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Japanese manual is written by Uehara, Eigo; English manual is edited by Hiroki YAHARA with support of Peter SURANYI.

## 1. What is dbook?

dbook is a tool for developing digital textbooks. Digital textbooks can be created by importing existing textbooks as image files. Furthermore, interactive drawing tools can be embedded in the digital textbooks. The textbook data together with the drawing tools can be used interactively in classrooms.

The following section explains how to prepare the data for creating a digital textbook. Section 3 describes the functions of the dbook program. Finally, section 4 shows a typical flow for creating a digital textbook.

## 2. Before using dbook

Most existing textbooks are paper-based. The creation of a digital textbook generally starts with the scanning of the paper textbook. The quality of scanned textbooks can be greatly enhanced by cutting the textbooks into pages before scanning.

### Cutting the textbook

Scanning a textbook as it is often causes the scanned image to be shaded and skewed (lower left figure). Therefore, the preferred method of scanning textbooks is to cut each page and scan them separately (lower right figure).



## Scanning the textbook

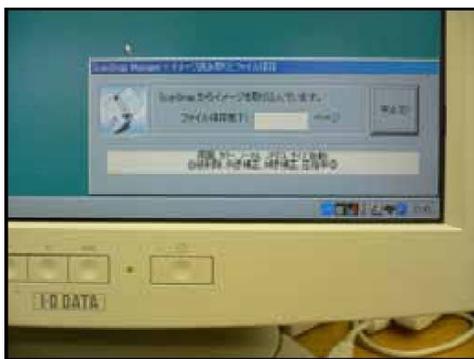
This is an example of how to scan a textbook. This example uses the ScanSnap scanner. Please consult the manual for your scanner for detailed usage information.

First, create a new folder on your desktop. After that, set this folder as the default folder for saving scanned images. Make sure that the images are saved as color images.

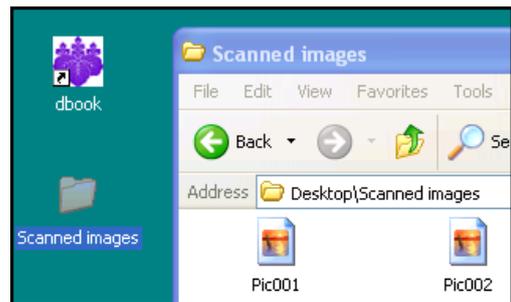


Place the pages of the textbook into the scanner. When scanning a large number of pages, split them into multiple passes.

After that, push the “SCAN” button.



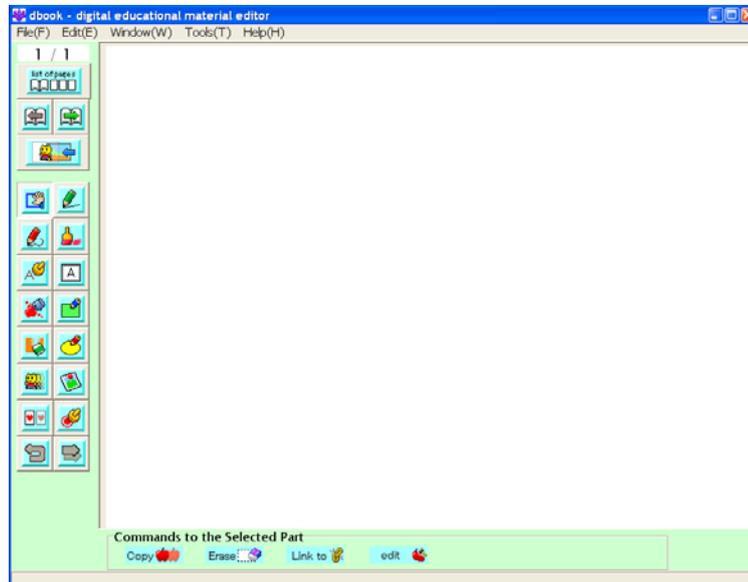
The progress of scanning is displayed at the bottom right of the computer screen.



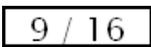
The images that have been scanned appear in the folder that you had created.

### 3. How to use dbook

Start dbook by double-clicking on its icon. The dbook editor window opens.



The menu bar is shown at the top of the window. Buttons for drawing tools are shown at the left side. Options for the currently selected tool are shown at the bottom. This section describes the usage of each tool as well as some menu items.



This shows that the ninth out of 16 pages is being displayed.



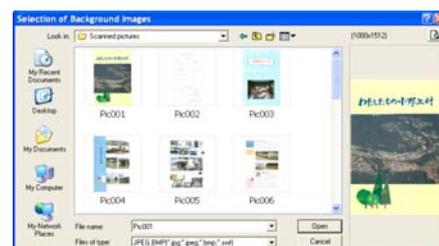
Display a list of all pages. Use this to navigate between, rearrange, or delete pages.



Move to the previous page (←) or the next page (→).



Load background images. After clicking on this icon, you can choose the file to open in a dialog box.



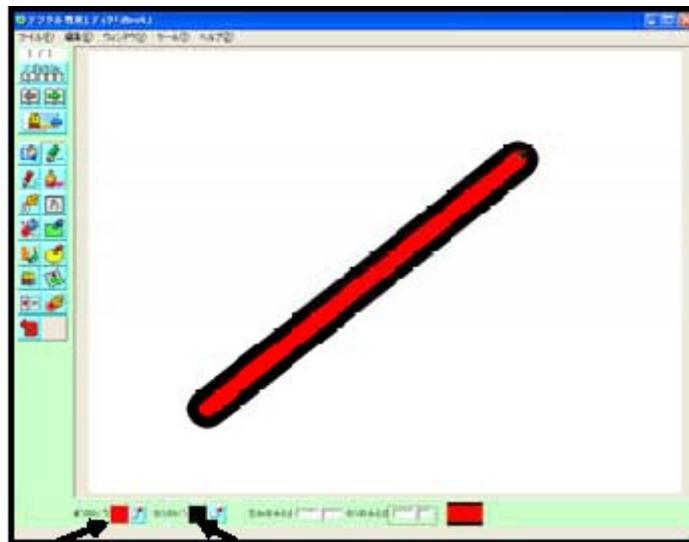


Specify a range and do any of the following:

- (1) Copy
- (2) Erase
- (3) Link to
- (4) Edit



Draw a straight line. "Color" sets the color for the central part of the line. "Color of Border" shows the color off the border of the line. Use the slide bars to change the thickness of each.



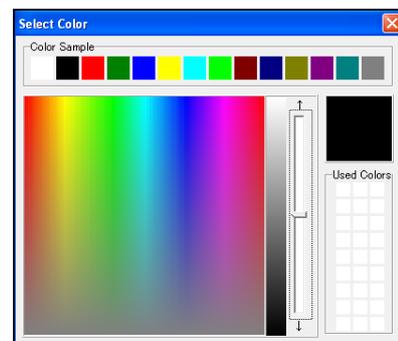
Click here to open the dialog box for changing "Color."

Click here to open the dialog box for changing "Color of Border."

This is the dialog box for choosing colors.

You can either select a color from "Color Sample," or adjust the brightness using the slide bar and choose a color from the color pane at the bottom left.

The same color selection dialog box is used in other tools as well.

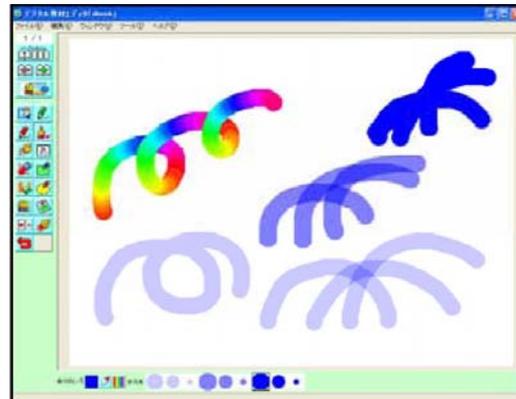




Draw a curve. Colors can be selected the same way as with straight lines.



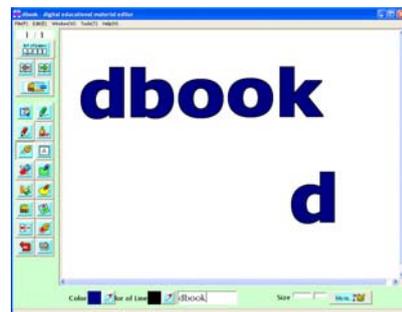
Draw a bold line. Thickness and transparency can be adjusted between three levels. You can also draw rainbow-colored lines.



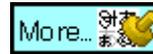
Write letters.

Initially, the input box at the bottom has “letters,” and the mouse cursor has the shape of the character “l.” The characters can be changed by editing the contents of the input box at the bottom of the window. In the initial state, each character in the input is stamped once.

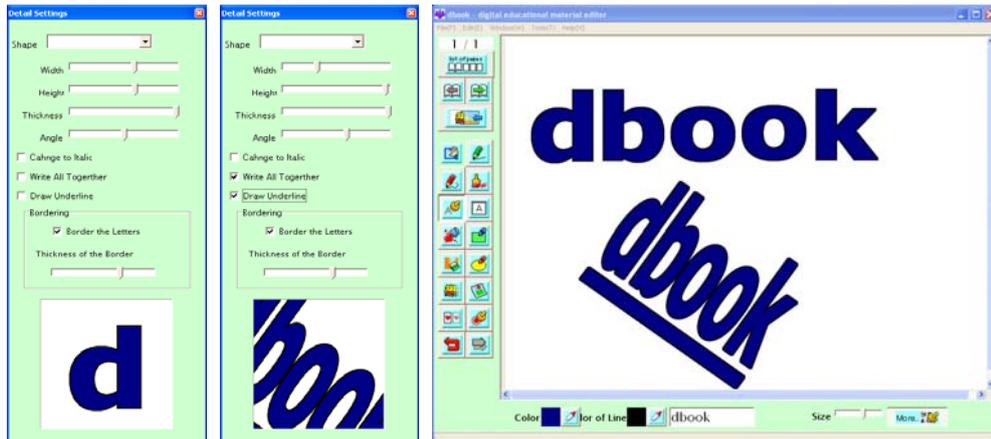
In this example, the input was changed to “dbook,” and each character was stamped once. The choosing of the color for the characters is done in the same way as with straight lines. The size of the characters can be adjusted using the slide bar. When all the characters have been stamped, the first character is used again.



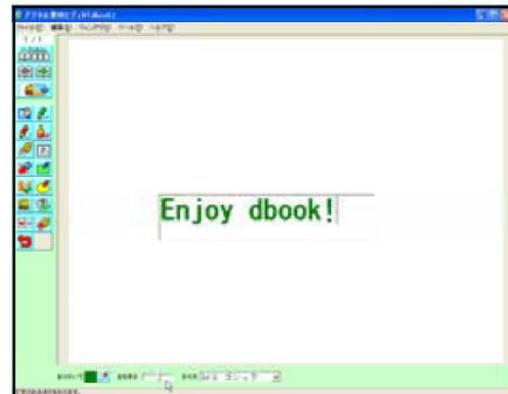
Click on the “More...” button for detailed settings.



Figures below show the default settings, an example of modified settings and the results with each set of settings.



Write text. This tool functions as a text box. You can place the box on top of a picture. It is also possible to move or edit the text after it has been placed. However, you cannot draw lines over the text box. The box is enlarged automatically to accommodate for longer texts.



The color selected at the bottom of the screen is used for writing the characters. You can change the size of the characters using the slide bar titled size. It is also possible to change the font. These settings are applied to the entire text box; it is not possible to change the colors and sizes of individual letters. Use the ENTER key to enter multiple lines.

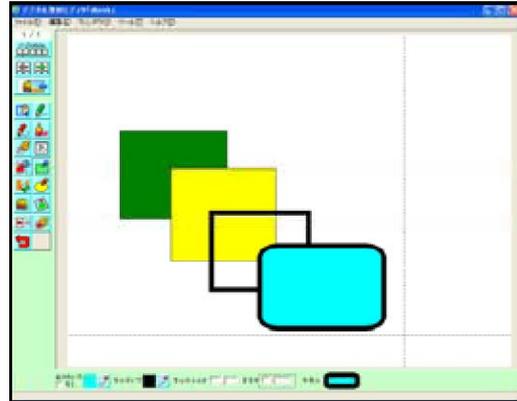


Paint. The area pointed to by the central part of the crosshair cursor “+” is painted. Choosing of the color is done the same way as with other tools.

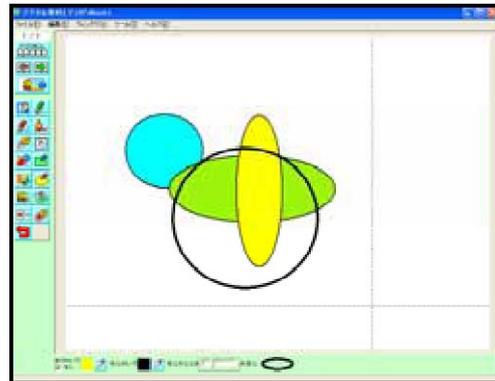


Draw rectangles. Specify two opposing corners of the rectangle by dragging. You can also change the paint color and the color of the edges.

To draw an unfilled rectangle, click on the check box “transparent” on the bottom left of the screen. To undo this operation, click on the check box again. You can also adjust the width of the edges and the roundness of the corners using slide bars.



Draw circles and ovals. The usage of this tool is similar to that of the rectangle tool.



Eraser. You can choose from different shapes before using the eraser. You can also erase the entire screen at once by clicking on “Erase all.”



Insert an animation file or Flash data (SWF file). Thumbnails of files are displayed. Choose the one to insert.





Drag and drop the object to move it. To resize the object, drag the square □ at the bottom right.

You can verify Flash animations by clicking on “ save digital textbook)” and opening it in a browser or FlashPlayer.

As in the case of textboxes, it is not possible to draw lines over animations. Also, in the dbook editor, transparent parts of the animation are shown opaque. However, when you use “save digital textbook” and open the file in a browser or FlashPlayer, the background can be seen behind the transparent parts.

Use drag and drop to add animation data. To delete an animation, right click on its thumbnail and choose “delete.” Animation data is saved in the “anim” folder which is located under the “work” folder within the “dbook” folder.

A single layer of folders can be used within the “anim” folder. Image (JPEG, BMP) and Flash data can be used as animations. The resolution of the original image is retained, so the image remains clear even when the page is magnified.

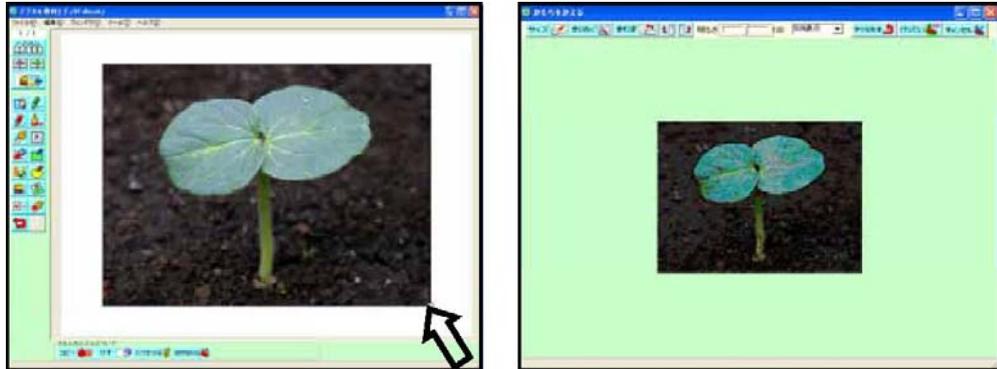


Add an image. A thumbnail is displayed that can be selected. The addition and deletion of images is done as in the case of animations.

Lines and text can be drawn over images. Images are put on the drawing layer, so they appear beneath text and animations.



Images can be moved using drag and drop until their locations are fixed. To resize an image, drag the white square  at the bottom right corner. You can also trim, turn, and change the brightness of an image by clicking on “Edit.”



Copy objects. Copying places the object on the clipboard. You can select and paste objects from the clipboard.

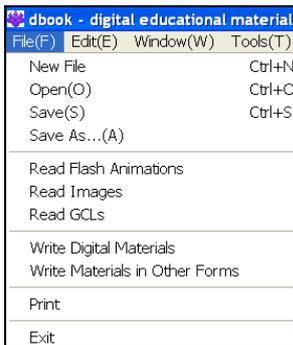
When a range is not specified, the entire screen is copied. You can clear the clipboard by clicking on clear.



Stamp using a picture file (JPEG, BMP). Choose the picture to use as a stamp from the list of thumbnails. Addition and deletion is done in the same manner as with animations.

The “Size” slide bar adjusts the size of the stamp. “Transparent” changes the background of the image to transparent. The color in the top left corner is used for the background color. Use the slide bar “angle” to rotate the image. Selecting “Upside Down” and “Reverse left and right sides” flip the image vertically and horizontally, respectively.





*Read GCLs:* GCL files are stored in the “xml” folder within the “dbook” folder. Selecting the menu item displays a list of thumbnails for the GCL files. When you click on a thumbnail, the object is placed in the same manner as with animations.

Use GCL Editor to create original GCL files.

*Write Digital Materials:* If the materials have not been saved yet, a dialog box is opened to save them with a new file name. When saving the textbook, a folder is created with the same name. The folder holds the data for the digital materials.

A list of templates for saving is displayed. Choose the one to use for saving.

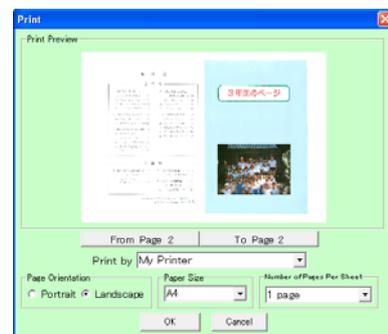


A digital textbook viewer named “dbook.swf” is saved in the folder. After the digital textbook

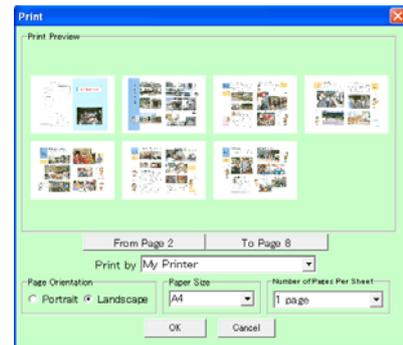
has been saved, the contents are displayed in the digital textbook viewer.

*Write Materials in Other Forms:* Use this menu item to save the data in other formats, such as BMP, PNG, JPEG. Choose the file format and enter the file name to save it.

*Print:* Opens the Print dialog box. The default is to print the current page only. To print a single page, choose the same page as the first and the last page. To print two or more pages, select the first and the last pages of the section to print.



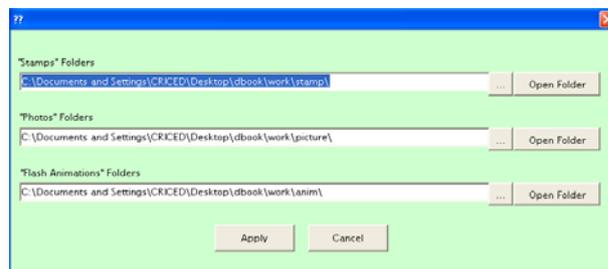
In this example, pages 2 to 8 are selected. A list of the pages to be printed is displayed. You can adjust the settings for the page size and orientation and select the printer to use. In this case, paper orientation is set to landscape.



You can print multiple pages per sheet. However, to print many copies of a single page on the same sheet, you have to create that many identical pages. To do that, copy the entire page and paste it to multiple pages from the clipboard.



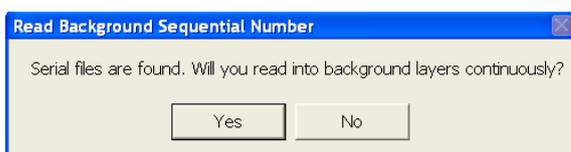
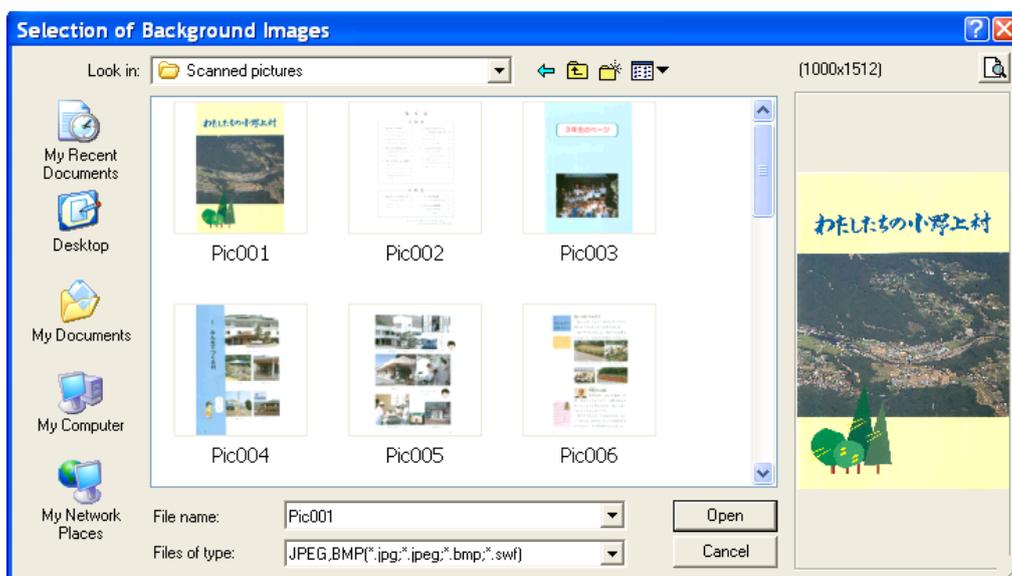
Use this menu item to open the settings dialog. In the dialog window, you can change the folders to use for stamps, pictures, and animations).



#### 4. A typical flow for creating digital educational materials

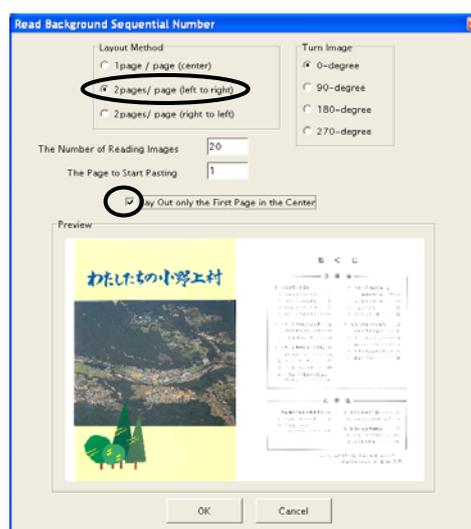


Load background pictures. Clicking on the icon opens a dialog box for choosing the picture. Navigate to the folder where the pictures are saved in case they do not appear at first.

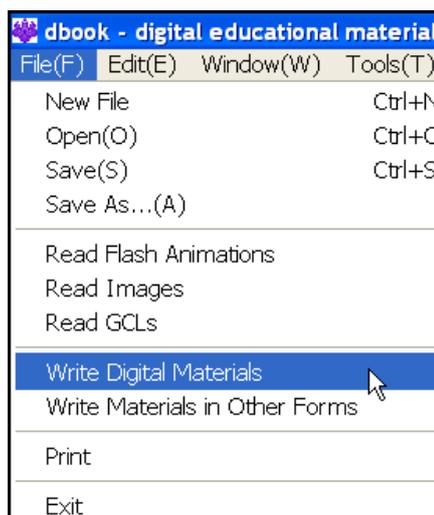


Choose the first picture to load. When pictures numbered consecutively are available, the following prompt is displayed. Click on Yes to load all files. Otherwise, only a single picture is loaded.

The dialog box to the right is opened when loading multiple pictures. Choose the layout method (one or two pictures per page). The first page can be laid out separately from the remaining pages (use the settings shown in the picture to the right).



After clicking on OK, the selected pictures are loaded as backgrounds and the last page is shown. Click on “Write Digital Materials” from the File menu to save the materials. Choose from a set of templates for saving the materials. After saving the digital materials, the saved materials are opened in a dbook viewer window.



The materials are saved in a folder with the name of the materials. To display the materials at a later time, double-click on "dbookLauncher" in the new folder.

