

6.3.4 Learning Objective

Learning objectives describe precisely what the student is expected to do, under specified conditions and to a specified standard following instruction. Learning objectives can be established in MCAIMS only after duties and tasks associated with a job or MOS are established. A terminal learning objective (TLO) is designed to duplicate the actual behavior required in the ITS. Enabling learning objectives (ELOs) are derived from identified knowledge and skills needed by students in order to perform the TLO. Progressive mastery of ELOs should lead to mastery of the TLO. Although ELOs support the TLO, not all TLOs require an ELO.

There is a one-to-one relationship between a task (or ITS) and a TLO. Therefore, in MCAIMS, the condition(s), behavior, and standard(s) recorded for a task are automatically transferred to the TLO. Curriculum designers in the schoolhouse adapt those real-world elements, if required, to reflect a level that is supportable in the instructional setting. Modifications to the task behavior must be justified.

When the individual elements of a TLO are accurately established for the instructional setting, you complete development of the TLO by combining the three individual elements into a Combined Learning Objective statement. This should be done to completely identify the TLO before you add any of its supporting ELOs.

From the Learning Objective Maintenance selection list box, you can develop and record all information for TLOs and ELOs relating to a specific course, to include assigning methods, media, references, and test items. You can also overwrite corresponding learning objectives in the Locally Approved course. After you have entered this information, you can produce the primary product of your learning analysis, the Learning Objective Worksheet (LOW).

1. From the Maintenance drop-down menu, choose Learning Objective. The Learning Objective Maintenance selection list box (Figure 6-43) opens.

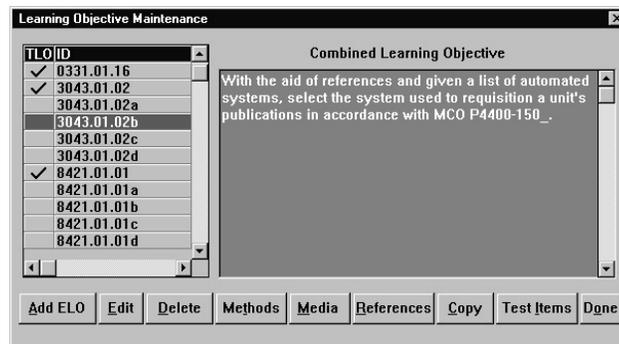


Figure 6-43. Learning Objective Maintenance

2. Refer to Table 6-78 for an explanation of the data fields appearing in the selection list box. TLOs are listed in the selection list box automatically once a task is saved. ELOs are listed in the selection list box as they are added.

Table 6-78. Learning Objective Maintenance

ITEM	DESCRIPTION
TLO	Non-editable field. A check mark in this column indicates the corresponding learning objective is a TLO rather than an ELO.
ID	Non-editable field displaying the designator for the learning objective. The TLO designator is identical to the task designator (TLO: XXXX.99.99). ELOs have the same designator as the TLO they support with the addition of one or two letters (ELO: XXXX.99.99xx).
Combined LO	Non-editable field displaying the product that results from combining the individual elements of a learning objective together (condition, behavior, and standard - in that order) and editing as needed to convey the appropriate meaning in a grammatically correct manner. This is generally one complete sentence. This field will appear blank until the Combined LO has been generated.

- As summarized in Table 6-79, only certain command buttons are available to you based on the status of the course with which you are working. If available, click on the desired command button.

Table 6-79. Access to Learning Objective Maintenance Functions

COMMAND BUTTON		WORKING	APPROVED	SUBMITTED
Add ELO		Yes	No	No
Edit		Yes	No	No
View		No	Yes	Yes
Delete	*ELOs only	Yes*	No	No
Methods	*View Only	Yes	Yes*	Yes*
Media	*View Only	Yes	Yes*	Yes*
References	*View Only	Yes	Yes*	Yes*
Copy		Yes	No	No
Test Items	*View Only if an Approved course exists with test items **View Only	Yes*	Yes**	Yes**

RECOMMENDED APPROACH: Complete the development of all TLOs using the Edit command button before adding ELOs. Make sure you create a Combined LO for every learning objective because only combined LOs are available for placement on concept cards.

6.3.4.1 Add ELO

This command allows you to add an ELO to the highlighted TLO. ELOs are derived from the groupings of common, similar, or related knowledge and skills developed for each performance step of the corresponding task. (See Paragraph 6.3.3.5, **Steps**.) Each ELO is assigned the same numeric designator as the TLO it supports, followed by a unique combination of one or two letters.

HINT: Before adding any ELOs subordinate to a TLO, you should first edit the TLO to create the Combined LO statement. (See Paragraph 6.3.4.2, **Edit**.)

Table 6-80 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-80. Access to Add ELO

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Add ELO	Yes	No	No

1. From the Learning Objective Maintenance selection list box (Figure 6-43), click on the TLO to which you will add a supporting ELO. MCAIMS identifies TLOs by a check mark in the TLO column..
2. Click on **Add ELO**. The Enabling Learning Objective Add dialog box (Figure 6-44) opens.

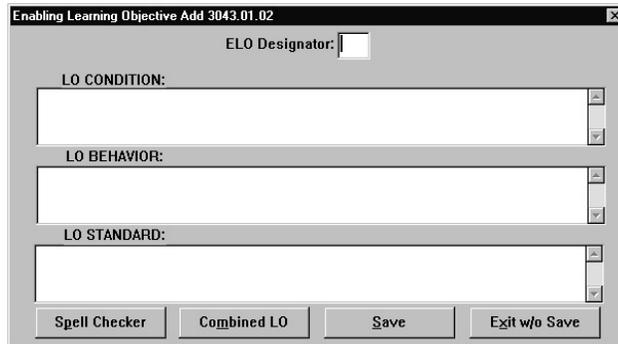


Figure 6-44. Enabling Learning Objective Add

3. Referring to Table 6-81 for an explanation of the data fields, enter the required information to add an ELO for the TLO listed in the title bar.

HINT: When completed, you can combine the ELO elements (condition, behavior, and standard) into the Combined LO statement by pressing a command button. Accordingly, you should structure your phrases in this dialog box to minimize grammatical edits when combining into one sentence.

Table 6-81. Enabling Learning Objectives Add

ITEM	DESCRIPTION	PARAMETERS/ FORMAT
ELO Designator	A unique combination of one or two letters, which is added to the numeric designator of the TLO it supports. Assign the first 26 ELOs the letters "a" through "z" consecutively. If there are more than 26 ELOs, assign the next 26 letters "aa" through "az", then "ba" through "bz", etc. You must complete this field to save the ELO.	2 alpha characters
LO Condition	Description of all the unique circumstances or limitations under which the student must perform the learning objective behavior. Include any resources the student may use and the instructional environment in which the student will complete the behavior. You must complete this field to save the ELO.	Up to 64,000 alphanumeric characters
LO Behavior	The action the student is expected to accomplish after instruction. Use a verb that connotes an observable and measurable action. You must complete this field to save the ELO.	Up to 64,000 alphanumeric characters

ITEM	DESCRIPTION	PARAMETERS/ FORMAT
LO Standard	A description of the level of proficiency to which the student must perform the learning objective behavior. Include time constraints, level of accuracy, degree of completeness, and/or rate requirements. You must complete this field to save the ELO.	Up to 64,000 alphanumerical characters

HINT: It is best to enter the learning objective elements in normal sentence structure format. Normal sentence structure format implies the use of an initial capital letter on the first word, only lowercase letters for the remaining words (except proper nouns and acronyms), and a period at the end of the statement.

HINT: If you must stop now, click on Save to return to the Learning Objective Maintenance selection list box. However, do not forget to return to the next step to combine the elements of the learning objective. Note that you must combine the elements of the learning objective to make it available later for placement on any concept card.

4. Click on **Combined LO**. The Learning Objective Edit dialog box (Figure 6-45) opens displaying a blank text field.

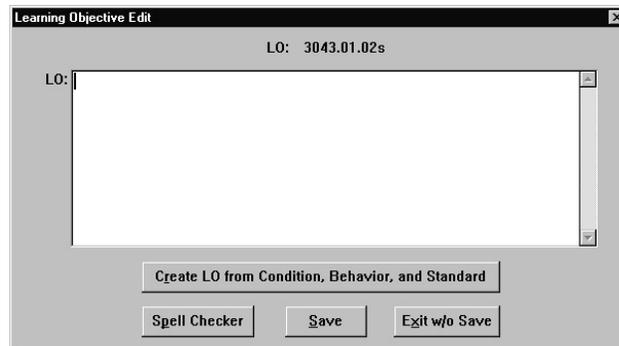


Figure 6-45. Learning Objective Edit

5. Click on **Create LO** from Condition, Behavior, and Standard to combine the three elements into one combined learning objective statement (or you could type in the learning objective statement). In the text box above the button, MCAIMS displays the ELO condition, behavior, and standard statements with a space between each.
6. Edit the Combined LO statement as needed for proper grammar, sentence structure, and readability.

HINT: Normal sentence structure format implies the use of an initial capital letter on the first word, only lowercase letters for the remaining words (except proper nouns and acronyms), and a period at the end of the statement.

7. Click on **Save**. A message appears to explain the impact upon this ELO of references added to the parent TLO. Click on OK. Then a message appears to inquire if you want to add another ELO under this TLO.
 - a. Clicking on **Yes** returns you to the Enabling Learning Objective Add dialog box. Note that the elements of the previous ELO

remain in this box. You can modify or overwrite as necessary, but be sure to assign a new ELO designator.

- b. Clicking on **No** returns you to the Learning Objective Maintenance selection list box.

6.3.4.2 **Edit**

This command allows you to edit or complete the initial development of a highlighted TLO or to edit a highlighted ELO. Note that the Terminal Learning Objective Edit selection list box has two extra command buttons that the Enabling Learning Objective Edit selection list box does not have: Downgrade and Replace. These buttons are explained below.

HINT: It is best to combine the elements of the TLO before adding and editing ELOs. The statement for the combined terminal learning objective will then appear in the Learning Objective Maintenance selection list box, making selection of the appropriate TLO easier.

6.3.4.2.1 **Edit** TLO

This command allows you to edit or to complete the initial development of the highlighted TLO. MCAIMS for Windows brings to the Terminal Learning Objective Edit dialog box the separate elements of the task (the task title, condition(s), and standard(s)) that you entered under the Task menu option. If these real-world elements cannot be duplicated in the instructional environment, then you must make modifications as necessary to accurately reflect the instructional environment.

If you must modify the TLO behavior, the system prompts you to provide a justification statement. Note that the Downgrade button remains shaded until you have changed the behavior and provided appropriate justification after clicking on **Save**. Then this button will allow you to edit the downgrade justification. You can print a Downgrade Justification Report detailing the TLOs you have downgraded. In addition, downgrade justifications will appear beneath downgraded TLOs in Concept Card reports and in Section IV of the POI.

If a TLO was downgraded and you later decide the downgrade is no longer necessary, the **Replace** button will replace the behavior portion of the TLO with the original task description entered under the task menu function.

Once all individual elements of the TLO are finalized, you must combine these elements so that the TLO appears in the Learning Objective Maintenance selection list box, on concept cards, in the POI, and in other reports as a grammatically complete statement.

Table 6-82 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-82. Access to Edit TLO

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Edit	Yes	No	No

1. From the Learning Objective Maintenance selection list box (Figure 6-43), highlight the TLO you wish to edit.
2. Click on **Edit**. The Terminal Learning Objective Edit dialog box appears (Figure 6-46).

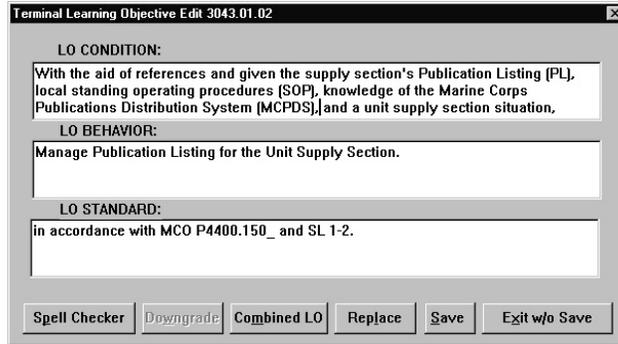


Figure 6-46. Terminal Learning Objective Edit

3. Referring to Table 6-83 for an explanation of the data fields, edit the TLO condition, behavior, and standard, as necessary. Whenever possible, the TLO should duplicate the condition, behavior, and standard of the original task (ITS).

Table 6-83. Terminal Learning Objectives Edit

ITEM	DESCRIPTION	PARAMETER/ FORMAT
LO Condition	Initially, this information matches that of the task condition(s). Edit as required to properly describe all the unique circumstances or limitations under which the student must perform the learning objective behavior. Include any resources the student may use and the instructional environment in which the student will complete the behavior.	Up to 64,000 alphanumeric characters
LO Behavior	Initially, this information matches the Task Title. If the student cannot complete the real world behavior due to safety concerns, a lack of equipment, or time constraints, modify the behavior to accurately reflect the closest attainable behavior in the instructional environment. If you edit the TLO Behavior, the system will automatically prompt you for downgrade justification.	Up to 64,000 alphanumeric characters
LO Standard	Initially, this information matches the Task Standard(s). Edit as required to properly describe the level of proficiency to which the student must perform the learning objective behavior. Include time constraints, level of accuracy, degree of completeness, and/or rate requirements.	Up to 64,000 alphanumeric characters

4. If you have previously entered justification for downgrading the TLO behavior from that of the task, and if you wish to edit that justification statement, click on **Downgrade**. Edit the text as desired and click on **Save**. You will be returned to the Terminal Learning Objective edit dialog box (Figure 6-46).
5. Click on **Combined LO**.
 - a. If you just changed the TLO behavior, the Downgrade Justification memo text box automatically opens. You must enter your justification for downgrading the TLO behavior from that of the task. The system will not allow you to exit until

you make an entry. When completed, click on Save and you will proceed to the Learning Objective Edit memo text box.

- b. If you have not changed the TLO behavior, the Learning Objective Edit memo text box automatically opens.
6. From the Learning Objective Edit memo text box, click on **Create LO from Condition, Behavior, and Standard** (or you could type in the learning objective statement). In the text box above the button, MCAIMS displays the TLO condition, behavior, and standard statements with a space between each.
- a. Edit the statement for proper grammar, sentence structure, and readability.

HINT: Normal sentence structure format implies the use of an initial capital letter on the first word, only lowercase letters for the remaining words (except proper nouns and acronyms), and a period at the end of the statement.

- b. Click on Save. A message appears to explain the impact on concept cards or reports.
 - (1) If no concept cards were affected, you receive a message to that effect. Click on OK. MCAIMS returns you to Learning Objective Maintenance selection list box
 - (2) If concept cards were affected, MCAIMS provides you a list to review. Click on Print or Quit. Either selection returns you to the Learning Objective Maintenance selection list box.

If you have not completed your editing of the TLO, you must click on Edit again to reopen to the Terminal Learning Objective Edit dialog box.

7. If you wish to replace a downgraded TLO behavior with the original task behavior entered under the Task menu option, click on **Replace**. A message appears to explain the impact of this action on the separate behavior portion of the TLO and on the combined TLO and to confirm your wish to continue.
- a. Click on Yes. The original task behavior replaces the separate TLO behavior, and the downgrade justification is removed.
 - b. If necessary, edit the Combined LO field as described in Steps 5 and 6 above. Otherwise, click on Save. You will receive a message explaining the impact of your actions on certain reports.
 - c. Click on **OK**. MCAIMS returns you to the Learning Objective Maintenance selection list box.

6.3.4.2.2 **Edit** ELO

This command allows you to edit the highlighted ELO.

Table 6-84 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-84. Access to Edit ELO

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Edit	Yes	No	No

1. From the Learning Objective Maintenance selection list box (Figure 6-43), highlight the ELO you wish to edit.
2. Click on **Edit**. The Enabling Learning Objective Edit dialog box appears (Figure 6-47).

Figure 6-47. Enabling Learning Objective Edit

3. Referring to Table 6-81 for an explanation of the data fields, edit the information in any field as necessary.
4. If the Combined ELO requires editing, click on Combined LO. The Learning Objective Edit memo text box opens and displays the current version of the combined ELO.
 - a. You can edit the existing text or click on **Create LO** from Condition, Behavior, and Standard to recombine the ELO from its separate elements. Edit the statement for proper grammar, sentence structure, and readability.

HINT: Normal sentence structure format implies the use of an initial capital letter on the first word, only lowercase letters for the remaining words (except proper nouns and acronyms), and a period at the end of the statement.

- b. Click on **Save**.
 - (1) If no concept cards were affected, you will receive a message to that effect. Click on **OK**. MCAIMS returns you to Learning Objective Maintenance selection list box.
 - (2) If concept cards were affected, MCAIMS provides you a list to review. Click on **Print** or **Quit**. Either selection returns you to the Learning Objective Maintenance selection list box.
5. If the combined ELO does not require editing, click on **Save**.
 - a. If you have edited the ELO designator, you will receive one of two messages.
 - (1) If no concept cards were affected, you will receive a message to that effect. Click on **OK**. MCAIMS returns you to Learning Objective Maintenance selection list box.
 - (2) If concept cards were affected, MCAIMS provides you a list to review. Click on **Print or Quit**. Either selection returns you to the Learning Objective Maintenance selection list box.
 - b. If you have not edited the ELO designator, you will receive a message explaining the potential impact on some reports.

6.3.4.3 View

This command allows you to view information concerning the highlighted learning objective.

Table 6-85 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-85. Access to View

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
<u>V</u>iew	No	Yes	Yes

1. From the Learning Objective Maintenance selection list box (Figure 6-43), highlight the desired learning objective by clicking on it.
2. Click on **View**. A dialog box similar to the one in Figure 6-46 or Figure 6-47 opens.
3. Click on Exit w/o **Save**. This returns you to the Task Maintenance selection list box.

6.3.4.4 Delete

This command allows you to delete the highlighted ELO from the Learning Objective Maintenance selection list box. However, you cannot delete TLOs. To delete a TLO, you must access the Task Maintenance selection list box and delete the task corresponding to the TLO. Deleting the task deletes the TLO and all subordinate ELOs and test items.

When you delete a learning objective, MCAIMS conducts extensive internal checking to determine if it impacts any existing concept cards or test items. MCAIMS also checks for access to Evaluation Maintenance. If there are test items associated with the ELO and you have access to Evaluation Maintenance, MCAIMS will allow you to continue and to delete the learning objective. If there are associated test items and you do not have access to Evaluation Maintenance, MCAIMS will not allow you to delete the ELO and you will receive a message to that effect. In that case, you must see your System Administrator for assistance. If you delete an ELO that already exists on a concept card, MCAIMS will resequence the remaining learning objectives on the concept card.

Table 6-86 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-86. Access to Delete ELO

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
<u>D</u>elete	Yes	No	No

1. From the Learning Objective Maintenance selection list box (Figure 6-43), highlight the ELO you desire by clicking on it.
2. Click on **Delete**. A message appears to confirm your wish to delete the ELO and all associated test items. (If there are associated test items and you do not have access to Evaluation Maintenance, you will receive a different message advising you to see your system administrator.)
3. Click on **Yes**. This deletes the record and provides you with additional information about its impact.

- a. If no concept cards were affected, you receive a message to that effect. Click on **OK**. MCAIMS returns you to the Learning Objective Maintenance selection list box.
- b. If concept cards were affected, MCAIMS provides you a list to review. Click on **Print** or **Quit**. Either selection returns you to the Learning Objective Maintenance selection list box.

6.3.4.5 **Methods**

This command allows you to access and maintain instructional methods for the selected TLO or ELO. The instructional methods you assign to each learning objective will be carried with the objective when it is used elsewhere in MCAIMS. This is particularly helpful when you are developing concept cards. When you add methods to a learning objective or delete methods from one, MCAIMS provides a list of any concept cards containing that learning objective. MCAIMS does not automatically modify the methods associated with these concept cards. Instead, you are responsible for reviewing the methods on the concept cards to determine if they are still accurate.

Table 6-87 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-87. Access to Methods

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Methods *View Only	Yes	Yes*	Yes*

1. From the Learning Objective Maintenance selection list box (Figure 6-43), highlight the desired TLO or ELO by clicking on it.
2. Click on **Methods**. The LO Method selection list box (Figure 6-48) opens. Note that the title bar identifies the TLO or ELO designator with which you are working and the Combined Learning Objective field displays the learning objective statement.

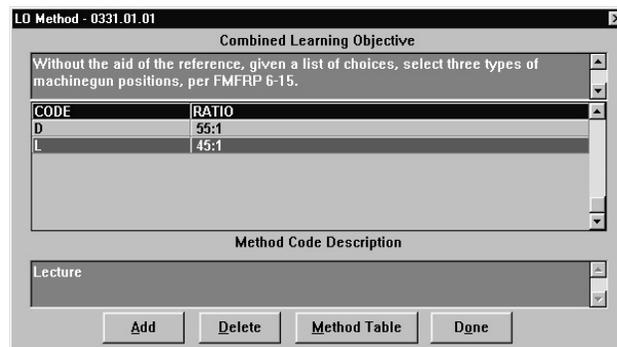


Figure 6-48. LO Method

3. Refer to Table 6-88 for an explanation of the data fields appearing in the selection list box. The selection list box lists all method(s) associated with this learning objective.

Table 6-88. LO Method

ITEM	DESCRIPTION
Combined Learning Objective	Non-editable field displaying the combined learning objective for the TLO or ELO listed in the title bar.

ITEM	DESCRIPTION
Code	Non-editable field displaying the abbreviation for a method of instruction associated with this learning objective.
Ratio	Non-editable field displaying the student:instructor ratio associated with the specific method of instruction when applied to this leaning objective. The first field represents the number of students generally receiving instruction on this learning objective using that instructional method at one time. The second field represents the number of instructors required to present that instruction on the learning objective using that instructional method.
Method Code Description	Non-editable field displaying the name of the highlighted instructional method.

- As summarized in Table 6-89, only certain command buttons are available to you based on the status of the course with which you are working. If available, click on the desired command button.

Table 6-89. Access to Methods Functions

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Methods - Add	Yes	No	No
Methods - Delete	Yes	No	No
Methods - Method Table	Yes	No	No

6.3.4.5.1 **Add**

This command allows you to add methods to the TLO or ELO listed in the title bar. Methods added to a learning objective are not automatically added to any existing concept cards containing that learning objective. A list of concept card(s) containing the modified learning objective will be provided. You should review each concept card for accuracy, and revise and reprint the concept card(s) when necessary.

Table 6-90 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-90. Access to Add Methods

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Methods - Add	Yes	No	No

- From the LO Method selection list box (Figure 6-48), click on **Add**. The Add Methods selection list box (Figure 6-49) opens. Note that the title bar and the Combined Learning Objective field identify the TLO or ELO with which you are working.

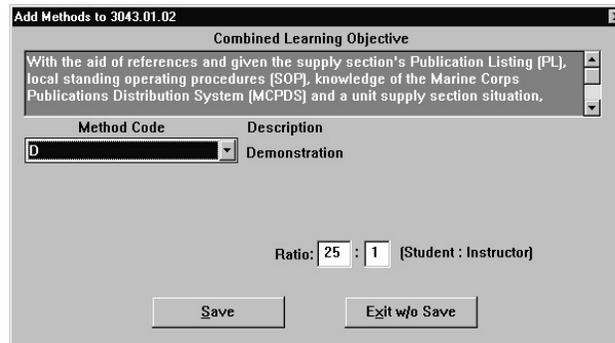


Figure 6-49. Add Methods

2. Referring to Table 6-91 for an explanation of the data fields, enter the required information to add a method of instruction for this learning objective.

HINT: You can add duplicate methods to a TLO or ELO as long as they have different ratios.

Table 6-91. Add Method Codes

ITEM	DESCRIPTION	PARAMETERS/ FORMAT
Combined Learning Objective	Non-editable field displaying the combined learning objective for the TLO or ELO listed in the title bar.	
Method Code	A drop-down list of all methods in the Method Table for this course. Note that the description of the highlighted method is displayed to the right of the box. Scroll through the drop-down list and click on the desired code.	
Ratio	The student:instructor ratio associated with the specific method of instruction when applied to this leaning objective. The first field represents the number of students generally receiving instruction on this learning objective using that instructional method at one time. The second field represents the number of instructors required to present that instruction on the learning objective using that instructional method.	Up to 3 numeric characters for 1st field; 2 for 2nd field

HINT: If you cannot find a method you desire in the drop-down list, select **Exit w/o Save** to return to the LO Method selection list box. You can then access the Method Table by clicking on the Method Table button (see Paragraph 6.3.4.5.3). After you add the method to the Method Table, it will be available to add to the learning objective.

3. Click on **Save**. A message appears to explain the impact of this action on any existing concept cards.
 - a. If the modified learning objective is not contained on any existing concept cards, you receive a message stating that no concept cards were affected. Click on **OK**. MCAIMS returns you to the LO Method selection list box.
 - b. If there are concept cards that contain the modified learning objective, MCAIMS provides a list for your review. Note that none of these concept cards were modified so you should review them for accuracy. Click on **Print** or **Quit**. Either selection returns you to the LO Method selection list box.

6.3.4.5.2 **Delete**

This command allows you to delete the selected method(s) from the TLO or ELO appearing in the title bar. Deletion at this level will not affect any existing concept cards. A list of concept card(s) containing the modified learning objective will be provided. You should review each concept card for accuracy, and revise and reprint the concept card(s) when necessary.

Table 6-92 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-92. Access to Delete Methods

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Methods - Delete	Yes	No	No

1. From the LO Method selection list box (Figure 6-48), mark the method(s) you wish to delete using the multiple select feature.
2. Click on **Delete**. A message appears to confirm your choice.
3. Click on **Yes**. MCAIMS deletes the method(s) from the learning objective and provides you information about the impact of this action.
 - a. If the modified learning objective is not contained on any existing concept cards, you receive a message stating that no concept cards were affected. Click on **OK**. MCAIMS returns you to the LO Method selection list box.
 - b. If there are concept cards that contain the deleted learning objective, MCAIMS provides a list for your review. Note that none of these concept cards were modified so you should review them for accuracy. Click on **Print** or **Quit**. Either selection returns you to the LO Method selection list box.

6.3.4.5.3 **Method Table**

This command allows you to access the Method Table to add or copy a method to the table, thus making it available to add to the learning objective with which you are working.

Table 6-93 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-93. Access to Method Table

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Methods - Method Table	Yes	No	No

1. From the LO Method selection list box (Figure 6-48), click on **Method Table**. The Method Table Maintenance selection list box (Figure 6-50) opens.

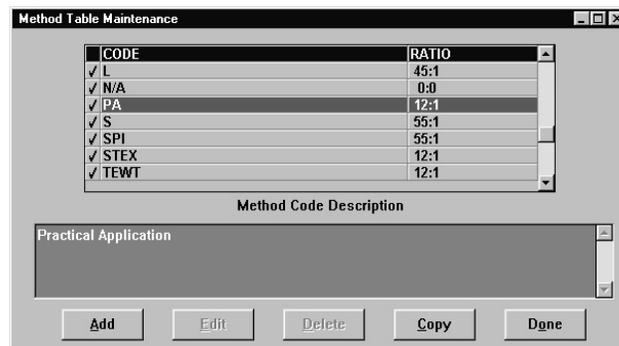


Figure 6-50. Method Table Maintenance

2. As summarized in Table 6-94, only certain command buttons are available to you based on the status of the course with which you are working. If available, click on the desired command button.

Table 6-94. Access to Methods Table Functions

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Methods - Method Table - Add	Yes	No	No
Methods - Method Table - Copy	Yes	No	No

HINT: Only the Add and Copy buttons are accessible from this selection list box. You must return to the Method option under the Tables drop-down menu to edit or delete any method listed in this selection list box.

6.3.4.5.3.1 **Add**

This command allows you to add a new method to the Method Table for your course.

HINT: Before adding a new method to your course, check the copy list for methods added to other courses. If the method you desire is present, copy it rather than add it.

Table 6-95 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-95. Access to Add Methods

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Methods - Method Table - Add	Yes	No	No

- From the Method Table Maintenance selection list box (Figure 6-50), click on **Add**. The Method Code Add dialog box (Figure 6-51) opens.

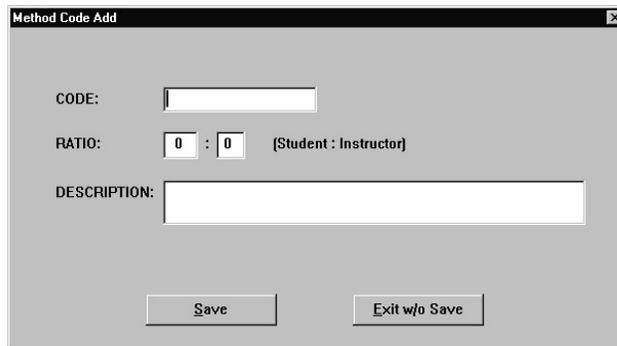


Figure 6-51. Method Code Add

- Referring to Table 6-96 for an explanation of the data fields, enter the required information to add a method of instruction to your Method Table.

Table 6-96. Method Codes Add

ITEM	DESCRIPTION	PARAMETERS/ FORMAT
Code	Abbreviation for a method of instruction used in a course. You must complete this field to save the record.	Up to 10 alphanumeric characters
Ratio	Default (most common) student:instructor ratio associated with a specific method of instruction used in a course. The first field represents the number of students generally taught using that instructional method. The second field represents the number of instructors necessary to teach those students using that instructional method.	Up to 3 numeric characters for 1st field; 2 for 2nd field
Description	Name of the instructional method. You must complete this field to save the record.	Up to 112 alphanumeric characters

- Click on **Save**. The method is added, and you are returned to the Method Table Maintenance selection list box.

HINT: If you wish to add the new method to the learning objective with which you are working, click on Done to return to the LO Method selection list box. Then click on Add. Follow the instructions listed in Paragraph

6.3.4.5.3.2 Copy

This command allows you to access a list of all methods not contained in the Method Table of the current course, but that have been added to other courses on the same computer or server as your MCAIMS installation. From that list, you may copy selected methods to the Method Table for the course you are developing.

Table 6-97 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-97. Access to Copy Methods

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Methods - Method Table - Copy	Yes	No	No

1. From the Method Table Maintenance selection list box (Figure 6-50), click on **C**opy. The Copy Method Codes selection list box (Figure 6-52) opens with a list of all other methods added to other courses on the same computer or server as your MCAIMS installation.

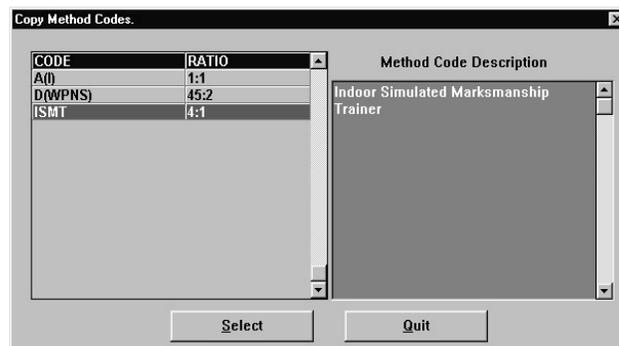


Figure 6-52. Copy Method Codes

2. Using the multiple select feature, mark the method(s) you want to copy to the Method Table for the course with which you are working.
3. Click on **S**elect. Each method is copied, and you are returned to the Method Table Maintenance selection list box.

HINT: If you wish to add the newly copied method(s) to the learning objective with which you are working, click on Done to return to the LO Method selection list box. Then click on Add. Follow the instructions listed in Paragraph 6.3.4.5.1.

6.3.4.6 Media

This command allows you to access and maintain instructional media for the selected TLO or ELO. The instructional media you assign to each learning objective will be carried with the objective when it is used elsewhere in mcaims. This is particularly helpful when you are developing concept cards. When you add media to a learning objective or delete media from one, MCAIMS provides a list of concept cards containing that learning objective. MCAIMS does not automatically modify media associated with the

concept card. Instead, you are responsible for reviewing the media on the concept cards to determine if they are still accurate.

Table 6-98 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-98. Access to Media

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Media *View Only	Yes	Yes*	Yes*

1. From the Learning Objective Maintenance selection list box (Figure 6-43), highlight the desired TLO or ELO by clicking on it.
2. Click on Media. The LO Media selection list box (Figure 6-53) opens. Note that the title bar and the Combined Learning Objective field identify the TLO or ELO with which you are working.

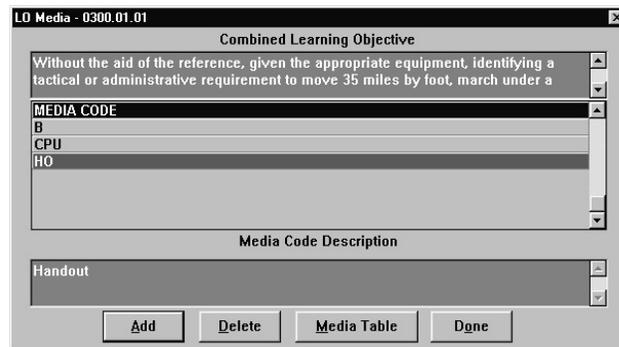


Figure 6-53. LO Media

3. Refer to Table 6-99 for an explanation of the data fields appearing in the selection list box. The selection list box lists all media associated with this learning objective.

Table 6-99. LO Media

ITEM	DESCRIPTION
Combined Learning Objective	Non-editable field displaying the combined learning objective associated with the TLO or ELO in the title bar.
Media Code	Non-editable field displaying the abbreviation for a medium of instruction associated with this learning objective.
Media Code Description	Non-editable field displaying the name of the highlighted instructional medium.

4. As summarized in Table 6-100, only certain command buttons are available to you based on the status of the course with which you are working. If available, click on the desired command button.

Table 6-100. Access to Media Functions

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Media - Add	Yes	No	No
Media - Delete	Yes	No	No
Media - Media Table	Yes	No	No

6.3.4.6.1 **Add**

This command allows you to add media to the TLO or ELO listed in the title bar. Media added to a learning objective are not automatically added to any existing concept cards containing that learning objective. A list of concept card(s) containing the modified learning objective will be provided. You should review each concept card for accuracy, and revise and reprint the concept card(s) when necessary.

Table 6-101 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-101. Access to Add Media

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Media - Add	Yes	No	No

- From the LO Media selection list box (Figure 6-53), click on **Add**. The Add Media Codes selection list box (Figure 6-54) opens and displays a list of all media in the Media Table for this course that are not already assigned to this learning objective. Note that the title bar and the Combined Learning Objective field identify the TLO or ELO with which you are working.

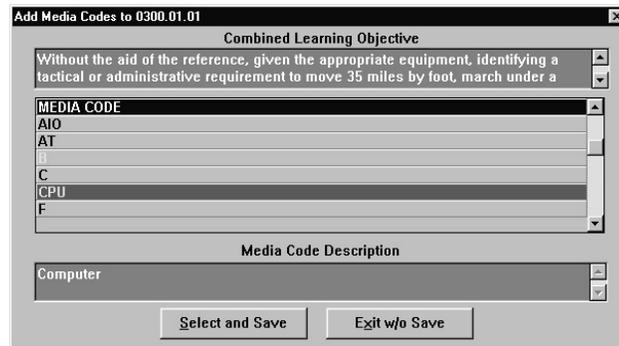


Figure 6-54. Add Media Codes

- Refer to Table 6-102 for an explanation of the data fields.

Table 6-102. Add Media Codes

ITEM	DESCRIPTION
Combined Learning Objective	Non-editable field displaying the combined learning objective associated with the TLO or ELO in the title bar.
Media Code	A list of all media in the Media Table for this course that are not already assigned to this learning objective.
Description	Non-editable field displaying the name of the highlighted instructional medium.

- Using the multiple select feature, mark the media code(s) you want to add to your learning objective.

HINT: If you cannot find the media you desire in this list, select **Exit w/o Save** to return to the LO Media selection list box. You can then access the Media Table by clicking on the Media Table button (see Paragraph 6.3.4.6.3). After you add the media to the Media Table, they will be available to add to the learning objective.

4. Click on **Select** and **Save**. A message appears explaining the impact of this addition on any existing concept cards.
 - a. If the modified learning objective is not contained on any existing concept cards, you receive a message stating that no concept cards were affected. Click on **OK**. MCAIMS returns you to the LO Media selection list box.
 - b. If there are concept cards that contain the modified learning objective, MCAIMS provides a list for your review. Note that none of these concept cards were modified so you should review them for accuracy. Click on **Print** or **Quit**. Either selection returns you to the LO Media selection list box.

6.3.4.6.2 **Delete**

This command allows you to delete the selected media from the TLO or ELO appearing in the title bar. Deletion at this level will not affect any existing concept cards. A list of concept card(s) containing the modified learning objective will be provided. You should review each concept card for accuracy, and revise and reprint the concept card(s) when necessary.

Table 6-103 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-103. Access to Delete Media

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
<u>M</u>edia - <u>D</u>elete	Yes	No	No

1. From the LO Media selection list box (Figure 6-53), mark the media you wish to delete using the multiple select feature.
2. Click on **Delete**. A message appears to confirm your wish to delete these media.
3. Click on Yes. MCAIMS deletes the media from the learning objective and provides you information about the impact of this action.
 - a. If the modified learning objective is not contained on any existing concept cards, you receive a message stating that no concept cards were affected. Click on **OK**. MCAIMS returns you to the LO Media selection list box.
 - b. If there are concept cards that contain the modified learning objective, MCAIMS provides a list for your review. Note that none of these concept cards were modified so you should review them for accuracy. Click on **Print** or **Quit**. Either selection returns you to the LO Media selection list box.

6.3.4.6.3 **Media Table**

This command allows you to access the Media Table to add or copy a medium to the table, thus making it available to add to the learning objective with which you are working.

Table 6-104 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-104. Access to Media Table

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
<u>M</u>edia - <u>M</u>edia Table	Yes	No	No

- From the LO Media selection list box (Figure 6-53), click on **Media Table**. The Media Table Maintenance selection list box (Figure 6-55) opens.

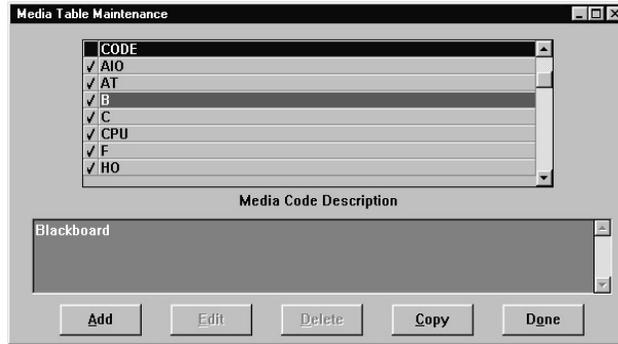


Figure 6-55. Media Table Maintenance

- As summarized in Table 6-105, only certain command buttons are available to you based on the status of the course with which you are working. If available, click on the desired command button.

Table 6-105. Access to Media Table Functions

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Media - Media Table - Add	Yes	No	No
Media - Media Table - Copy	Yes	No	No

HINT: Only the Add and Copy buttons are accessible from this selection list box. You must return to the Media option under the Tables drop-down menu to edit or delete any media listed in this selection list box.

6.3.4.6.3.1 **Add**

This command allows you to add a new medium to the Media Table for your course.

HINT: Before adding a new medium to your course, check the copy list for media added to other courses. If the medium you desire is present, copy it rather than add it.

Table 6-106 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-106. Access to Add Code to Media Table

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Media - Media Table - Add	Yes	No	No

- From the Media Table Maintenance selection list box (Figure 6-55), click on **Add**. The Media Code Add dialog box (Figure 6-56) opens.

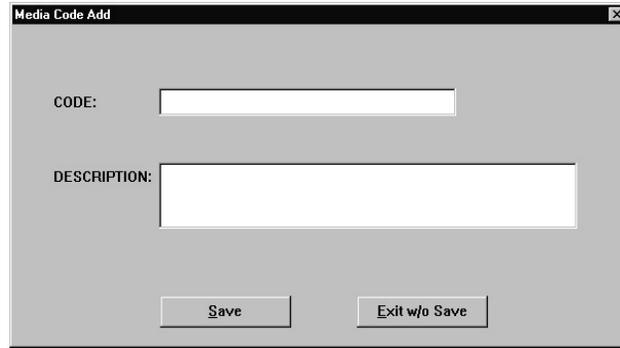


Figure 6-56. Media Code Add

- Referring to Table 6-107 for an explanation of the data fields, enter the required information to add a medium of instruction to your Media Table.

Table 6-107. Media Code Add

ITEM	DESCRIPTION	PARAMETERS/ FORMAT
Code	Abbreviation for a medium used to deliver instruction in a course. You must complete this field to save the record.	Up to 20 alphanumeric characters
Description	Name of the instructional medium. You must complete this field to save the record.	Up to 130 alphanumeric characters

- Click on **S**ave. The medium is added, and you are returned to the Media Table Maintenance selection list box.

HINT: If you wish to add the new medium to the learning objective with which you are working, click on Done to return to the LO Media selection list box. Then click on Add. Follow the instructions listed in Paragraph 6.3.4.6.1.

6.3.4.6.3.2 Copy

This command allows you to access a list of all media not contained in the Media Table of the current course, but that have been added to other courses on the same computer or server as your MCAIMS installation. From that list, you may copy selected media to the Media Table for the course you are developing.

Table 6-108 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-108. Access to Copy Code to Media Table

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Media - Media Table - Copy	Yes	No	No

- From the Media Table Maintenance selection list box (Figure 6-55), click on **C**opy. The Copy Media Codes selection list box (Figure 6-57) opens with a list of all other media added to other courses on the same computer or server as your MCAIMS installation.

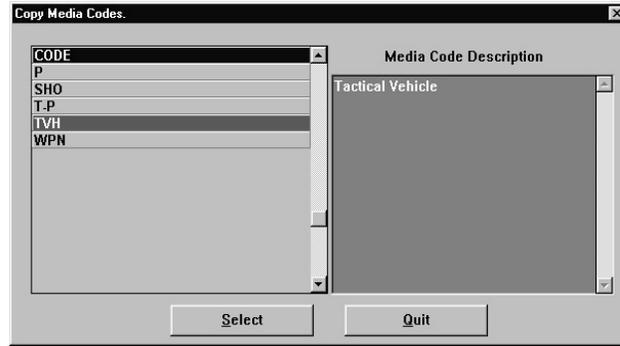


Figure 6-57. Copy Media Codes

2. Using the multiple select feature, mark the media you want to copy to the Media Table for the course with which you are working.
3. Click on **Select**. Each medium is copied, and you are returned to the Media Table Maintenance selection list box.

HINT: If you wish to add the newly copied medium (media) to the learning objective with which you are working, click on Done to return to the LO Media selection list box. Then click on Add. Follow the instructions listed in Paragraph 6.3.4.6.1.

6.3.4.7 **References**

This command allows you to access and maintain references for the selected TLO or ELO. The references you assign to each learning objective will be carried with the objective when it is used elsewhere in mcaims. This is particularly helpful when you are developing concept cards. When you add references to a learning objective or delete references from one, MCAIMS provides a list of concept cards containing that learning objective. MCAIMS does not automatically modify references associated with the concept card. Instead, you are responsible for reviewing the references on the concept cards to determine if they are still accurate.

Table 6-109 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-109. Access to References for Learning Objectives

	COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
References	*View Only	Yes	Yes*	Yes*

1. From the Learning Objective Maintenance selection list box (Figure 6-43), highlight the desired TLO or ELO by clicking on it.
2. Click on **References**. The References for LO selection list box (Figure 6-58) opens. Note that the title bar identifies the TLO or ELO with which you are working.



Figure 6-58. References for LO

- Refer to Table 6-110 for an explanation of the data fields appearing in the selection list box. The selection list box lists all references associated with this learning objective.

Table 6-110. References for Learning Objective

ITEM	DESCRIPTION
Reference	Non-editable field displaying the code (if one exists) for a reference associated with this learning objective.
Title	Non-editable field displaying the name of the highlighted reference.

- As summarized in Table 6-111, only certain command buttons are available to you based on the status of the course with which you are working. If available, click on the desired command button.

Table 6-111. Access to References Functions

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
References - Add	Yes	No	No
References - Delete	Yes	No	No
References - Reference Table *View Only	Yes	Yes*	Yes*

6.3.4.7.1 Add

This command allows you to add references to the TLO or ELO listed in the title bar. References added to a learning objective are not automatically added to any existing concept cards containing that learning objective. A list of concept card(s) containing the modified learning objective will be provided. You should review each concept card for accuracy, and revise and reprint the concept card(s) when necessary.

Table 6-112 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-112. Access to Add References

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
References - Add	Yes	No	No

- From the References for LO selection list box (Figure 6-58), click on **Add**. The Add References to Learning Objective selection list box (Figure 6-59) opens and displays a list of all references in the Reference Table for this course that are not already assigned to this learning objective. Note that the title bar identifies the learning objective with which you are working.

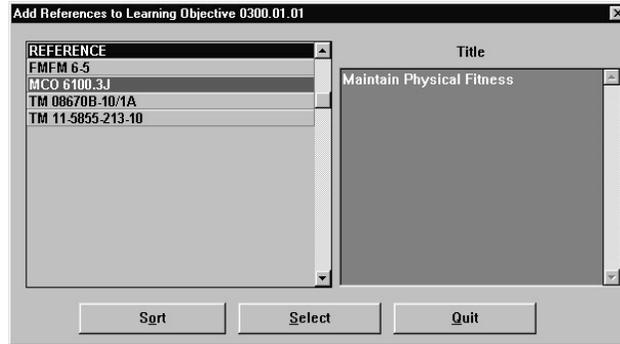


Figure 6-59. Add References to Learning Objective

2. Sort references by title rather than reference code, if desired.
3. Using the multiple select feature, mark the reference(s) you want to add to this learning objective.

HINT: If you cannot find the references you desire in this list, select **Quit** to return to the References for LO selection list box. You can then access the Reference Table by clicking on the Reference Table button (see Paragraph 6.3.4.7.3). After you add the references to the Reference Table, they will be available to add to the learning objective.

4. Click on **Select**. A message appears to advise you of the impact of this addition.
 - a. If you added a reference to a TLO, the message advises that the reference(s) will be added automatically to newly created ELOs. However, the task and any existing ELOs and concept cards will not be impacted.
 - b. If you added a reference to an ELO, the message advises that the action will have no effect on the task, the parent TLO, other ELOs, or any existing concept cards.
5. Click on **OK**. A report is generated listing all references added to this learning objective and listing all concept cards containing this learning objective.

6.3.4.7.2 **Delete**

This command allows you to delete the selected reference(s) from the TLO or ELO appearing in the title bar. Deletion at this level will not affect any existing concept cards. A list of concept card(s) containing the modified learning objective will be provided. You should review each concept card for accuracy, and revise and reprint the concept card(s) when necessary.

Table 6-113 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-113. Access to Delete References

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
References - Delete	Yes	No	No

1. From the References for LO selection list box (Figure 6-58), mark the reference(s) you wish to delete using the multiple select feature.
2. Click on **Delete**. A message appears to confirm your choice.

3. Click on **Yes**. MCAIMS deletes the reference(s) from the learning objective and provides you information about the impact of this action.
 - a. If you deleted references from a TLO, a message advises that the reference(s) deleted from the TLO will not be assigned to newly created ELOs. However, the deletion will have no impact on the task and any existing ELOs and concept cards.
 - b. If you deleted references from an ELO, a message advises that the deletion will have no effect on the task, the parent TLO, other ELOs, or any existing concept cards.
4. Click on **OK**. A report is generated listing all references deleted from this learning objective and listing all concept cards containing this learning objective.

6.3.4.7.3 **Reference Table**

This command allows you to access the Reference Table to add or copy a reference to the table, thus making it available to add to the learning objective with which you are working.

Table 6-114 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-114. Access to Reference Table

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
References - Reference Table *View Only	Yes	Yes*	Yes*

1. From the References for LO selection list box (Figure 6-58), click on **Reference Table**. The Reference Table Maintenance selection list box (Figure 6-60) opens.

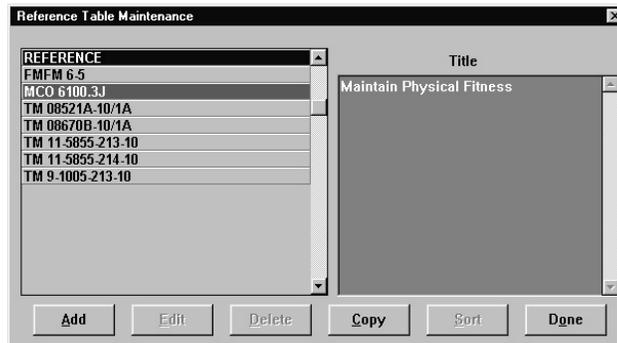


Figure 6-60. Reference Table Maintenance

2. Refer to Table 6-115 for an explanation of the data fields.

Table 6-115. Reference Table Maintenance

ITEM	DESCRIPTION
Reference	Non-editable field displaying the code (if one exists) of a publication that is used during the development or execution of this course.
Title	Non-editable field displaying the name of the highlighted reference.

3. As summarized in Table 6-116, only certain command buttons are available to you based on the status of the course with which you are working. If available, click on the desired command button.

Table 6-116. Access to Reference Table Functions

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
References - Reference Table - Add	Yes	No	No
References - Reference Table - Copy	Yes	No	No

HINT: Only the Add and Copy buttons are accessible from this selection list box. You must return to the References option under the Tables drop-down menu to edit or delete any references listed in this selection list box.

6.3.4.7.3.1 **Add**

This command allows you to add a new reference to the Reference Table for your course.

HINT: Before adding a new reference to your course, check the copy list for references added to other courses. If the reference you desire is present, copy it rather than add it.

Table 6-117 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-117. Access to Add References to Reference Table

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
References - Reference Table - Add	Yes	No	No

1. From the Reference Table Maintenance selection list box (Figure 6-60), click on Add. The Reference Add dialog box (Figure 6-61) opens.

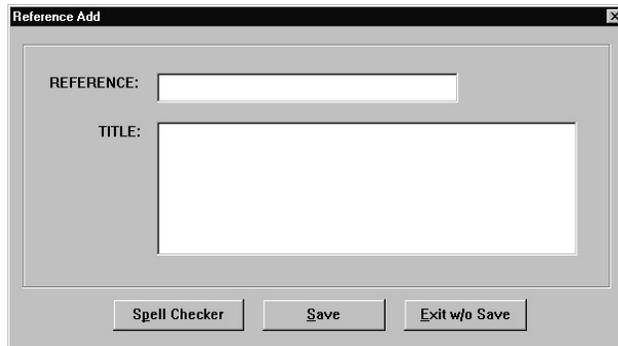


Figure 6-61. References Add

2. Referring to Table 6-118 for an explanation of the data fields, enter the required information to add a reference to the Reference Table.

Table 6-118. References Add

ITEM	DESCRIPTION	PARAMETERS/ FORMAT
Reference	Code (if one exists) depicting a publication.	Up to 20 alphanumeric characters
Title	Name of the reference. You must complete this field to save the record.	Up to 150 alphanumeric characters

3. Click on **Save**. The reference is added, and you are returned to the Reference Table Maintenance selection list box.

HINT: If you wish to add the new reference to the learning objective with which you are working, click on Done to return to the References for LO selection list box. Then click on Add. Follow the instructions listed in Paragraph 6.3.4.7.1.

6.3.4.7.3.2 Copy

This command allows you to access a list of all references not contained in the Reference Table of the current course, but that have been added to other courses on the same computer or server as your MCAIMS installation. From that list, you may copy selected references to the Reference Table for the course you are developing.

Table 6-119 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-119. Access to Copy References to Reference Table

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
References - Reference Table - Copy	Yes	No	No

1. From the Reference Table Maintenance selection list box (Figure 6-60), click on **C**opy. The Copy References selection list box (Figure 6-62) opens with a list of all other references added to other courses on the same computer or server as your MCAIMS installation.

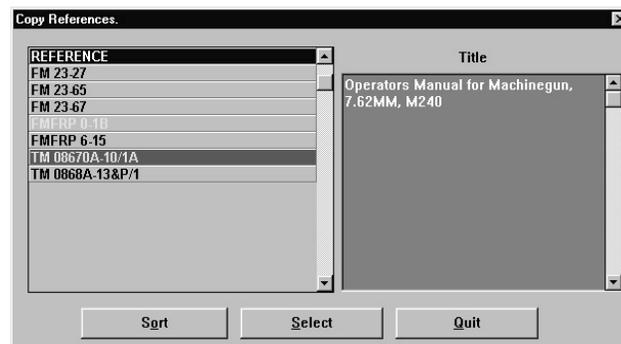


Figure 6-62. Copy References

2. Sort references by title rather than by reference code, if desired.
3. Using the multiple select feature, mark the reference(s) you want to copy to the Reference Table for the course with which you are working.
4. Click on **S**elect. Each reference is copied, and you are returned to the Reference Table Maintenance selection list box.

HINT: If you wish to add the newly copied reference(s) to the learning objective with which you are working, click on Done to return to the References for LO selection list box. Then click on Add. Follow the instructions listed in Paragraph 6.3.4.7.1.

6.3.4.8 Copy

This command allows you to overwrite a corresponding TLO or ELO in the Locally Approved version of the same course. The highlighted learning objective and all methods (with associated ratios), media, references, and test items assigned to it will be copied. For a TLO, its parent task and any downgrade justification will also be transferred.

HINT: Proper execution of this function requires (1) that there be a Locally Approved version of the same course; (2) that a learning objective with the same designation already exist in the Locally Approved course; (3) that the user have access rights to the Locally Approved course; and (4) that the user have access rights to Evaluation Maintenance if test items are associated with the learning objective being copied or with the corresponding learning objective in the Locally Approved course.

Table 6-120 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-120. Access to Copy Learning Objectives

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Copy	Yes	No	No

1. From the Learning Objective Maintenance selection list box (Figure 6-43), highlight the TLO or ELO you wish to copy to the Locally Approved course.
2. Click on **Copy**. MCAIMS checks for the existence of the same course in the Locally Approved status. If the course does not exist in the Locally Approved status, a message appears to advise you. Click on **OK**. MCAIMS returns you to the Learning Objective Maintenance selection list box.
3. After finding the Locally Approved course, MCAIMS checks the course for the existence of the same learning objective. If the learning objective does not exist in the Locally Approved course, a message advises you to assign this learning objective to a concept card and then copy the concept card to the Locally Approved status. Click on **OK**. MCAIMS returns you to the Learning Objective Maintenance selection list box.
4. After finding the learning objective, MCAIMS checks for the existence of test items on the learning objective in either the Working or Locally Approved course.
 - a. If test items exist and you do not have access to Evaluation Maintenance, you receive a message advising you of that fact. Click on **OK**. MCAIMS returns you to the Learning Objective Maintenance selection list box.
 - b. If no test items exist on either the learning objective being copied or on the corresponding learning objective in the Locally Approved course, MCAIMS explains the copy process that will occur and requires that you confirm your decision. Click on **Continue**. MCAIMS depicts the update process.
 - (1) If you are copying a TLO, MCAIMS will update the task upon which this TLO is based along with any downgrade justification. Method, media, and reference tables in the Locally Approved course will be updated and you will receive a report of all concept cards in the Locally Approved course that are affected.
 - (2) If you are copying an ELO, method, media, and reference tables in the Locally Approved course will be updated and you will receive a report of all concept cards in the Locally Approved course that are affected.
 - c. If test items do exist and you have appropriate access rights to Evaluation Maintenance, MCAIMS explains the copy process that will occur and requires that you choose whether or not to

include test items in the copy process. Click on either **Yes** or **No** and MCAIMS depicts the update process.

- (1) If you are copying a TLO, MCAIMS will update the task upon which this TLO is based along with any downgrade justification. Method, media, and reference tables will be updated in the Locally Approved course, and test items will be replaced if you chose to include them. Upon completion, you will receive a report listing all affected concept cards and tests in the Locally Approved course. Click on either the Printer or Door icon. Either selection returns you to the Learning Objective Maintenance selection list box.
- (2) If you are copying an ELO, method, media, and reference tables will be updated, and test items will be replaced if you chose to include them. Upon completion, you will receive a report listing all affected concept cards and tests in the Locally Approved course. Click on either the Printer or Door icon. Either selection returns you to the Learning Objective Maintenance selection list box.

6.3.4.9 **Test Items**

This command allows you to access and maintain test items for the selected TLO or ELO. You can access this command only if your password gives you access to the Evaluation Management module.

Note that test items, described below, are associated with specific learning objectives for three basic types of academic tests: written, scaled credit, and mastery/non-mastery. These tests are created and developed in the Evaluation Management module (Paragraph 7.5.3.3).

- **Multiple Choice.** This type of test item contains a question or statement with up to five possible responses, only one of which is correct. This test item may be selected for use on a Written test.
- **True-False.** This test item contains a statement that is either true (A) or false (B). As an alternative, you may use this test item field to enter a fill-in-the-blank or short answer test item. For such a test item, no partial credit is allowed. The correct response would be A and the incorrect response would be B. This test item may be selected for use on a Written test.
- **Performance.** This test item is used to evaluate a student's performance of a learning objective without concern for the specific process used during the performance. The focus is on the product of the performance, rather than the process. This type of test item might also be used as an essay question dealing with a single learning objective. This test item may be selected for use on a Scaled Credit or Mastery/Non-mastery test.
- **Performance Checklist.** This test item is used to evaluate a student's performance of a learning objective with an emphasis on the process rather than the product. This type of test item might also be used as an essay question that must address certain points, each

carrying the same weight. This test item may be selected for use on a Scaled Credit or Mastery/Non-mastery test.

HINT: While you are in the Working course, you may begin establishing the test items that you expect to need for your course. Print out a Learning Objective Worksheet Report (either by Duty, by Task, or by LO) to review the existing test items you have created and to identify learning objectives with no associated test items.

You can add, edit, delete, or copy test items to a learning objective in the Working course as long as test items do not exist in the corresponding learning objective in the Approved course. Once test items have been added to their corresponding learning objectives in an Approved course, you can no longer view, add, edit, delete, or copy test items to that learning objective in the Working course. However, you may add, edit, delete, or import test items in the Evaluation Management module of the Approved course. Test items are assigned to tests, and tests are assigned to classes under the Evaluation Management module.

Table 6-121 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-121. Access to Test Items

COMMAND BUTTON		WORKING	APPROVED	SUBMITTED
Test Items	*Cannot access if the corresponding LO in the Approved version has test items. Access from within the Evaluation module of the Approved version. **View Only	Yes*	Yes**	Yes**

1. From the Learning Objective Maintenance selection list box (Figure 6-43), highlight the desired TLO or ELO by clicking on it.
2. Click on Test Items. The Learning Objective Test Items for LO selection list box (Figure 6-63) opens. Note that the title bar identifies the TLO or ELO designator with which you are working.

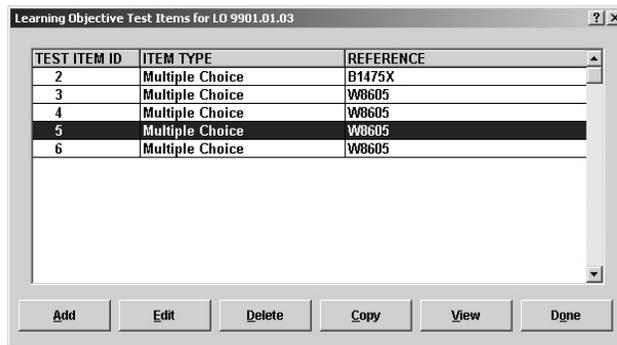


Figure 6-63. Learning Objective Test Items for LO

3. Refer to Table 6-122 for an explanation of the data fields. The selection list box lists every test item associated with this learning objective. This enables you to see at a glance the number and type of test items already entered for each selected learning objective.

Table 6-122. Learning Objective Test Items for LO

ITEM	DESCRIPTION
Test Item ID	Non-editable field displaying the sequential Arabic number for test items that you have added or copied.
Item Type	Non-editable field displaying the type of test item (Multiple Choice, True-False, Performance Item, or Performance Checklist).
Reference	Non-editable field displaying the title of the document used for developing the test item for the highlighted learning objective.

4. As summarized in Table 6-123, only certain command buttons are available to you based on the status of the course with which you are working. If available, click on the desired command button.

Table 6-123. Access to Test Items Functions

ITEM	WORKING	APPROVED	SUBMITTED
Test <u>I</u>tems - <u>A</u>dd	Yes*	No	No
Test <u>I</u>tems - <u>E</u>dit	Yes*	Yes**	Yes**
Test <u>I</u>tems - <u>D</u>elete	Yes*	No	No
Test <u>I</u>tems - <u>C</u>opy	Yes*	No	No
Test <u>I</u>tems - <u>V</u>iew	Yes*	Yes	Yes

6.3.4.9.1 Add

This command allows you to add test items, one at a time, for a highlighted learning objective. That is, you must complete and save each test item (multiple choice, true-false, performance, performance checklist) before adding another. The Performance test item type allows you to create a single performance test item for the learning objective. The Performance Checklist test item type allows you to create a sequence of checklist items, one at a time, that are similar to performance steps under tasks.

Table 6-124 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-124. Access to Add Test Items

COMMAND BUTTON	WORKING	APPROVED	SUBMITTED
Test Items - Add *Only if the corresponding LO in the Approved version does not have test items.	Yes*	No	No

1. From the Learning Objective Test Items for LO selection list box (Figure 6-63), click on **Add**. The Select Test Item Type dialog box (Figure 6-64) opens.

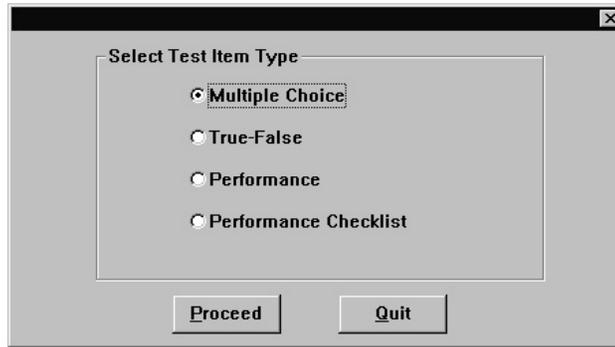


Figure 6-64. Select Test Item Type

2. Choose the appropriate radio button in the dialog box and click on **Proceed**. Depending on your choice of radio buttons, choose the appropriate steps (a, b, or c) below.
 - a. If you select Multiple Choice or True-False, the Test Item Maintenance for LO dialog box (Figure 6-65) opens. Note that the title bar identifies the TLO or ELO designator with which you are working. The title bar also identifies the test item type as Multiple Choice or True-False.

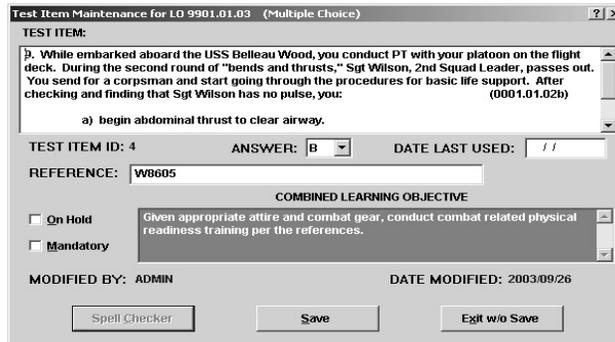


Figure 6-65. Test Item Maintenance for LO (Multiple Choice)

- (1) Referring to Table 6-125 for an explanation of the data fields, complete the required information.

Table 6-125. Test Item Maintenance for LO (Multiple Choice)

ITEM	DESCRIPTION	PARAMETERS/ FORMAT
Test Item	Place to enter the actual multiple choice or true-false test item. You must complete this field to save the record.	Up to 65,000 alphanumeric characters
Test Item ID	Sequence number assigned to a test item. Defaults automatically to next available Arabic number when adding a test item.	

ITEM	DESCRIPTION	PARAMETERS/ FORMAT
Answer	Drop-down list from which you choose the correct response for a multiple choice (with choices A through E) or true-false (with A representing True and B representing False) test item.	
Date Last Used	Non-editable field displaying the date that this test item was last used on any test.	
Reference	Optional entry; generally contains the authoritative reference for the test item.	Up to 45 alphanumeric characters
On Hold	Setting for a newly created test item that you do not want to immediately consider for use. If selected, MCAIMS excludes the test item from any test until you remove the check from this box by clicking on it. Choosing this setting disables the Mandatory setting.	
Mandatory	Clicking on this setting makes a newly created test item a required part of any test using the learning objective. Choosing this setting disables the On Hold setting.	
Combined Learning Objective	Non-editable field displaying the combined learning objective for the TLO or ELO listed in the title bar.	
Modified By	Non-editable field displaying the User ID of the person modifying or creating the test item. Appears automatically when changes are made.	
Date Modified	Non-editable field displaying the date the test item was created or last modified.	

(2) Click on **Save**. If you have not entered a test item, you receive a message advising you that you must enter a test item prior to saving. Click on OK. Otherwise, MCAIMS returns you to the Learning Objective Test Items for LO selection list box. When you click on Done, a message advises you to reprint the LOW for this learning objective if changes to test items have been made. Click on OK to return to the Learning Objective Maintenance selection list box.

b. If you select Performance, the Test Item Maintenance for LO (Performance Item) dialog box (Figure 6-66) opens. Note that the title bar identifies the TLO or ELO designator with which you are working. The title bar also identifies the test item type as Performance Item.

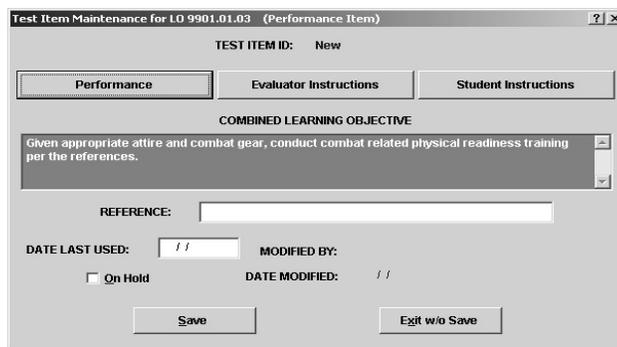


Figure 6-66. Test Item Maintenance for LO (Performance Item)

(1) Click on **Performance**. The Performance Item Add/Edit memo text box (Figure 6-67) opens. Note that the title bar

identifies the TLO or ELO designator with which you are working.

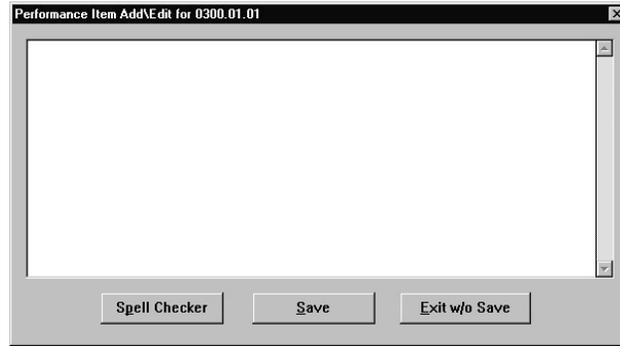


Figure 6-67. Performance Item Add/Edit

- (a) Enter the performance item in the memo text box. You must make an entry in this text box in order to save the record.
- (b) Click on **S**ave. This returns you to the Test Item Maintenance for LO dialog box (Figure 6-66).
- (2) Click on either Evaluator Instructions or Student Instructions. A memo text box (similar to Figure 6-67) opens. Note that the title bar identifies the TLO or ELO number with which you are working.
 - (a) Enter appropriate information in the memo text box.
 - (b) Click on **S**ave. This returns you to the Test Item Maintenance for LO (Performance Item) dialog box (Figure 6-66).
- (3) Referring to Table 6-126 for an explanation of the data fields, complete the required information.

Table 6-126. Test Item Maintenance for LO (Performance Item)

ITEM	DESCRIPTION	PARAMETERS/ FORMAT
Combined Learning Objective	Non-editable field displaying the combined learning objective for the TLO or ELO listed in the title bar.	yyyy/mm/dd
Reference	Optional entry; generally contains the authoritative reference for the test item.	Up to 45 alphanumeric characters
Date Last Used	Non-editable field displaying the date that this test item was last used on any test.	yyyy/mm/dd
On Hold	Setting for a newly created test item that you do not want to immediately consider for use. If selected, MCAIMS excludes the test item from any test until you remove the check from this box by clicking on it.	
Modified By	Non-editable field displaying the User ID of the person creating or modifying the test item. Appears automatically when changes are made.	
Date Modified	Non-editable field displaying the date the test item was created or last modified.	

- (4) Click on **S**ave. The system returns you to the Learning Objective Test Items for LO.
- c. If you select Performance Checklist, the Test Item Maintenance for LO (Performance Checklist) (similar to Figure 6-66) opens.

Note that the title bar identifies the TLO or ELO designator with which you are working. The title bar also identifies the test item type as Performance Checklist.

- (1) Click on **Performance Checklist**. The Performance Checklist for Question dialog box (Figure 6-69) opens. Note that the title bar identifies the question number with which you are working.

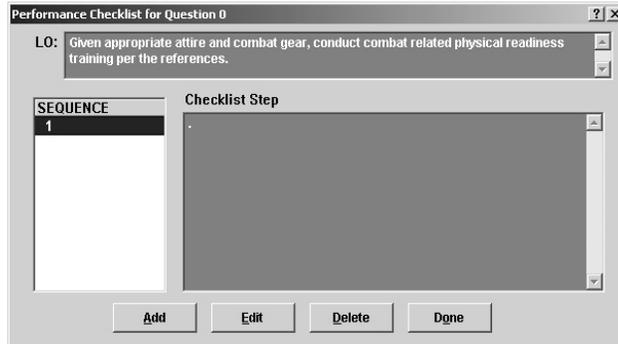


Figure 6-68. Add Performance Checklist Item

- (2) Refer to Table 6-127 for an explanation of the data fields.

Table 6-127. Add Performance Checklist Item

ITEM	DESCRIPTION	PARAMETERS/ FORMAT
LO	Non-editable field displaying the learning objective for which checklist items will be developed.	
Sequence	Field displaying the Arabic number assigned to a checklist item for the given task that will be tested.	
Checklist Step	Non-editable field displaying the checklist item for the highlighted learning objective.	Up to 64,000 alphanumeric characters

- (3) Click on **Add**. The Performance Checklist for Question dialog box (Figure 6-69) opens.

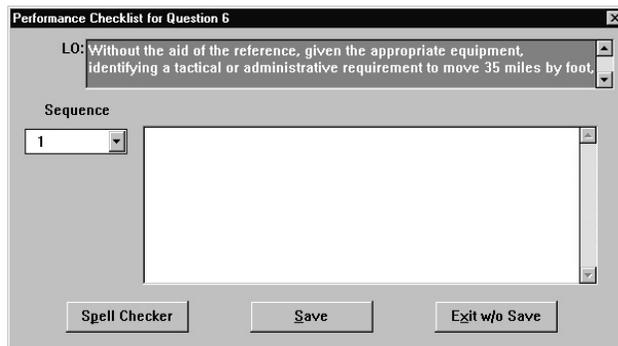


Figure 6-69. Performance Checklist for Question

- (a) Refer to Table 6-128 for an explanation of the data fields.

Table 6-128. Performance Checklist for Question

ITEM	DESCRIPTION	PARAMETERS/ FORMAT
LO	Non-editable field displaying the learning objective on which the checklist item is based.	

ITEM	DESCRIPTION	PARAMETERS/ FORMAT
Sequence	Field displaying the Arabic number assigned to a checklist item for the learning objective.	
Untitled	A checklist item for the highlighted learning objective. You must complete this field to save the record.	Up to 64,000 alphanumeric characters

- (b) Enter the checklist item for the highlighted learning objective in the memo text box. You must complete this field to save the record.
 - (c) Click on **Save**. The system returns you to the Performance Checklist for Question.
 - (d) To add multiple checklist items, repeat the previous process as necessary.
- (4) If you wish to edit an existing checklist item, highlight the desired item and click on **Edit**. A dialog box (similar to Figure 6-69) opens for you to edit the item or resequence it. Make the appropriate changes. Click on **Save** to return to the Performance Checklist for Question selection list box.
 - (5) If you wish to delete checklist item(s), use the multiple select feature to highlight the desired item(s) and click on **Delete**. A message appears to confirm your wish to delete the checklist item(s). Click on **Yes**. MCAIMS deletes the items, resequences them, and returns you to the Performance Checklist for Question selection list box.
 - (6) Click on **Done**. This returns to the Test Item Maintenance for LO (Performance Checklist) dialog box (similar to Figure 6-66).
 - (7) Referring to Table 6-126 (Step b), enter the required information to complete the performance checklist for the learning objective.
 - (8) Click on **Save**. The system returns you to the Test Item Maintenance for LO.
3. Click on **Done**. A message advises you to reprint the LOW for this learning objective if changes to test items have been made. Click on **OK** to return to the Learning Objective Maintenance selection list box.

6.3.4.9.2 **Edit**

This command allows you to edit test items for a highlighted learning objective.

Table 6-129 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-129. Access to Edit Test Items

COMMAND BUTTON		WORKING	APPROVED	SUBMITTED
Test Items - Edit	*Only if the corresponding LO in the Approved version does not have test items. **View Only	Yes*	Yes**	Yes**

1. From the Learning Objective Test Items for LO selection list box (Figure 6-63), highlight the desired Test Item by clicking on it.
2. Click on **Edit**. The appropriate dialog box opens. Refer to Step a if you are editing a multiple choice or true-false test item. Refer to Step b if you are editing a performance test item. Refer to Step c if you are editing a performance checklist test item.
 - a. If you select Multiple Choice or True-False, the Test Item Maintenance for LO dialog box (similar to Figure 6-65) opens. Note that the title bar identifies the TLO or ELO designator with which you are working. The title bar also identifies the test item type as Multiple Choice or True-False.
 - (1) Referring to Table 6-125 for an explanation of the data fields, edit the information as needed.
 - (2) Click on **Save**. The system returns you to the Learning Objective Test Items for LO. When you click on **Done**, a message advises you to reprint the LOW for this learning objective if changes to test items have been made. Click on **OK** to return to the Learning Objective Maintenance selection list box.
 - b. If you select Performance, the Test Item Maintenance for LO (Performance Item) dialog box (Figure 6-66) opens. Note that the title bar identifies the TLO or ELO designator with which you are working. The title bar also identifies the test item type as Performance Item.
 - (1) Click on the Performance, Evaluator Instructions, or Student Instructions command button. The memo text box (similar to Figure 6-67) opens.
 - (a) Edit the text for Performance, Evaluator Instructions, or Student Instructions.
 - (b) Click on **Save**. This returns you to the Test Item Maintenance for LO dialog box (Figure 6-63).
 - (2) Referring to Table 6-126 for an explanation of the data fields, edit the information as needed.
 - (3) Click on **Save**. The system returns you to the Learning Objective Test Items for LO. When you click on **Done**, a message advises you to reprint the LOW for this learning objective if changes to test items have been made. Click on **OK** to return to the Learning Objective Maintenance selection list box.
 - c. If you select Performance Checklist, the Test Item Maintenance for LO (Performance Checklist) dialog box (similar to Figure 6-66) opens. Note that the title bar identifies the TLO or ELO designator with which you are working. The title bar also identifies the test item type as Performance Checklist.

- (1) Click on Performance Checklist. The Performance Checklist for Question (Figure 6-69) opens.
 - (a) Refer to Table 6-127 for an explanation of the data fields.
 - (b) If you wish to enter a checklist item for the highlighted learning objective in the memo text box, click on **Add**. The Performance Checklist for Question dialog box (Figure 6-69) opens.
 - 1 Referring to Table 6-128 for an explanation of the data fields, enter a checklist item.
 - 2 Click on **Save**. The system returns you to the Performance Checklist for Question.
 - (c) If you wish to edit an existing checklist item, highlight the desired item and click on **Edit**. A dialog box (similar to Figure 6-68) opens for you to edit the item or resequence it.
 - 1 Make the appropriate changes.
 - 2 Click on **Save** to return to the Performance Checklist for Question selection list box.
 - (d) If you wish to delete checklist item(s), use the multiple select feature to highlight the desired item(s) and click on **Delete**. A message appears to confirm your wish to delete the checklist item(s). Click on **Yes**. MCAIMS deletes the items, resequences them, and returns you to the Performance Checklist for Question selection list box.
 - (e) Click on **Done**. This returns to the Test Item Maintenance for LO (Performance Checklist) dialog box (similar to Figure 6-66).
- (2) Click on the Evaluator Instructions or Student Instructions command button. The memo text box (similar to Figure 6-67) opens.
 - (a) Edit the text for Evaluator Instructions or Student Instructions.
 - (b) Click on **Save**. This returns you to the Test Item Maintenance for LO dialog box (Figure 6-63).
- (3) Referring to Table 6-126 for an explanation of the data fields, edit the information as needed.
- (4) Click on **Save**. The system returns you to the Learning Objective Test Items for LO. When you click on **Done**, a message advises you to reprint the LOW for this learning objective if changes to test items have been made. Click on **OK** to return to the Learning Objective Maintenance selection list box.

6.3.4.9.3 **Delete**

This command allows you to delete the selected test item from the TLO or ELO appearing in the title bar.

Table 6-130 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-130. Access to Delete Test Items

COMMAND BUTTON		WORKING	APPROVED	SUBMITTED
Test Items - Delete	*Only if the corresponding LO in the Approved version does not have test items.	Yes*	No	No

1. From the Learning Objective Test Items for LO selection list box (Figure 6-63), highlight the test item you wish to delete by clicking on it.
2. Click on **Delete**. A message appears to confirm your wish to delete this test item.
3. Click on **Yes**. MCAIMS deletes the record and returns you to the Learning Objective Test Items for LO selection list box. Note that the test items are not renumbered.
4. When you click on **Done**, a message advises you to reprint the LOW for this learning objective if changes to test items have been made. Click on OK to return to the Learning Objective Maintenance selection list box.

6.3.4.9.4 **Copy**

This command allows you to copy test item(s) from any other course to which you have access on the same MCAIMS for Windows installation/server. Copied test items are given unique test item IDs within the current course. When you copy a test item created in another course, you may modify it as necessary to match your learning objective.

Table 6-131 summarizes the availability of this command based on course status. If available, continue with the following steps.

Table 6-131. Access to Copy Test Items

COMMAND BUTTON		WORKING	APPROVED	SUBMITTED
Test Items - Copy	*Only if the corresponding LO in the Approved version does not have test items.	Yes*	No	No

1. From the Learning Objective Test Items for LO selection list box (Figure 6-63), click on **Copy**. The Select Courses from Which to Copy Test Items dialog box (Figure 6-70) opens.

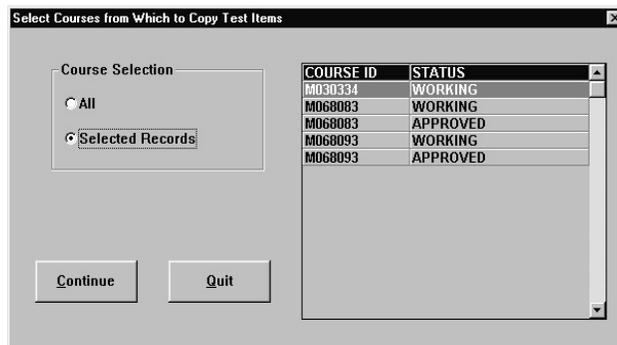


Figure 6-70. Select Courses From Which to Copy Test Items

2. Referring to Table 6-132 for an explanation of the data fields, click on the appropriate radio button.

Table 6-132. Select Courses to Copy Test Items From

ITEM	DESCRIPTION
Course Selection	
All	Clicking on this radio button selects every course in the selection list box.
Selected Records	This default radio button allows you to use the multiple select feature to select courses from which to copy test items.
Course ID	Non-editable field displaying the unique code for each course represented in this list.
Status	Working, Locally Approved, or Submitted

3. Click on **Continue**. A message appears to advise you to stand by while the system is loading test items. Then the Select From Available Test Items selection list box (Figure 6-71) opens.

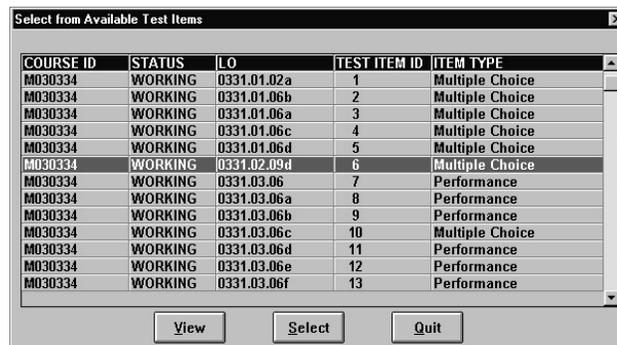


Figure 6-71. Select From Available Test Items

4. Referring to Table 6-133 for an explanation of the data fields, select the test items you desire.

Table 6-133. Select From Available Test Items

ITEM	DESCRIPTION
Course ID	Non-editable field displaying the course associated with a given test item.
Status	Working, Locally Approved, or Submitted
LO	Non-editable field displaying the TLO or ELO designator associated with the given test item.
Test Item ID	Non-editable field displaying the unique designator for a given test item.
Item Type	Non-editable field depicting the type of test item (Multiple Choice, True-False, Performance, or Practical App).

5. Preview each potential test item to determine if it is a test item you want to copy.
 - a. Click on the desired test item.
 - b. Click on **View**. When you have finished previewing the test item, click on **Return** to return to the Select From Available Test Items selection list box.
6. Using the multiple select feature, mark the test item(s) you wish to copy.

7. Click on **Select**. MCAIMS returns you to the Learning Objective Test Items for LO selection list box. Note that you may now edit any newly copied test items to ensure they match the current learning objective.

6.3.4.9.5 **View**

This command allows you to view a selected test item. The comprehensive report covers all information entered for this test item (i.e., question, possible answers, correct answer, reference, date last modified, and by whom modified). This command is available from every status (Working, Approved, And Submitted).

1. From the Learning Objective Test Items for LO selection list box (Figure 6-63), highlight the desired test item by clicking on it.
2. Click on **View**. A view of the report appears.