensure that your students are able to read the screen. Check out what works best for your display system.*
- *To get white text on a colored or black background, change the text color to white, and place a colored rectangle behind the text region.*
- ***Shortcut:*** *You can select a portion (or all) of a text region to include in the "Hot text" that is sent to the student units. To do this, select the text object, or highlight the desired text and press G*
- *We do not recommend making intricate diagrams using Classtalk's tools. They are intended for simple graphics or to add a missing line or two to an imported PICT. If you need a top-quality drawing, use a professional drawing package such as MacDraw, Canvas, or Clarisworks to create the drawing. Then copy it into Classtalk using the clipboard (i.e. Copy & Paste) or the PICT import tool.*

- **Changing color & line width of objects**

  Pop-out menu of fill patterns for 2D shapes;

  Pop-out menu of fill color for 2D shapes;

  Pop-out menu of line colors;

  Pop-out menu of line width and arrow heads;

  Use one or more of the pop-out menus to change color, fill, line thickness or arrow heads for the selected graphical object. If no object is selected, selecting an attribute sets the default of that attribute for all new objects that you create.

- **Inserting & resizing a PICT image**
  You can paste in any "PICT" format object from other applications or from the scrapbook, using Copy & Paste.

  "PICT tool" used to import an entire PICT file

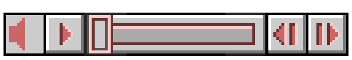
  To resize a PICT object, select it using the tool, and drag one of the corner "handles" to reduce or enlarge the image area.

- **Inserting & running a MOVIE**
  You can paste in any "QT" (Quick Time) format movie from other applications or from the scrapbook, using Copy & Paste.

  "MOVIE tool" used to import a QT file.

  You may have as many as two QT movies in a Question Screen. However

  To resize a **MOVIE** object, select it using the tool, and drag one of the corner "handles" to reduce or enlarge the image area.

  ˆMovie controller...

  Movie controls appear in the Task Info Panel.

Notes:

- *Resized PICTs may look strange due to uneven doubling (or deleting) of rows or columns of pixels. It's best to resize your PICTs before importing them into Classtalk!*
- *NOTE: QT performance may be poor during the projection of the task with enlarged or high resolution movies unless you have a op-of-the- line Macintosh. Be sure--try out your ovies on a two-screen system before class tomake sure they work OK.*

Question sets

A “Question Set” is a task with more than one part to be answered. The parts can be interrelated or unrelated. Classtalk allows you to require that the students answer the parts in a specific order (called “in order”), or to allow “random access”, where the students choose from a list of titles the question they will answer first, second, etc. **Only one Task screen can be projected during a Question Set,** so make sure the component questions are completely stated either in “Hot text” or on a paper handout or overhead transparency.

- **Anatomy of a Question Set (QS)**

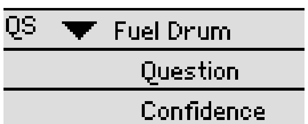
All Question Sets have a “Header” which includes the Task Screen, and QS settings. The “inside” of a Question Set consists of ordinary questions that have been created or pasted inside.

use the “List” tool to see QSs in your taskfile.

In the “list of tasks” Question Sets may be “Collapsed” so you only see the Header title, or they may be “expanded” so you see the QS header and the titles of all the Qns in the QS

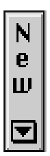
a “collapsed” QS

Clicking on the black triangle expands a collapsed QS, or collapses an expanded QS.



the same QS “expanded”

- **Creating a new Question Set**



Use the “New” popup in the New Tasks Panel to create a new Question Set, or to add a new QS Question within an existing QS.

- **Question Set settings**

At present, the only QS setting is “Sequencing”. The default selection is “In order”-- the students don’t see a list of titles, and move directly from one question to the next, in order.

Feedback is also provided “in order”.
“Random Access” allows the students to select questions to answer from a list of Qn titles.
QS Time is set in the “Header” (the individual times for the included Qns are ignored). At present, a time is set for the duration of the whole QS.

Notes:

- *Here’s an idea-- start the day off with a “Login-Quiz” consisting of a Question set with a few short questions Each student answers the QS after s/he logs in for the class-- and you get great feedback on whether they’re ready for today’s lesson!*
- *Because of network limitations, we recommend that you keep the number of questions to 10 or fewer. The actual limit depends on how much text is included in the Hot text and feedback fields of the questions.*

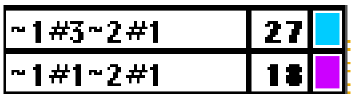
- **Assembling QSs from existing Qns**

use the “Task List” to see QSs in a taskfile.

You can “click & drag” Qns from the list into any QS on the list whether the QS is expanded or collapsed. Within an expanded QS you can drag Qns up or down to change their order, or you can drag them out of the QS entirely.
Cut & Paste (-c & -v) work for building QSs from tasks found in other taskfiles.

- **Running & Monitoring QSs**
  Select a QS to run by clicking on its “Header” in the Task List. Use “Send” to transmit the QS to the student computers. Check the time, grouping and feedback settings in the timer window, and click “Start” to allow the students to begin answering.

- **Analyzing Question Set returns**
  QSs have a special type of binning that allows you to follow student answering throughout the QS.



Question Set bins

Question set bins group students by their series of answers to all the questions in the question set.The key shows question number and bin number for each question in the set, and tallies the number of students who answered with this set of answers. This QS-autobinning works for the Classview and the Analysis graphs of the QS.
To view student performance for an individual Qn within a QS, locate the Qn’s title in the “Active Tasks Mode” panel and select the individual Qn’s title.

Records of a session (current or past)

the “Records” mode panel

After you and your class have finished answering a task, having discussed it and having looked any feedback, it’s time for the task to become history. Starting a new task or clicking “Done” will automatically move the task from “Active” to “Records”, i.e. history.
Records of past sessions are stored in date-stamped “Session Files” in the Session folder for your course.
Each session has a different number: S 1, etc.

- **Reviewing Records from past sessions**
  1) Open a past sessions from the “Files” Menu:
  Files ->Session files->Open Session file
  or open several sessions at once use group open:
  Files->Session files->Group Open Session
  2) Select a session to review using the (upper) Records mode-panel popup menu.
  3) Select a task to review using the Task list or (lower) mode popup menu to. All views & analyses should work just as if you were in class.

Notes:

- *Normally the QS header’s “Task Screen” is projected when you run a QS. If instead of selecting the “Header” in the task list, you select one of the question titles within the QS and press “Send”, you are presented with a choice:*
  --Send just the selected Qn, or
  --Send the entire QS, but project the selected Qn’s “Task Screen” instead of the QS “Task Screen”.

- *In this example there were two questions in the question set. Twenty seven students sent in answers to Qn 1 that fell into Qn 1’s 3rd bin, along with answers to Qn 2 that fell into Qn 2’s first bin. Eighteen students’ answers to Qn1 fell into the 3rd bin, but their answers to Qn2 all fell in the 1st bin (as did the other 27 students’).*

- *TEMPORARY RESTRICTION: Group open won’t allow you to switch folders. Set the folder using Open Session.*

- **Exporting Record data for other uses**
  It is easy to use selected Classtalk Qns in student evaluations or grades. The data are readily exported in tab-delimited text files that can be opened or read by virtually all spreadsheet programs.
  Export Setup and Export are on the Files menu.

Export Setup: choose the data fields to export...
1) Decide where you want the column labels;
2) Decide which "label fields" you need-- we suggest you use at least student ID and Last Name;
3) Decide which data fields you need;
4) Decide which sets of Qn data to export--data from all the Qns, or only from selected Qns?
5) Click **OK** to accept the Export Settings;

Export: Select the Qns or Sessions you want to include in the export file, and then select "Export". Choose a useful name & destination folder the file.
Click SAVE to create the export file.

Collected Sessions (CSs)

Classtalk's "Collected Sessions" are designed to help you keep track of each student's progress and participation in class. Use a collected session to gather in one file, students' answers to key questions in a curriculum unit or over a two or three week period. Each CS also includes a "StudentPerformance" summary (which looks like a QS) that contains attendance, participation and score summaries for each individual student.

- **Building a Collected Session**
  1) Create a new collected session-- use the menu:
  Files->Collected Session->New Collected Session
  2) Open one or more regular sessions that contain tasks you wish to include in the collected session.
  Files->Session File ->Open Session File, or
  Files->Session File ->Group Open Session File.
  3) Select the question or questions from the Task List that you wish to include in the CS.
  4) Use "Copy with Answers" to copy these tasks:
  (Edit->Copy with Answers or -1)
  5) Use "Paste to CS" to paste these tasks into the CS: (Edit->Paste to CS or -2). Your view will be shifted to the list of items in the CS, so you can verify that the tasks have been copied, or you can look at the Session summary set.
  To add additional items select the appropriate session and repeat form step 3.
- **Using CS "StudentPerformance" Summary**
  Individual student performance summaries are calculated as you build a CS. All data are normalized so the maximum value is always one.
  Attendance: proportion of sessions the student logged in out of total number of possible sessions.
  Participation: proportion of Qns answered out of the total number of questions sent ***to that student.***

Notes:

- *If you have made a point to set "scores" for your questions, this may be the only data field you need. Otherwise you will have to export answer or bin# and assign useful scores within your spreadsheet..*
- *Once created, you can open this file with a spreadsheet program such as Excel(tm) or Claris Works(tm), or you can open it with a text editor, select & copy the data, and paste it into a preexisting spreadsheet.*
- ***In "Room" classview** CS data are displayed relative to a particular session's seating chart. You can set the reference seating chart to whatever session you wish.*
  (under Files->Collected Session->Set Seating Chart)
- ***WARNING:** for a large class, a collected session can consume a lot of memory. Do not plan to put a whole semester's data in one CS. Setting the preferred memory for the classtalk application to a higher value helps alleviate memory limitations.*
- ***BE PATIENT--** it takes a while to calculate and update the Performance data, so the paste may be very slow.*
- *The Performance summaries are designed to separate attendance, performance and score variable. Note that Attendance doesn't affect Participation and neither Attendance or Participation affects Score.*
  If you want a combined indicator, just multiply the two components for each student.
- *TEMP. CONSTRAINT: You will have to set up your own bins of Student Performance. This a special type of data-- use numeric ranges e.g. 1:1, .85:1,.75:.85, etc.*

Quitting & Resuming

When you finish using Classtalk in a particular class, you should quit the program:

1) select **Files->Quit** from the main menu,
2) (optional) check which files you do or do not wish to update or save on disk,
3) Use "**Save & Quit**" to save what you marked.
Use "**Suspend**" if you want to continue it later.
Use "**Don't Save**" to abandon the session.

Recovering from Crashes

Someday Classtalk may crash during one of your classes, but be assured this is not as disastrous as it seems. Classtalk writes critical information to disk every few seconds; login information, answers etc. are all saved in temporary files that can be used to reconstruct your session. If the Classtalk program "hangs up" or "freezes", you should reboot your computer, turn the network adapter off and on, and double-click on the classfile again. Classtalk will appear to open normally, but will ask you if you want to resume the suspended session. The answer is "Yes"!

Notes:

- *You may want to get into the habit of exporting your class' scores for a participation grade, or you might add key questions to a Collected session. Just before shutting down is a good time to do this sort of "house keeping".*

- *When you turn the Network Adapter off, the network adapter forgets who is logged in. Classtalk has to give this information back to the network adapter. You will be prompted to relogin students on the TI's. Choose resume and your students will be relogged in as it nothing happened.*

Using Classtalk in your Classroom

Getting your class "psyched" for Classtalk

(what to do before you use Classtalk in class)

Experienced Classtalk user find that it is helpful to discuss how they will use the system to enhance teaching and learning and improve the classroom atmosphere. We suggest you emphasize the value to the students:

--participation improves learning
--answering questions is challenging & fun
--Classtalk helps the teacher know what to teach.

We also recommend that you provide a small (grade) incentive for participation with Classtalk. With no incentive, some students may drift into nonparticipation.

The day before you start using Classtalk, go over with your students what they will see and do as they use Classtalk system.

--Explain how they will connect to the network before class and disconnect after class is over.
--Show them (with overhead slides) how to login & register, and how to answer questions individually and in groups.

Notes:

- *Until you get used to the routine, you may wish to have a student assist you in these processes.*

Hardware & deployment

Give some thought ahead of time to how you will deploy and undeploy the Classtalk system. You will not want to spend more than about 2 minutes setting up or taking down the system.

Starting up Classtalk

1) Connect components: Cable the computer to the network, hook up the display system, plug in the power cords;
2) power on (it's helpful to have a master plugstrip) Turn on the computer, the network & other hardware such a scan converter or LCD;
3) set out the Student computers where the students can get them and return them easily;
4) start up the Classtalk application (from the classfile if you have one). Open Login (allow new students if it's the first time or two). Open any taskfiles you have pre-prepared.

Finishing up a Classtalk class

Here are some things to do that will make your life easier at the end of class:

1) remind your students how to disconnect and return their computers
2) attendance and participation? Export at least one task to keep as a record of participation or add a key task to a Collected Session that you're maintaining for the purpose. Copy the file to diskette if you won't have access to the Mac.
3) Quit CT & Shut down Mac
4) Turn all power off before disconnecting;
5) Disconnect & put away the components.

Logging in & Registering a Class

All student users must have an established Classtalk "account" before they can use the system.

There are two ways to set up the class' accounts:

1) Each student "Registers" from his/her student computer on the first time s/he uses Classtalk, or

2) The instructor preregisters the students by importing a "roll" file containing the essential information on each (i.e. LastName, FirstName, StudentID, Handle, and Password.)

Most instructor use method 1). Here is a reasonable way to do it. in college classes...

- **Day before first use:** Instruct the students what to do to register & login. Use overheads. Explain what "StudentIDs" and "Handles" are to be used.
- **First week:** "Allow new Students" when you open login. Tell them "Register ONLY the first time. Memorize your Handle & Password!"
- **Second day on:** Bring a printed list of Student Handles and passwords, because several students will forget each day for at least a week.

Usually all students will be registerred by the end of the first week, and you should not "Allow new students" after that.

Classtalk "Cycle of learning",(15-20 min)

There are many ways to use Classtalk, and many reasons to ask questions in class. Here is a generalized "cycle" for incorporating Socratic questioning in your lectures and lessons.

1. "Anticipatory" Question (or login quiz):

Use a humorous and/or student-related problem or "Puzzler" to motivate student interest in the topic you're about to discuss. Students should receive a small (grade) incentive for any answer.

2. Motivating the Lesson

A good "Anticipatory" question will split the class with significant numbers of different answers. Without giving away your preference, the Class should puzzle over their answers, and brainstorm to identify other possible Qns & As

3. Mini-Lesson (8-12 min)

Your turn to talk & teach. You might present...
--What is the Problem?
--Relevant background
--Solving the Problem
--Broad &/or Specific Implications

4. Follow-up Question

Now it's time to test your students' understanding and application of the concepts just covered. Use another question, maybe an extension of Qn 1.

Mazur's Peer-instruction method works well here.

5. Lesson Reprise

Your turn again...
--recap the concepts
--go over the implications & applications to real-life problems or situations.

Repeat the cycle for the next related topic.

Notes:

Both Student ID and Handle must be unique for each student. For Handles, we suggest you have your students use their nicknames with added characters to make them unique (e.g. "JOHN!!") Handles are always uppercase.

Managing task, class and session files

You will be using lots of taskfiles, and creating many sessionfiles as you use Classtalk. Here are some suggestions that may help you keep your files useful and in order...

- use meaningful file names that will help you remember what is in them from year to year;
- keep all the files you need for one course in one folder labeled with the course name...
  e.g. Phys104'95 (folder) might contain: Phys104'95 (classfile), SF for Phys104'95 (folder containing sessions and collected sessions), ***104 Mechanics Tasks** (folder containing mechanics taskfiles), as well as copies of the files Classtalk needs: Instructors List, Rm.120.config (the room configuration), Task template, and Quick Qns.
- organize tasks into taskfiles according to sensible topical or pedagogical content;
- Keep up-to-date backup copies of all task, class, & session files on separate diskettes.

Tips from Classtalk users...

We've watched Classtalk in action in many classrooms. Here are some tips that will help you achieve the same success that our best users enjoy in their own classes...

- **Make it Relevant--** It's important that your students feel the value of answering Classtalk Questions.If they don't sense they're gaining something, they are likely to become reluctant participants once the novelty has worn off.
- **Make it a positive experience--** Don't use Classtalk to embarrass or denigrate individuals or groups.
- **Begin Login before class begins--**it saves time! Get your students in the habit of logging as soon as they get to class. This conserves class time to use for teaching & learning;
- **Use a Login-Question or Question Set--** A Qn or QS concurrent with login will focus your students on the subject of the day (Also it's great for checking that they understood their homework assignment);
- **Get your students used to answering questions--** Too little use makes it harder to succeed. It works well to use Classtalk three or more times a week if you have good questions. But remember that Classtalk is just one of your teaching tools-- use it only when you and your students benefit. *Don't feel you have to use Classtalk in every lesson;*
- **Group collaboration is GREAT--** Encourage your students to share a calculator/computer and collaborate on answers, at least for some questions;
- **Establish clear-cut ground rules--** Signal when talking & collaboration are OK, and when you expect quiet, and/or individual answers;
- **Be prepared for surprises--** Plan to adapt your lesson on-the-fly to take advantage of your "inside line". You're bound to meet unexpected responses.

Notes:

- *We suggest that you strive to use meaningful Task names within your taskfile. This makes it much easier to find the Qns you want.*
- *We like our taskfile folder to be at the top of the list in the file selector. The asterisk before the name puts it in front.*