

# Users' Guide R-Type Item (EMQ) Writing Wizard for PCs

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Developed with the support of the University Grants Committee,  
Hong Kong Government

**Users' Guide**  
**R-type Item (EMQ) Writing Wizard for PCs**

**International Database for Enhanced Assessments and Learning**

**C. Hazlett, S. Yip, G. Choy, J Ware**  
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## Preface

Development of the R-type Item Writing Wizard was made possible with the support of a Teaching Development Grant (TDG) from The Chinese University of Hong Kong (CUHK) and the Hong Kong government's University Grants Commission (UGC).

The concept and design for an R-type item writing wizard was developed by J Ware and C Hazlett by adapting Case and Swanson's<sup>1</sup> item writing templates to an interactive, computer-based environment. We gratefully acknowledge that some initial themes and many of the lead-in questions in the virtual templates are based on the centennial work by Case and Swanson and that the National Board of Medical Examiners has kindly permitted their use by the IDEAL Consortium.

An important feature of the wizard is its capability to add additional disciplines or systems, topics, themes and lead-in questions. As a user adds these, the wizard's capability as an item writing aid increases, enabling the user to be increasingly efficient in developing well constructed R-type items (i.e., items that measure higher cognitive skills).

Although the wizard's initial disciplines, themes, topics and lead-in questions are suited for use in a medical education programme, users from other disciplines can also tailor the entries to reflect their respective fields of study. Thus, the wizard's use is widely generalizable.

Based on the research associated with its development, one will find that both students and teaching staff are equally capable in using this wizard. Having both groups use the wizard will enable a school to rapidly build high quality formative and summative assessment banks. In achieving the latter, students will have more opportunity for self learning and teaching staff will be able to more effectively direct desired student learning with the use of high quality assessments.

The system design and programming for the R-type Item Writing Wizard for PCs and for the Intranet were done by S. Yip and G. Choy. Related manuals were written by C. Hazlett and G. Choy. Suggestions for improving the wizard or this manual are welcome. Email the IDEAL Coordination Centre at [secretariat@hkwebmed.org](mailto:secretariat@hkwebmed.org)

TDG Principal and Co-Investigators

H.K. Ng, C.B. Hazlett, J. Ware, E.A. Nelson, S.M. Kumta, P.S.B. Lai

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<sup>1</sup> Case S.M. & Swanson D.B. (2001). *Constructing written test questions for the basic and clinical sciences*. Philadelphia: National Board of Medical Examiners.

# **Users' Guide for the R-Type Wizard on PCs**

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# Chapter 1

## Introduction

### 1.1 Background

The format of R-type items (also referred to as Extended Matching Questions [EMQ])<sup>2</sup> is suited to assessing medical students' scientific & clinical reasoning capabilities. However, often basic medical science teachers have difficulty assessing their students' reasoning abilities within a clinically relevant context. In addition, both basic and clinical science teachers often complain that composing a well developed R-type item is difficult and time-consuming.

This item writing wizard, a MS Word macro, was developed to assist teachers to generate quality R-type items more easily & quickly.

### 1.2 The Wizard's Components for an R-type Item

- Discipline (or System)
- Topic
- Theme
- Options (any number from 3 to 26)
- Lead-in Question
- One or more vignettes (scientific or clinical scenarios for which the candidate must select one option as the best answer for each vignette)

### 1.3 Minimal Requirements for the Wizard

The PC version for this wizard requires that MS Word 97 or later is installed on the same computer. Option sets are stored in text file labeled ROptionSet.txt

The Intranet version for this wizard requires a server with IDEAL Intranet software installed. The user can easily upload any composed items to IDEAL's formative bank if the non-restricted bank is also kept on the same server. A users' guide for the Intranet wizard is available.

### 1.4 Manual's Organization

This manual addresses how to (i) install the wizard (Chapter Two), (ii) use the wizard to quickly create R-type items (Chapter Three), (iii) expand the wizard's capability as a writing aid (Chapter Four), and (iv) access the wizard's within-program files and guidelines (Chapter Five).

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<sup>2</sup> Throughout this manual, the term 'R-type item' is used in lieu of 'extended matching question' although these terms are synonymous.

## Chapter 2

### Getting Started

#### 2.1 Installing the Wizard on a PC

Open Internet Explorer and download the R-type Item Writing Wizard for a PC at the following URL:

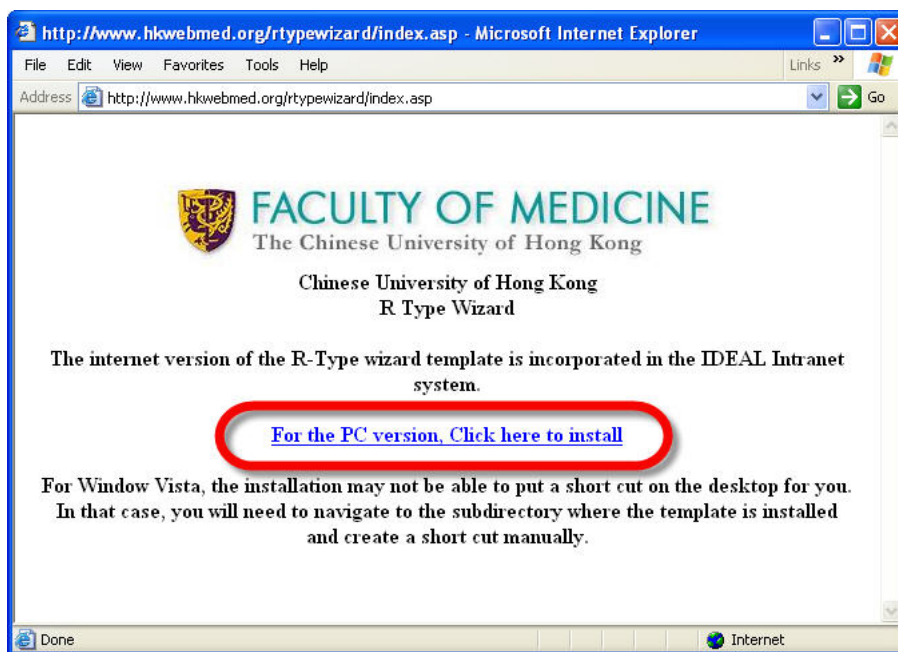
<http://www.hkwebmed.org/rtypeWizard/>

The program is free and accessible for any teaching staff or students in the Faculty of Medicine at the Chinese University of Hong Kong. It is also freely available for staff and students in any medical school that is a member of the IDEAL Consortium. Please contact your school's Item Bank Administrator for the school's current password.

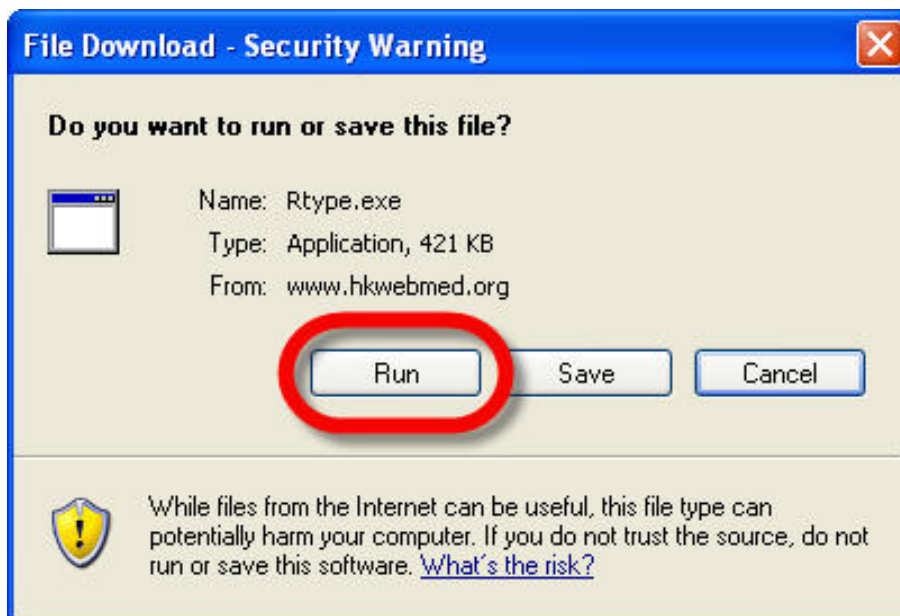


To install the wizard, follow steps 1 -7, as described and illustrated below.

1. After navigating to the previously noted URL, click on the link 'For the PC version, Click here to install' (see following illustration).



2. Click the button 'Run'.





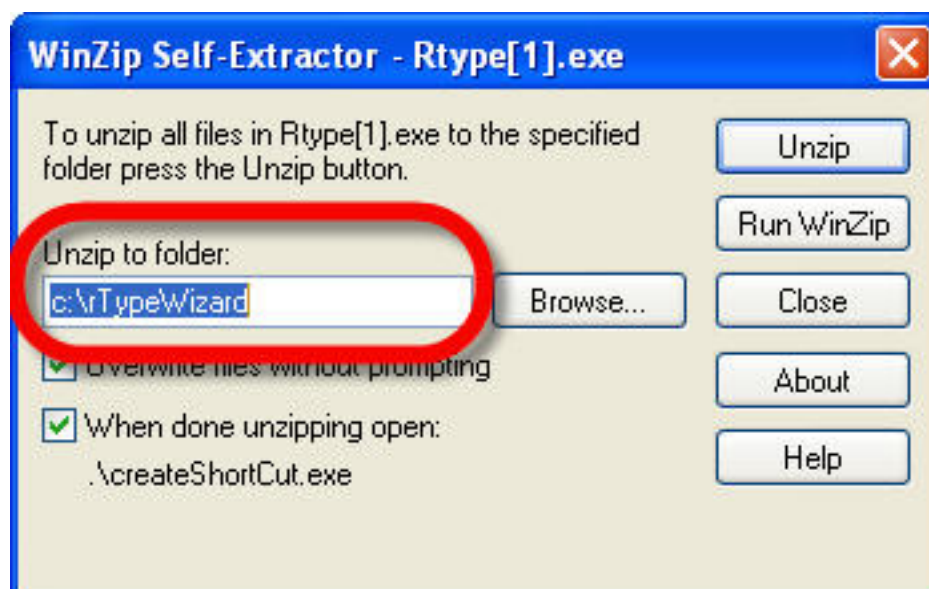
3. An Internet Explorer security warning message will appear. The software is safe to install. Click 'Run' to continue.



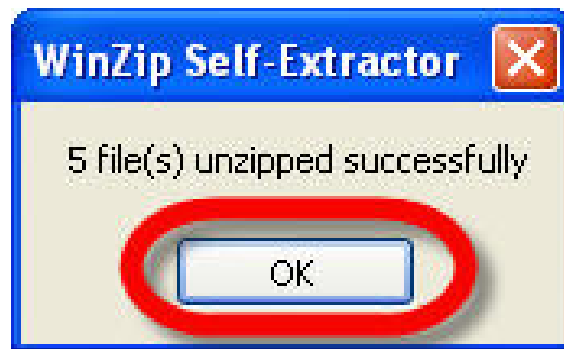
4. Click the button 'OK' to unzip the downloaded file.



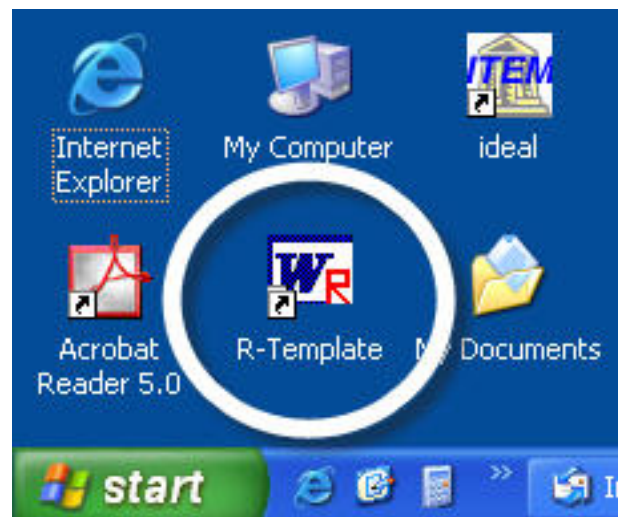
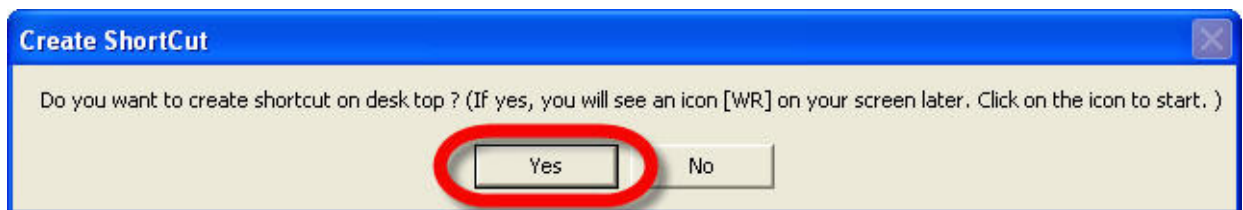
5. Specify a directory on the PC where you want to save the wizard's program files.



6. Click 'OK' after the files have been unzipped successfully.



7. To create a shortcut for the R-type wizard on the desktop, click 'Yes'.



The wizard's icon will be identical to the above illustration.

## 2.2 Launching the R-type Wizard for PCs

1. Double click the wizard's icon on the desktop.



2. A R-type item writing wizard will be displayed on top of a new MS Word document (as illustrated below).

**R-Type Wizard**

Input R-Type Item(s) | Input/Edit Option Set(s) | Concise User Guide

**Discipline/Panel:**  **Start with Item no:**  **Options: ID**

**Topic:**

**Theme:**

**Load Option set: ID**

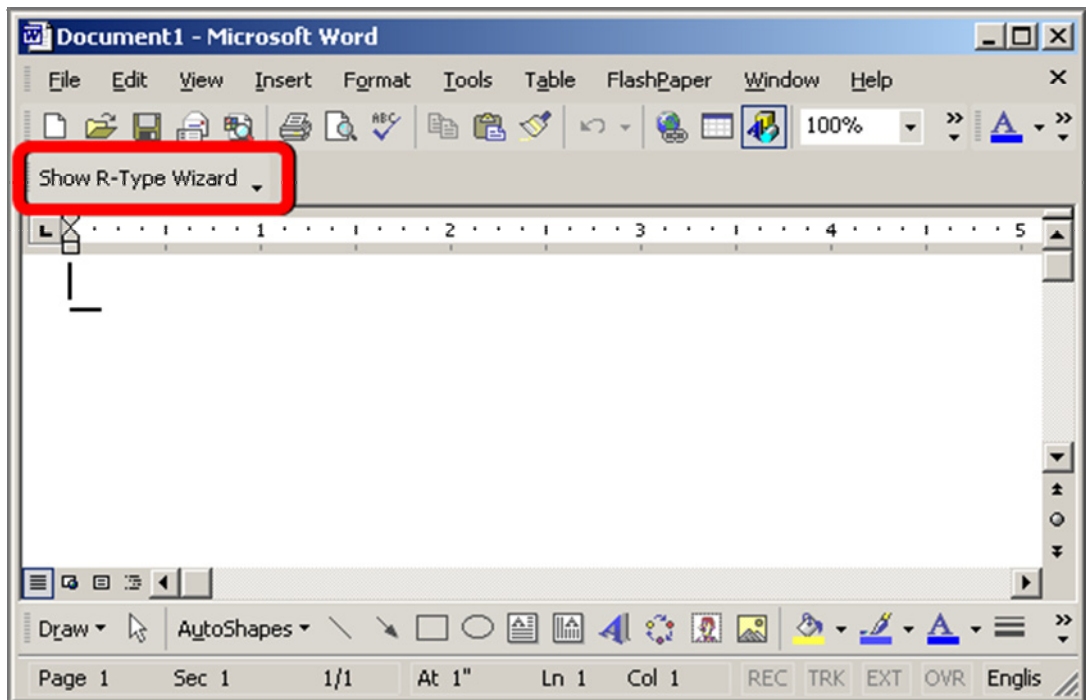
**Lead-In:**  **Copy: CTRL C** **Paste: CTRL V** **Get LeadIn Template**

**Scenario:** **Answer(s):**  **Add Scenario**

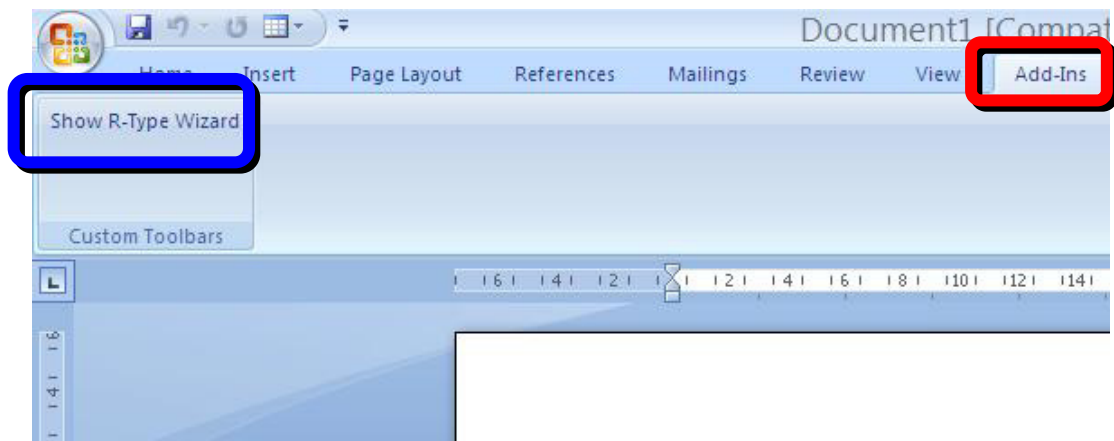
**FeedBack for Students:**

**Reset** **Export and Continue** **Export and Exit** **Exit**

3. Subsequently, the user may also launch the wizard from within MS Word by clicking the button 'Show R-Type Wizard'. If the version of Word on the PC is Word-97, -XP or -2003, the button will appear as illustrated below.



4. If MS Word 2007 is installed, the 'Show R-type Wizard' button will be accessible in the 'Add-Ins' section. Click the 'Add-Ins' tab on the top ribbon of Word 2007 in order to access the button.



The 'Show R-type Wizard' button will remain accessible until MS Word is closed (at which time the wizard is also closed). When MS Word is re-opened, the button will not appear until the user re-launches the wizard by clicking the wizard's icon on the desktop (as described on the previous page).

## Chapter 3

### Using the Wizard to Compose Items

#### 3.1 Creating an R-type Item

The wizard has three tabs that are located in the upper left window. Ensure the 'Input R-type Item(s)' has been selected.

Under Discipline/Panel<sup>3</sup>, select from the drop down menu, a relevant discipline or system (e.g., Paediatrics). Similarly, select a Topic (e.g., fever) and a Theme (e.g., rash) from their respective drop down lists.

As you select a particular theme, a list of relevant options will appear in the 'Options' text box (located immediately to the right). This list of options will have an associated ID (the illustrated example has 270 as its ID). If more than one option set is available (for a particular Discipline-Topic-Theme combination), a list of IDs will be displayed. Highlight each ID to view the various option sets. To select one of the option sets, highlight the corresponding ID.

**R-Type Wizard**

Input R-Type Item(s) | Input/Edit Option Set(s) | Concise User Guide

**Discipline/Panel:** Item no: 1  
Paediatrics

**Topic:**  
Fever

**Theme:**  
Rash

**Options: ID 270**  
Theme: Rash

- A. Hand foot mouth disease
- B. Infectious mononucleosis
- C. Kawasaki
- D. Measles
- E. Meningococcal septicaemia
- F. Roseola infantum
- G. Rubella
- H. Scarlet fever
- I. Slapped cheek disease
- J. Varicella-zoster

Load Option set: ID  max:270

**Lead-In:**  Copy: CTRL C Paste: CTRL V

**Scenario:** Answer(s):

**FeedBack for Students:**

<sup>3</sup> The term panel refers to system, module or any other term that a school may use, in lieu of discipline, as the organizational unit for delivering its curriculum

The next step is to identify a suitable lead-in question.

Click the button 'Get Lead-In Template' and select a relevant question from the available list stored in the wizard. Appropriate lead-in questions for both basic and clinical science are provided. If an appropriate question is not presently listed, compose the question, typing in the open text box located to the immediate left of the template button and under the label 'Lead-In:'

**R-Type Wizard**

Input R-Type Item(s) | Input/Edit Option Set(s) | Concise User Guide

**Discipline/Panel:** Paediatrics

**Topic:** Fever

**Theme:** Rash

**Options: ID** 270

Theme: Rash

- A. Hand foot mouth disease
- B. Infectious mononucleosis
- C. Kawasaki
- D. Measles
- E. Meningococcal septicaemia
- F. Roseola infantum
- G. Rubella
- H. Scarlet fever
- I. Slapped cheek disease
- J. Varicella-zoster

**Lead-In:** For each patients, what is the most likely diagnosis?

Copy: CTRL C Paste: CTRL V

**Get LeadIn Template**

**Scenario:** Answer(s): A B C

**Feedback for Students:**

Reset Export and Continue Export and Exit Exit

**Get LeadIn**

**Discipline:** Not specified

**LeadIn Template (select from the following):**

- For each of the following [1/2..n] patients,
- In each of the following [1/2..n] scenarios,
- select the [ ] that is most likely to be [ ].
- select the [ ] that would be expected.
- select the most likely [ ].
- select the [ ] that should be administered.
- select the most likely diagnosis.**
- select the most appropriate next step in patient care
- select the most appropriate diagnostic study.

Select Back



In the second last open text box in the window, (under the label 'Scenario'), compose a relevant, appropriate scientific or clinical scenario. The user will have encountered numerous relevant and useful clinical cases or scientific problems during his/her own work experience. Draw on these experiences to develop a relevant short story.

This short story, (i.e., vignette) is typed into the open text box, or copied & pasted from MS NotePad, Excel or numerous other software programs *with the exception of MS Word*. An example vignette is illustrated below.

*Two yr-old boy is brought to clinic complaining of generalized rash & fever for 1 day. Rash initially appeared on face & trunk then spread to limbs. Intensity of rash in axilla & groin region has increased recently. Skin feels like sand-paper & there is also circumoral pallor. Throat is congested & examination is otherwise uneventful.*

**R-Type Wizard**

Input R-Type Item(s) | Input/Edit Option Set(s) | Concise User Guide

**Discipline/Panel:** Paediatrics

**Topic:** Fever

**Theme:** Rash

**Options: ID** 270

Theme: Rash

- A. Hand foot mouth disease
- B. Infectious mononucleosis
- C. Kawasaki
- D. Measles
- E. Meningococcal septicaemia
- F. Roseola infantum
- G. Rubella
- H. Scarlet fever
- I. Slapped cheek disease
- J. Varicella-zoster

**Load Option set: ID** [ ] max:270

**Lead-In:** For each patients, what is the most likely diagnosis? **Copy: CTRL C Paste: CTRL V** **Get LeadIn Template**

**Scenario:** Answer(s): A B C **Add Scenario**

Two yr-old boy is brought to clinic complaining of generalized rash & fever for 1 day. Rash initially appeared on face & trunk then spread to limbs. Intensity of rash in axilla & groin region has recently increased. Skin feels like sand-paper & there is also circumoral pallor. Throat is congested & examination is otherwise uneventful.

**FeedBack for Students:** [ ]

**Reset** **Export and Continue** **Export and Exit** **Exit**

Specify the option that is the correct answer to the lead-in question for this scenario by selecting the relevant letter from the drop down list (see illustration).

**R-Type Wizard**

Input R-Type Item(s) | Input/Edit Option Set(s) | Concise User Guide

**Start with Item no:** 1

**Discipline/Panel:** Paediatrics

**Topic:** Fever

**Theme:** Rash

**Options: ID** 270

Theme: Rash

- A. Hand foot mouth disease
- B. Infectious mononucleosis
- C. Kawasaki
- D. Measles
- E. Meningococcal septicaemia
- F. Roseola infantum
- G. Rubella
- H. Scarlet fever
- I. Slapped cheek disease
- J. Varicella-zoster

**Load Option set: ID**  max:270

**Lead-In:** For each patients, what is the most likely diagnosis? Copy: CTRL C Paste: CTRL V Get LeadIn Template

**Scenario:** Answer(s): G  
H  
I Add Scenario

Two yr-old boy is brought to clinic complaining of generalized rash & fever for 1 day. Rash initially appeared on face & trunk then spread to limbs. Intensity of rash in axilla & groin region has recently increased. Skin feels like sand-paper & there is also circumoral pallor. Throat is congested & examination is otherwise uneventful.

**FeedBack for Students:**

Reset Export and Continue Export and Exit Exit



The item will be more educationally useful if relevant feedback is provided for candidates to read (or used by the instructor in discussions with the students) after the assessment has been taken and marked.

The feedback should include, when appropriate, information applicable to the vignette generally and feedback that is tailored for each option. A candidate can then be provided with the type of feedback that matches the vignette and the option that the candidate chose as an answer. Without this, the item will have limited use as a formative learning resource and will unlikely be stored in the school's item bank.

If you intend to create only one scenario for this particular R-type item, click either the 'Export and Continue' (i.e., continue developing new items) or the 'Export and Exit' button (i.e., exit the wizard and display the developed item(s) in MS Word).

If, however, you want to create another vignette for this same option set, click the button 'Add Scenario' (see the outlined button at the lower right hand side in the above illustrated window). The first scenario will be kept, not lost, even though the scenario text box will clear so that you can type in a second scenario.

Assume that you want to add a second scenario. A scenario that is applicable for the same illustrated option set is:

*Six yr-old girl, who has had cold & fever for 3 days, is sent home from school because she is feeling so poorly. Later in the same day she develops a maculopapular rash on her face & trunk. She does not want to get out of bed, preferring the bedroom curtains to be closed. On examination, there is grayish spot on the mucous membrane of her mouth.*

To incorporate this second vignette (i) click 'Add Scenario' (to store the first scenario and clear the text box), (ii) type the above text into the 'Scenario' open text box, and (iii) specify the correct answer for this second scenario.

**R-Type Wizard**

Input R-Type Item(s) | Input/Edit Option Set(s) | Concise User Guide

**Discipline/Panel:** Paediatrics

**Topic:** Fever

**Theme:** Rash

**Options: ID 270**

- A. Hand foot mouth disease
- B. Infectious mononucleosis
- C. Kawasaki
- D. Measles
- E. Meningococcal septicaemia
- F. Roseola infantum
- G. Rubella
- H. Scarlet fever
- I. Slapped cheek disease
- J. Varicella-zoster

**Lead-In:** For each patients, what is the most likely diagnosis?

**Scenario: 2 of 2** Answer(s): G, H, I

**Add Scenario**

**FeedBack for Students:**

- A. Painful vesicular lesions on the hands, feet, mouth and tongue.
- B. Rash only occur in 5% of patient infected by the Ebstein Barr Virus, usually after ampicillin/amoxicillin is given.

**Buttons:** Reset, Export and Continue, Export and Exit, Exit

(iv) If one's intention is to also enter a third scenario, click the button 'Add Scenario'. In a similar manner, the second scenario will be kept and the scenario box will clear so that you can type in the third vignette.

If, however, you are finished entering all the scenarios for this particular R-type item, do not click the 'Add Scenario' button and instead click either the 'Export and Continue' or the 'Export and Exit' button.

When the user clicks the 'Add Scenario' button, the sequential position for the scenario will be specified by the wizard (e.g., 2 of 2).

The screenshot shows the 'R-Type Wizard' window with the following elements:

- Discipline/Panel:** Paediatrics
- Topic:** Fever
- Theme:** Rash
- Options:** ID 270. A list of options is displayed: A. Hand foot mouth disease, B. Infectious mononucleosis, C. Kawasaki, D. Measles, E. Meningococcal septicaemia, F. Roseola infantum, G. Rubella, H. Scarlet fever, I. Slapped cheek disease, J. Varicella-zoster.
- Lead-In:** For each patients, what is the most likely diagnosis?
- Scenario:** 2 of 2. A dropdown menu shows 'Answer(s):' with options C, D, and E. 'D' is selected.
- Feedback for Students:** A text box containing:
  - A. Painful vesicular lesions on the hands, feet, mouth and tongue.
  - B. Rash only occur in 5% of patient infected by the Ebstein Barr Virus, usually after ampicillin/amoxicillin is given.
- Buttons:** Load Option set: ID, Copy: CTRL C, Paste: CTRL V, Get LeadIn Template, Remove Scenario, Add Scenario, Reset, Export and Continue, Export and Exit, Exit.

The feedback that you provided for the first scenario will be automatically included with all subsequent scenarios for this set of options. This feedback for a second and subsequent scenario may require modification as not all information is similarly applicable.

To modify the feedback, place the cursor in the 'Feedback for Students' text box and type in the revisions for the general feedback as well as any of the tailored feedback for each option.

There is no technical limit to the number of vignettes that you may develop for a given option set.

For example, a third scenario is illustrated below.

*One yr-old boy is admitted to the A&E department due to high fever & generalized rash. His mother claims that the boy was still playful a few hours ago & his condition has deteriorated very quickly. On examination, the rash is non-blanching , irregular in size, with a necrotic centre.*

As before, click 'Add Scenario', type the third scenario into the 'Scenario' open text box and then identify its correct answer. Click the 'Export and Continue' button if you intend to develop further but different R-type items (i.e., those for a different discipline, topic, theme and/or option set); the wizard will refresh and you can begin the process of selecting a new discipline/topic/theme and/or option set.

Alternatively, click the 'Export and Exit' button if you are now finished generating items. The wizard will close and all R-type items that were just developed will be displayed in MS Word.

If you click the 'Exit' button, the wizard will close. Items created up to the last time that you clicked the 'Export and Continue' button will be displayed in MS Word.

### 3.2 Editing a Draft Scenario

To modify any scenario, click '<' (i.e., back button) or '>' (i.e., forward button) and navigate to the appropriate section in the scenario & edit its text within the wizard.

Click the 'Remove Scenario' button if you wish to delete the entire scenario that is being currently displayed in the window.

**R-Type Wizard**

Input R-Type Item(s) | Input/Edit Option Set(s) | Concise User Guide

**Start with Item no:** 1

**Options: ID** 270

**Discipline/Panel:** Paediatrics

**Topic:** Fever

**Theme:** Rash

**Theme: Rash**

- A. Hand foot mouth disease
- B. Infectious mononucleosis
- C. Kawasaki
- D. Measles
- E. Meningococcal septicaemia
- F. Roseola infantum
- G. Rubella
- H. Scarlet fever
- I. Slapped cheek disease
- J. Varicella-zoster

**Load Option set: ID** [ ] max:270

**Lead-In:** For each patients, what is the most likely diagnosis?

**Copy: CTRL C Paste: CTRL V**

**Get LeadIn Template**

**Scenario: 3 of 3** Answer(s): D E F

**< > Remove Scenario Add Scenario**

One yr-old boy is admitted to the A&E department due to high fever & generalized rash. His mother claims that the boy was still playful a few hours ago & his condition has deteriorated very quickly. On examination, the rash is non-blanching, irregular in size, with a necrotic centre.

**FeedBack for Students:**

- A. Painful vesicular lesions on the hands, feet, mouth and tongue.
- B. Rash only occur in 5% of patient infected by the Ebstein Barr Virus, usually after ampicillin/amoxicillin is given.

**Reset Export and Continue Export and Exit Exit**

If you are in MS Word but wish to return to the wizard in order to create more R-type items, you can do so by clicking the R-type wizard button in MS Word's menu bar (provided that you have not, in the interim, closed MS Word since launching the wizard). Upon returning to the wizard, you can continue to generate further items following the steps already described. These new items will be accumulated with those previously developed.

If, however, you do not wish to have these new items accumulated and saved in the same MS Word file, click the button 'Reset' (see illustration) before creating the new items.

Note that whenever MS Word is closed, the wizard also is closed. Thus, when MS Word is re-opened, one needs to double click the wizard's icon on the desktop in order to re-launch the wizard.

**R-Type Wizard**

Input R-Type Item(s) | Input/Edit Option Set(s) | Concise User Guide

**Discipline/Panel:** Paediatrics

**Topic:** Fever

**Theme:** Rash

**Options: ID** 270

Theme: Rash

- A. Hand foot mouth disease
- B. Infectious mononucleosis
- C. Kawasaki
- D. Measles
- E. Meningococcal septicaemia
- F. Roseola infantum
- G. Rubella
- H. Scarlet fever
- I. Slapped cheek disease
- J. Varicella-zoster

**Load Option set: ID** [ ] max:270

**Lead-In:** For each patients, what is the most likely diagnosis? Copy: CTRL C Paste: CTRL V Get LeadIn Template

**Scenario:** 3 of 3 **Answer(s):** D E F < > Remove Scenario Add Scenario

One yr-old boy is admitted to the A&E department due to high fever & generalized rash. His mother claims that the boy was still playful a few hours ago & his condition has deteriorated very quickly. On examination, the rash is non-blanching, irregular in size, with a necrotic centre.

**FeedBack for Students:** A. Painful vesicular lesions on the hands, feet, mouth and tongue.  
B. Rash only occur in 5% of patient infected by the Ebstein Barr Virus, usually after ampicillin/amoxicillin is given.

**Reset** **Export and Continue** **Export and Exit** **Exit**



### 3.3 Reviewing Items in MS Word

As already discussed, after one clicks the 'Export and Exit' button, the generated items will be displayed in a MS Word document. Click 'View' in Word's menu bar and select 'Print Layout'. The Word file will refresh displaying the correctly formatted R-type item(s). An example output is illustrated below.

Reference the following options for Questions: 1 – 3

Theme: Rash

- A. Hand foot mouth disease
- B. Infectious mononucleosis
- C. Kawasaki
- D. Measles
- E. Meningococcal septicaemia
- F. Roseola infantum
- G. Rubella
- H. Scarlet fever
- I. Slapped cheek disease
- J. Varicella-zoster

For each patients, what is the most likely diagnosis?

**Question: 1** Answer:H

Two yr-old boy is brought to clinic complaining of generalized rash & fever for 1 day. Rash initially appeared on face & trunk then spread to limbs. Intensity of rash in axilla & groin region has recently increased. Skin feels like sand-paper & there is also circumoral pallor. Throat is congested & examination is otherwise uneventful.

Feedback:

- A. Painful vesicular lesions on the hands, feet, mouth and tongue.
- B. Rash only occur in 5% of patient infected by the Epstein Barr Virus, usually after ampicillin/amoxicillin is given.
- C. The patient may have conjunctivitis, red cracked lip, strawberry tongue, cervical lymph node, and indurative edema of the palm.

You can, if needed, edit this document using MS Word. When this is done, save the document in Word: click 'File' in Word's menu bar, then 'Save As' and assign a file name (or click on the MS symbol for Office 2007 in the upper left corner of the window and similarly save this document).

## Chapter 4

### Increase the Wizard's Capability

Users can add additional option sets or options within option sets. Users can also incorporate additional themes, topics and/or disciplines and systems. These additions increase the wizard's usefulness as an item writing aid.

#### 4.1 Adding an Option Set

If an appropriate set of options is not presently available in the wizard, compose the set and add it by following the steps as described in this section.

1. Click the Tab 'Input/Edit Option Set(s)'.

**R-Type Wizard**

Input R-Type Item | **Input/Edit Option Set(s)** | Concise User Guide

**Add/Edit Classifier**

Discipline/Panel:

Topic:

Theme:

**Add New/Edit Option Set**

max:270

**Classifiers:**

Discipline:

Topic:

Theme:

Edit:

Add Option:



2. Under the label 'Classifiers', select from the respective drop down menus a relevant Discipline or System, a Topic and a Theme.

The screenshot shows the 'R-Type Wizard' application window. It has a blue title bar and a tabbed interface with three tabs: 'Input R-Type Item(s)', 'Input/Edit Option Set(s)', and 'Concise User Guide'. The 'Input/Edit Option Set(s)' tab is active.

The interface is divided into two main sections. The top section is titled 'Add/Edit Classifier' and contains three input fields: 'Discipline/Panel:', 'Topic:', and 'Theme:'. Each field has a text input area and a dropdown arrow. To the right of these fields are six buttons: 'Add Discipline/Panel', 'Edit Discipline/Panel', 'Add Topic', 'Edit Topic', 'Add Theme', and 'Edit Theme'.

The bottom section is titled 'Add New/Edit Option Set'. It contains a 'Load Option set: ID' field with a text input and a 'max:270' label. To the right are 'Show all Deleted Sets' and 'Delete Set' buttons. Below these is a large empty text area. To the right of this area is a red-bordered box labeled 'Classifiers:'. Inside this box are three dropdown menus: 'Discipline:' (selected: Paediatrics), 'Topic:' (selected: Signs), and 'Theme:' (selected: Chest Pain). Below the 'Classifiers' box are 'Update' and 'Remove' buttons. At the bottom of the 'Add New/Edit Option Set' section are 'Add' and 'Sort' buttons. Below this section are 'Create New Option Set' and 'Reset' buttons.

At the very bottom of the window are three buttons: 'Save Changes Permanently', 'Create File on all option sets', and 'Exit'.

3. Now create a new set of options by typing each of the options in the 'Add Option' text box (i.e., in the highlighted text box at the bottom in the following illustration).

Type one option and then click the button 'Add' (located immediately to the right of this text box). Continue this two step process for each of the remaining options in the set.

As you enter the options, they will be displayed in the larger text box which is highlighted in the middle left of the following illustration..

**R-Type Wizard**

Input R-Type Item(s) | Input/Edit Option Set(s) | Concise User Guide

**Add/Edit Classifier**

Discipline/Panel:

Topic:

Theme:

**Add New/Edit Option Set**

Load Option set: ID

Classifiers:

- A. Asthma
- B. Costochondritis (Tietze Syndrome)

Discipline:

Topic:

Theme:

Add Option:

Assume, for example, a new option set (for the Discipline of Paediatrics, with the Topic of 'Signs' and with the Theme of 'Chest Pain') was as follows.

Asthma  
 Costochondritis (Tietze Syndrome)  
 Conversion Disorder  
 Esophagitis  
 Foreign Body  
 Myocarditis  
 Muscle strain  
 Pericarditis  
 Pneumonia  
 Pneumothorax  
 Precordial Catch Syndrome  
 Supraventricular Tachycardia

- After each option in this set has been typed and added, click the 'Create New Option Set' button (highlighted in the following illustration). The above 12 options will be added and treated as a common group by the wizard.

The wizard's total number of option sets will be appropriately increased. In the illustrated example, the number 270 indicates that this example is the 270<sup>th</sup> option set that is now stored in the wizard.

The screenshot shows the 'R-Type Wizard' window with the following components:

- Input R-Type Item(s)** tab selected.
- Add/Edit Classifier** section:
  - Discipline/Panel: [Empty text box]
  - Topic: [Empty text box]
  - Theme: [Empty text box]
  - Buttons: Add Discipline/Panel, Edit Discipline/Panel, Add Tonic, Edit Tonic, Add Theme, Edit Theme.
- Add New/Edit Option Set** section:
  - Load Option set: ID [Empty text box] (max:270)
  - Show all Deleted Sets [Button]
  - Delete Set [Button]
  - Classifiers:
    - Discipline: Paediatrics [Dropdown]
    - Topic: Signs [Dropdown]
    - Theme: Chest Pain [Dropdown]
  - Edit: [Dropdown] [Empty text box] [Update] [Remove]
  - Add Option: [Empty text box] [Add] [Sort]
  - Create New Option Set** [Button - highlighted with a red circle]
  - Reset [Button]
- Bottom Bar**:
  - Save Changes Permanently [Button]
  - Create File on all option sets [Button]
  - Exit [Button]

5. A message will confirm that the new option set has been added. Click 'Ok'.



6. To keep any changes for use in the future, you must also click the button 'Save Changes Permanently'.

Click 'OK' to continue.

## 4.2 Adding an additional option to an existing set of options

If you only want to add one or more options to an existing option set, follow these steps.

1. Click the top tab 'Input/Edit Option Set(s)'.
2. Under the label 'Add New/Edit Option Set', enter the ID of the relevant option set in the open text box and click the button 'Load Option Set ID'.

The relevant set of options will appear in the open text box immediately below.

The screenshot shows the 'R-Type Wizard' window with the 'Input/Edit Option Set(s)' tab selected. The 'Load Option set: ID' field is highlighted with a red circle, and the 'Add New/Edit Option Set' section is also highlighted with a red circle. The interface includes various input fields for Discipline, Panel, Topic, and Theme, as well as buttons for adding, editing, and deleting options.

**Input R-Type Item(s)** | **Input/Edit Option Set(s)** | Concise User Guide

**Add/Edit Classifier**

Discipline/ Panel:

Topic:

Theme:

**Add New/Edit Option Set**

**Load Option set: ID**

**Classifiers:**

Discipline:

Topic:

Theme:

**Edit:**

**Add Option:**

3. Using the 'Add Option' text box (see illustrated window), first type in the additional option, and then secondly, click the button 'Add'.
4. Continue this two step process for each additional option that you want to include.

The screenshot shows the 'R-Type Wizard' window with the 'Input/Edit Option Set(s)' tab selected. The window is divided into two main sections: 'Add/Edit Classifier' and 'Add New/Edit Option Set'.

**Add/Edit Classifier:**

- Discipline/Panel:** Two empty text boxes.
- Topic:** Two empty text boxes.
- Theme:** Two empty text boxes.
- Buttons:** 'Add Discipline/Panel', 'Edit Discipline/Panel', 'Add Tonic', 'Edit Tonic', 'Add Theme', 'Edit Theme'.

**Add New/Edit Option Set:**

- Load Option set: ID:** A text box containing 'ID: 2' and a 'max:271' label.
- Show all Deleted Sets:** A button.
- Delete Set:** A button.
- Classifiers:** A section with three dropdown menus: 'Discipline:' (set to 'Medicine'), 'Topic:' (set to 'Symptoms'), and 'Theme:' (set to 'Abdominal pain').
- Edit:** A dropdown menu.
- Update:** A button.
- Remove:** A button.
- Add Option:** A text box containing 'Munchausen's syndrome', which is highlighted with a red circle.
- Add:** A button next to the 'Add Option' text box.
- Sort:** A button.
- Save Changes:** A button.
- Create New Option Set:** A button.
- Reset:** A button.
- Save Changes Permanently:** A button.
- Create File on all option sets:** A button.
- Exit:** A button.

5. A button 'Save Changes' will appear in the lower left of the window. Click this button. In order to keep the new options for use in the future, you also must click the button 'Save Changes Permanently'.

The screenshot shows the 'R-Type Wizard' window with three tabs: 'Input R-Type Item(s)', 'Input/Edit Option Set(s)', and 'Concise User Guide'. The 'Input/Edit Option Set(s)' tab is active.

**Add/Edit Classifier**

Discipline/Panel: [Text Field] [Add Discipline/Panel] [Edit Discipline/Panel]  
Topic: [Text Field] [Add Topic] [Edit Topic]  
Theme: [Text Field] [Add Theme] [Edit Theme]

**Add New/Edit Option Set**

Load Option set: ID [Text Field] max:271 [Show all Deleted Sets] [Delete Set]  
ID: 2  
A. Appendicitis  
B. Carcinoma of the bowel  
C. Carcinoma of the pancreas  
D. Chronic cholecystitis  
E. Chronic pancreatitis  
F. Cystitis  
G. Diverticulities  
H. Duodenal ulcer  
Discipline: [Text Field]  
Topic: [Text Field]  
Theme: [Text Field]  
Edit: [Text Field] [Update] [Remove]  
Add Option: [Text Field] [Add] [Sort]  
[Save Changes] [Create New Option Set] [Reset]  
[Save Changes Permanently] [Create File on all option sets] [Exit]

### 4.3 Editing an option within an existing set of options

1. To modify a particular option within an existing set of options, first retrieve the relevant option set by entering its ID (as previously described in section 4.2).
2. Click on and highlight the particular option within the option text box that you wish to edit (see illustration). Alternatively, select the option's letter from the drop down list next to the label 'Edit' (see illustration). The relevant option will be displayed in the text box immediately to the right. The option that you have just identified now can be edited.

The screenshot shows the 'R-Type Wizard' window with the following components:

- Input R-Type Item(s) | Input/Edit Option Set(s) | Concise User Guide**
- Add/Edit Classifier**
  - Discipline/Panel: [Text Box] [Add Discipline/Panel] [Edit Discipline/Panel]
  - Topic: [Text Box] [Add Topic] [Edit Topic]
  - Theme: [Text Box] [Add Theme] [Edit Theme]
- Add New/Edit Option Set**
  - Load Option set: ID [Text Box] [max:271] [Show all Deleted Sets] [Delete Set]
  - ID: 1
  - Classifiers:
    - Discipline: [Text Box]
    - Topic: [Text Box]
    - Theme: [Text Box]
  - Options List:
    - A. Angiotensin-converting enzyme (ACE) inhibitor medication
    - B. Asthma
    - C. Cardiac failure
    - D. Inhaled foreign body
    - E. Middle ear disease
    - F. Oesophageal reflux
    - G. Psychogenic
    - H. Pulmonary embolism
  - Classifiers:
    - Discipline: [Text Box]
    - Topic: [Text Box]
    - Theme: [Text Box]
  - Buttons: [Update] [Remove] [Add] [Sort]
  - Buttons: [Create New Option Set] [Reset]
  - Buttons: [Save Changes Permanently] [Create File on all option sets] [Exit]

3. Make any modifications to the option in the open text box. Save the changes by clicking the 'Save Changes Permanently' button.



#### 4.4 Removing an option from an existing option set

1. To remove an option from an existing option set, retrieve the set of options by identifying the ID for the option set (as previously described steps in section 4.2).
2. Highlight the option in the option set text box that you want to remove (or select the appropriate letter for this option from the drop down list next to the label 'Edit'). The option that you wish to remove will be displayed in the second last text box (this text box is located to the right of the label 'Edit').
3. Click the button 'Remove' (on the far right) and the selected option will be deleted. To save this change, follow the steps for saving changes (as previously described in section 4.2).

The screenshot shows the 'R-Type Wizard' application window. It has a blue title bar and a menu bar with 'Input R-Type Item(s)', 'Input/Edit Option Set(s)', and 'Concise User Guide'. The main area is divided into two sections: 'Add/Edit Classifier' and 'Add New/Edit Option Set'.

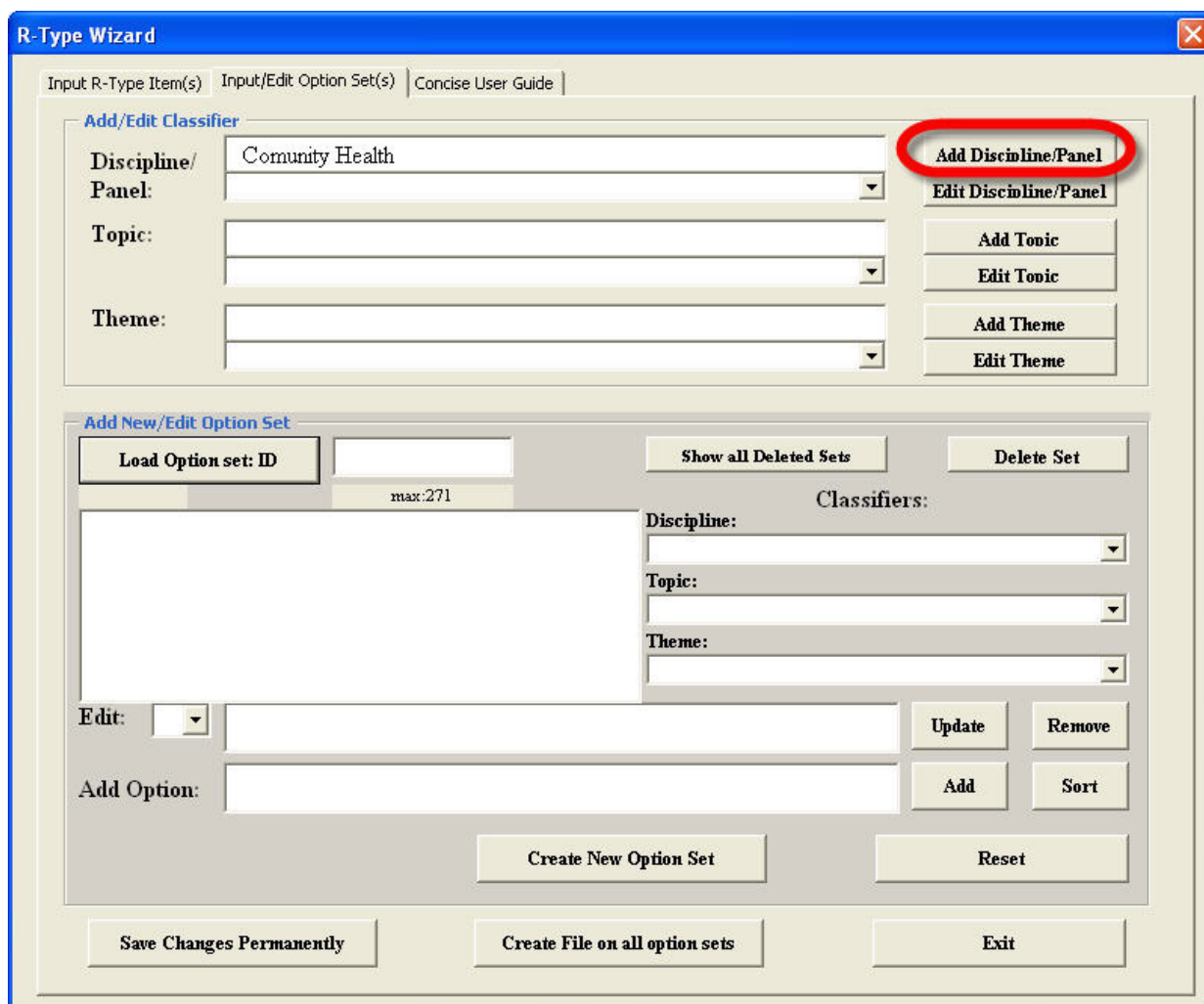
**Add/Edit Classifier:** This section contains input fields for 'Discipline/Panel:', 'Topic:', and 'Theme:', each with a corresponding dropdown menu. To the right of these fields are buttons for 'Add Discipline/Panel', 'Edit Discipline/Panel', 'Add Topic', 'Edit Topic', 'Add Theme', and 'Edit Theme'.

**Add New/Edit Option Set:** This section includes a 'Load Option set: ID' field with a 'max:271' limit. Below it is a list of medical conditions: D. Chronic cholecystitis, E. Chronic pancreatitis, F. Cystitis, G. Diverticulities, H. Duodenal ulcer, I. Gastric ulcer, J. Irritable bowel syndrome (highlighted), and K. Munchausen's syndrome. To the right of this list are 'Discipline:', 'Topic:', and 'Theme:' dropdown menus. Below the list is an 'Edit:' dropdown menu showing 'J' and a text box containing 'Irritable bowel syndrome'. To the right of this text box are 'Update' and 'Remove' buttons. The 'Remove' button is circled in red. Below the 'Edit' section is an 'Add Option:' text box with 'Add' and 'Sort' buttons. At the bottom of the window are three large buttons: 'Save Changes', 'Create New Option Set', and 'Reset'. At the very bottom are three more buttons: 'Save Changes Permanently', 'Create File on all option sets', and 'Exit'.

## 4.5 Adding / Editing Disciplines/System, Topics and/or Themes

The user can add additional sets of Disciplines or Systems, Topics, and/or Themes in the wizard by following these steps.

1. Type in a new discipline or system in the relevant text box and click the button 'Add Discipline/System'.



The screenshot shows the 'R-Type Wizard' dialog box. The 'Add/Edit Classifier' section is active. It contains three text boxes: 'Discipline/Panel' (with 'Community Health' entered), 'Topic', and 'Theme'. To the right of these text boxes are buttons: 'Add Discipline/Panel' (highlighted with a red circle), 'Edit Discipline/Panel', 'Add Tonic', 'Edit Tonic', 'Add Theme', and 'Edit Theme'. Below this section is the 'Add New/Edit Option Set' section, which includes a 'Load Option set: ID' field, a 'max:271' label, a 'Show all Deleted Sets' button, and a 'Delete Set' button. There are also 'Discipline:', 'Topic:', and 'Theme:' dropdowns. At the bottom of the dialog are buttons for 'Save Changes Permanently', 'Create File on all option sets', and 'Exit'.

2. A message will confirm that the new discipline has been added to the wizard's list of disciplines and systems. Click 'Ok' to continue.



3. To edit an existing discipline, select one of the listed disciplines or systems in the drop down list & click the button 'Edit Discipline/Panel'.

**R-Type Wizard**

Input R-Type Item(s) | Input/Edit Option Set(s) | Concise User Guide

**Add/Edit Classifier**

Discipline/Panel: [Dropdown]  
Topic: [Dropdown]  
Theme: [Dropdown]

**Add Discipline/Panel**  
**Edit Discipline/Panel**  
Add Tonic  
Edit Tonic  
Add Theme  
Edit Theme

**Add New/Edit Option Set**

Load Option set: ID [Text Box] max:271  
Show all Deleted Sets  
Delete Set

Classifiers:  
Discipline: [Dropdown]  
Topic: [Dropdown]  
Theme: [Dropdown]

Edit: [Dropdown] [Text Box] Update Remove  
Add Option: [Text Box] Add Sort

Create New Option Set Reset

Save Changes Permanently Create File on all option sets Exit

4. A pop-up window will appear (see illustration below).

Enter the modification in this pop-up text box. Click the button 'Confirm Exit' in order to save the modification. To ignore or cancel this change, click the button 'Exit'

**Edit**

Edit Discipline value: Community Health

New Value:  
Community Health

**Confirm Exit** Exit

5. A message will confirm that your modification has been accepted by the Wizard.



6. Follow a similar process to add new or to edit Topics and/or Themes.

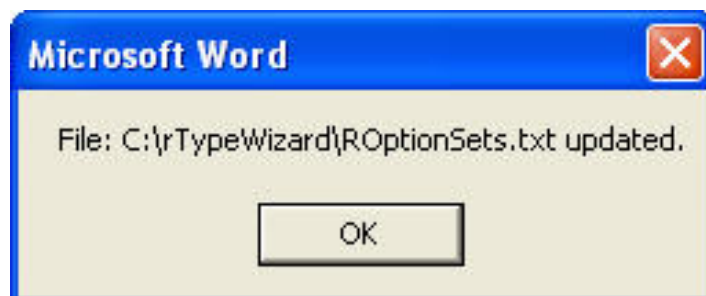
Note that after any option (or discipline or system, topic and/or theme) has been permanently saved, that entry cannot be subsequently deleted. However, as already described, any entry which has been permanently saved can be edited (modified).

Click 'OK' to continue.

7. To ensure that any and all of the changes remain available for future use, you must click the button 'Save Changes Permanently'.

The screenshot shows the 'R-Type Wizard' dialog box with the 'Input/Edit Option Set(s)' tab selected. The 'Add/Edit Classifier' section contains fields for Discipline/Panel, Topic, and Theme, each with an 'Add' and 'Edit' button. The 'Add New/Edit Option Set' section includes a 'Load Option set: ID' field, a 'Show all Deleted Sets' button, a 'Delete Set' button, and a 'Classifiers' section with Discipline, Topic, and Theme dropdowns. Below these are 'Edit', 'Update', 'Remove', 'Add', and 'Sort' buttons. At the bottom, the 'Save Changes Permanently' button is circled in red, along with 'Create New Option Set', 'Create File on all option sets', and 'Reset' buttons.

8. Whenever you have clicked the 'Save Change Permanently' button, the following message should appear to confirm that the newly entered or modified Discipline or System, Topic and/or Theme is/are permanently saved. Click 'OK' to continue.

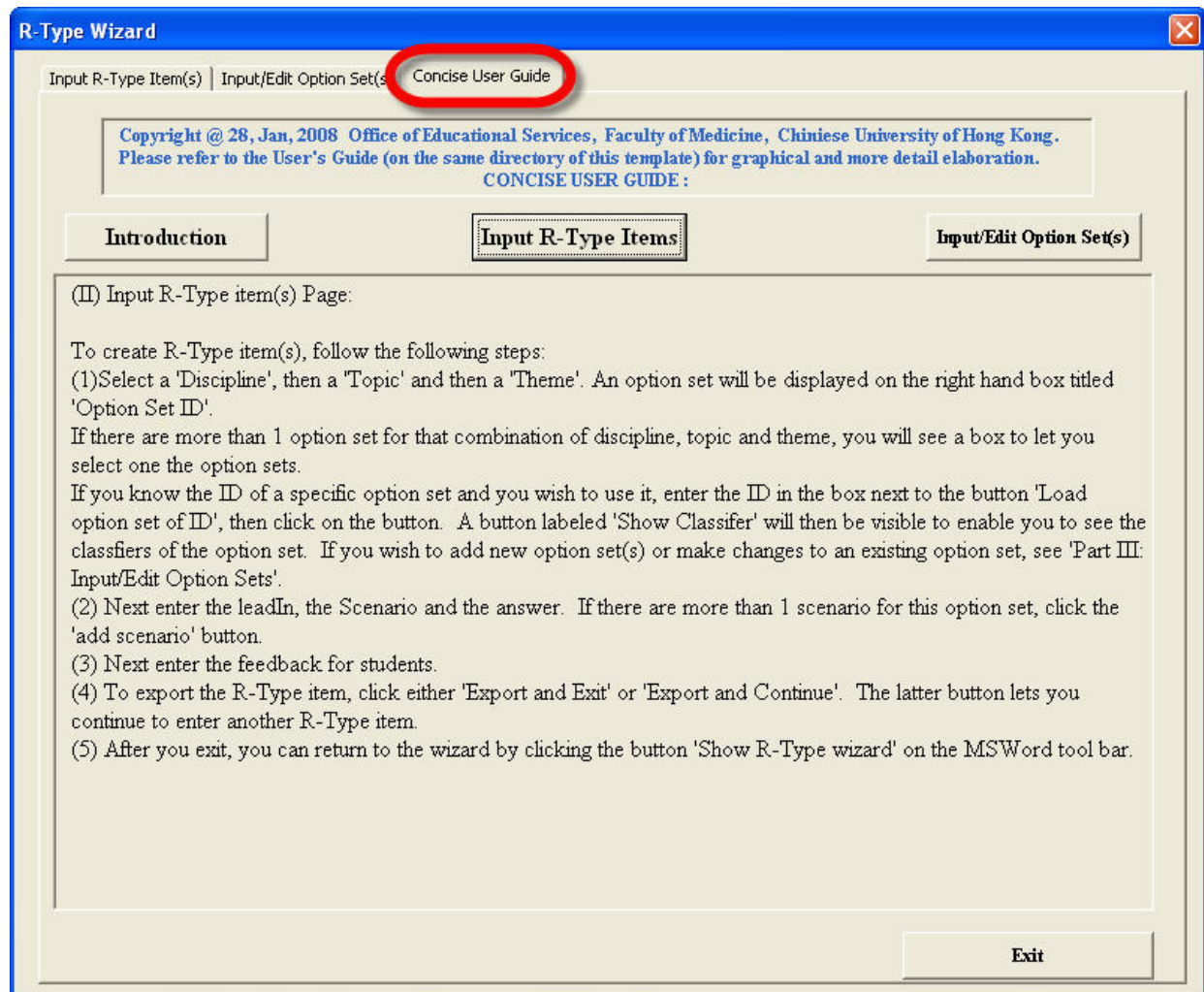


## Chapter 5

### Accessing Help Menu, User's Guide and Option Lists

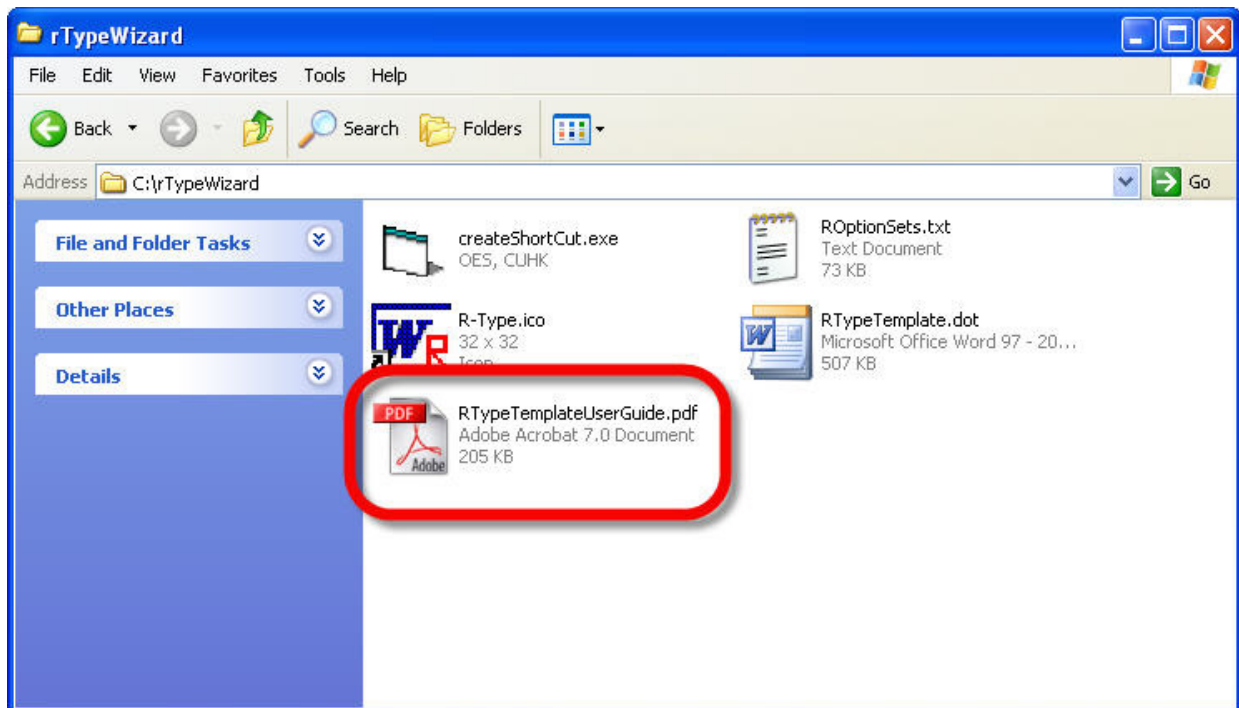
#### 5.1 On-line User's Guide

A concise user guide can be accessed by selecting the third tab at the top of the wizard.



## 5.2 Additional Copies of Guide

This User Guide, in PDF format, is also available in the R-type Item Writing Wizard folder.



You may print this pdf file in order to produce additional copies of this manual.



### 5.3 Review All Stored Option Sets

The user can examine all the option sets that are presently stored in the wizard. In order to do this, follow these steps.

1. Select 'Input/Edit Option Set(s)' tab.
2. Click the 'Create File for All Option Sets' button (located at the bottom of the window).

The screenshot shows the 'R-Type Wizard' window with the 'Input/Edit Option Set(s)' tab selected. The 'Load Option set: ID' field is set to 270. The 'Classifiers' section shows Discipline: Paediatrics, Topic: Fever, and Theme: Rash. The 'Create File on all option sets' button is highlighted with a red circle.

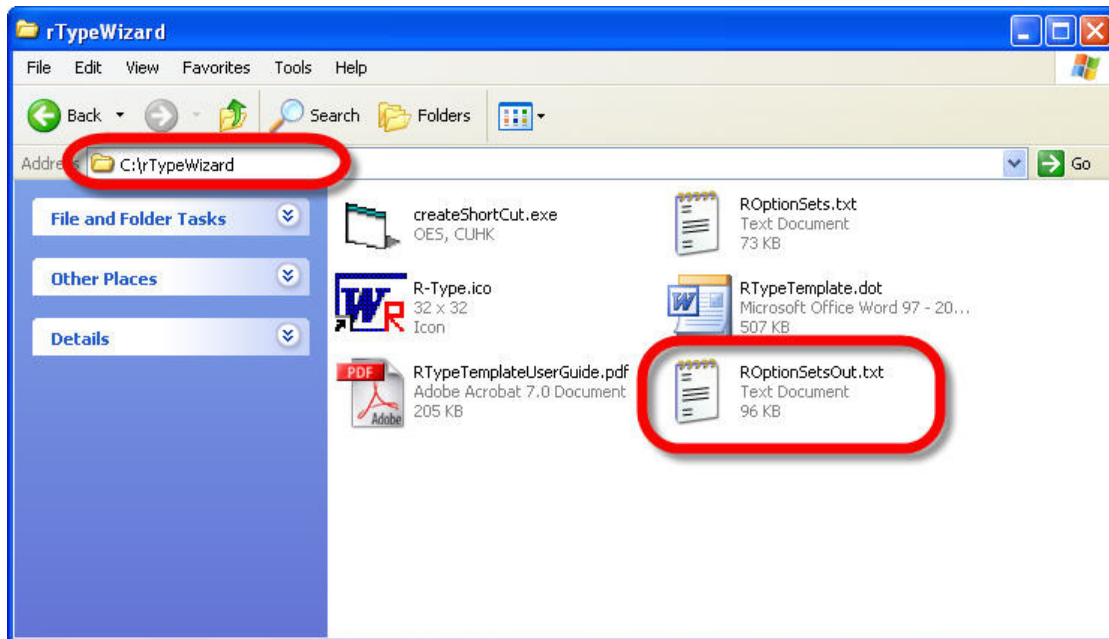
3. A message will confirm that a text file, containing all the wizard's option sets, has been created. Click 'OK' to continue.



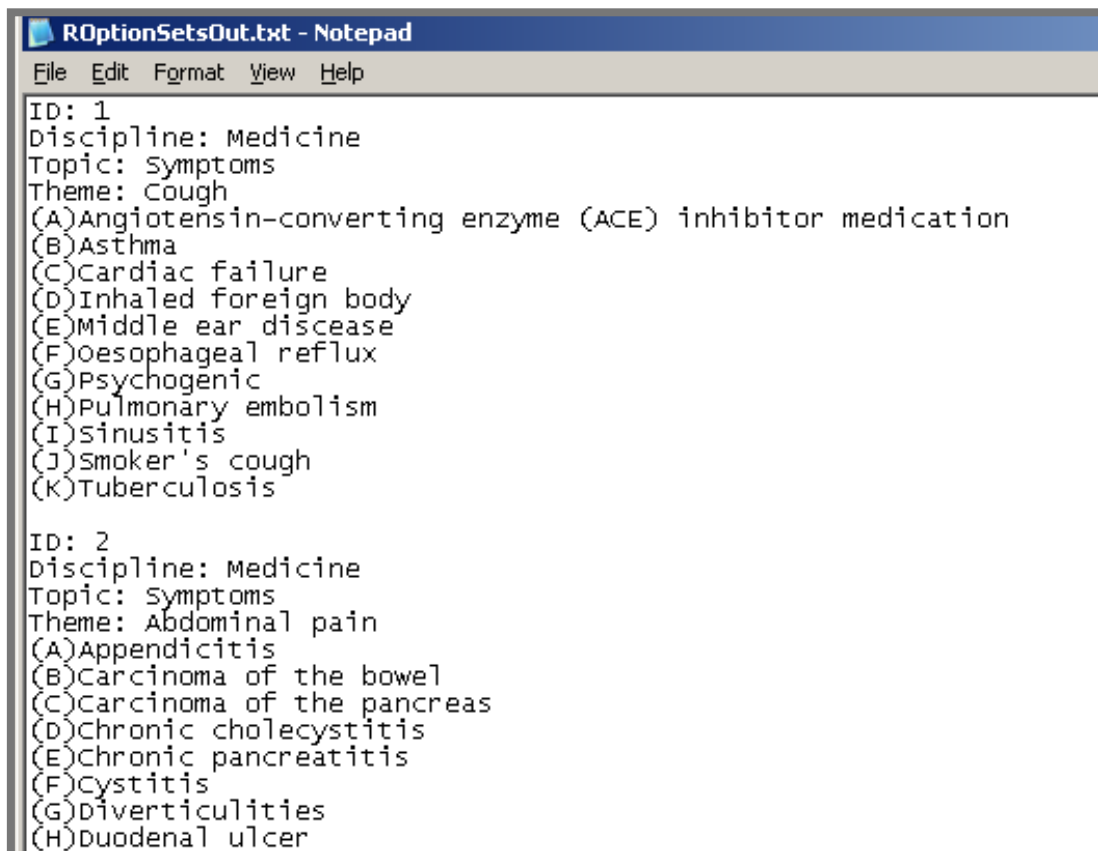


To read the text file containing all the option lists:

1. navigate to the R-Type Wizard directory on the PC,
2. double click the file 'ROptionSetsOut.txt', and



3. all options set stored in the wizard will be displayed in MS Notepad.



You can print this text by selecting 'File', then 'Print' in the Notepad's menu bar.



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