VIRTUALBOOK™: AN ELECTRONIC INTERFACE THAT FACILITATES SUSTAINED ONSCREEN LEARNING AND AN EFFECTIVE FLEXIBLE LEARNING ENVIRONMENT

Ann Strauss, MSc (Physics), Director, Eduflex.com

Eduflex.com's unique VirtualBook™ is an effective electronic interface that facilitates sustained onscreen learning. VirtualBook™ simulates the look and feel of a traditional book thereby promoting memory and learning processes.

VirtualBook™ provides a multimedia-rich environment that enables interactive learning and testing and that interacts seamlessly with customised website support via Internet or Intranet. Features of VirtualBook™ include: search engine; interactive bookmarks; highlighters; margin notes; easy navigation by hyperlink; progress charts; choice of printing functions; and clipboard function. Furthermore, VirtualBook™ works in conjunction with an application or simulator to provide step-by-step instruction to the student.

BENEFITS OF VIRTUALBOOK^{TM}

- Encourages student-tutor contact and student-student contact
- Facilitates interactive learning and self-testing
- Gives prompt feedback
- Emphasises time on task
- Enables learners to manage their studies and work at their own pace
- Respects diverse talents and ways of learning
- Provides a multimedia-rich environment
- Provides a cost-effective, exciting delivery method for flexible learning.

VIRTUALBOOK^{TM}: THE INTERFACE

- *User-friendly, familiar and intuitive* (the Book paradigm): no need to be a technocrat
- *Static page layout* : allows easier commitment of text to memory than scrolling text
- Offers the reader/learner *familiar aids*, such as *margin notes*, *highlighters, bookmarks*
- *Time management chart* indicates to the student time spent on each chapter of the material and tracks the time taken on submittable tests
- User-friendly *help* at the click of a button

VIRTUALBOOK^{TM}: COMMUNICATION & SUPPORT

- *Seamless e-mail connection* facilitating questions to the tutor at the click of a button

- Information about how long the student has spent studying the particular chapter is automatically included in the e-mail query to the tutor, together with the paragraph onto which the student dragged the query icon
- Interacts seamlessly with the Internet, where support can be provided from a *customised website* with all facilities such as Newsgroups, ChatRooms, Updates, Searchable FAQs, Online Testing
- *Seamless hot-linking* to websites whose URLs are included in the text

VIRTUALBOOK^{TM}: ACTIVE LEARNING

- Facilitates *interactive learning and self-testing* (e.g. drag n' drop; MCQs; fill in words; free form writing and drawing)
- *Prompt feedback* on self-marking test facilities
- Includes a *robust search engine* that indicates all sources of the requested word/phrase with a hotlink to each occurrence of the word
- Provides a *multimedia-rich environment* - sound, video, animated drawings, but also makes the studying of *text-rich material* as comfortable and sustainable as possible
- Allows *step-by-step instruction* using an *application or simulator*, and provides seamless access to the application via a button in the VirtualBook^{TM}
- *Progress chart* that shows how many self-tests the learner has completed and the degree of success

VIRTUALBOOK^{TM}: THE LEARNER IN CONTROL

- Learner is offline and goes online when necessary
- Learner decides when and where to study
- Learner decides on pace of study
- Learner is in control of communication with tutor and fellow students
- Learner can print pages as required (page, chapter or range of pages)

VIRTUALBOOK^{TM}: FUNCTIONALITY

1. Navigation
2. Multimedia
3. Study Aids
4. Communication and Support
5. Assessment

1.NAVIGATION

VirtualBook™ navigation is driven by hyperlinks.

Turn the Page

VirtualBook™ pages are turned by clicking on the arrows found
At the bottom of each page, or by using the left and right arrows of the
keyboard. Go to the end or beginning of a chapter by using the right and left stop
(underlined) arrows respectively.

Hyperlinked Contents

The hyperlinked Table of Contents is used to find and select
the beginning of a chapter or section. All chapter headings and s
headings can be meticulously listed. By clicking on the chapter required, users are
automatically linked to the relevant page by a hyperlink. The "Contents" icon on
the toolbar opens the Table of Contents at any time.

Retrace your Steps

By using the "Back" and Fwd" buttons users can retrace their
steps at any time.

Go To Page

Users are able to quickly locate a page using this function.

Hotlinks

Hotlinked words within the text link directly to study pages in other sections or
glossaries. or any specific section of the VirtualBook™.

> • Under Section 7(2), HIV testing is prohibited, unless i
> General Administrative Regulations (regulation 3(3)) p
> contain a description of the measures taken by the de

Flip through VirtualBook™

As users progress through the book, the visible edges of the
virtual pages become fewer. This gives the user an
impression of where about in the book they are. Clicking on
the page edges, is the equivalent of "flipping through the
book" rapidly to get a general impression of its contents.
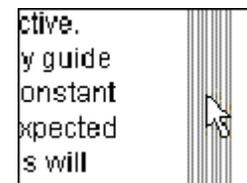
Quit Bookmark

When VirtualBook™ is closed a special Bookmark is
automatically inserted on the last page studied. When
a user re-opens VirtualBook™, they simply click on the
easily identifiable Bookmark to return to that exact
position.
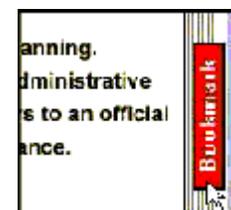
2. MULTIMEDIA

Because VirtualBook™ is a fully-fledged multimedia environment, material can be enhanced by including zoom-in-pictures and diagrams, sound, video and animated graphics.

Pictures and Diagrams
VirtualBook™ has the ability to "zoom in" and " zoom out" of small diagrams that need to be enlarged to be viewed clearly and the ability to move a diagram within a windows so as to view the parts more clearly.
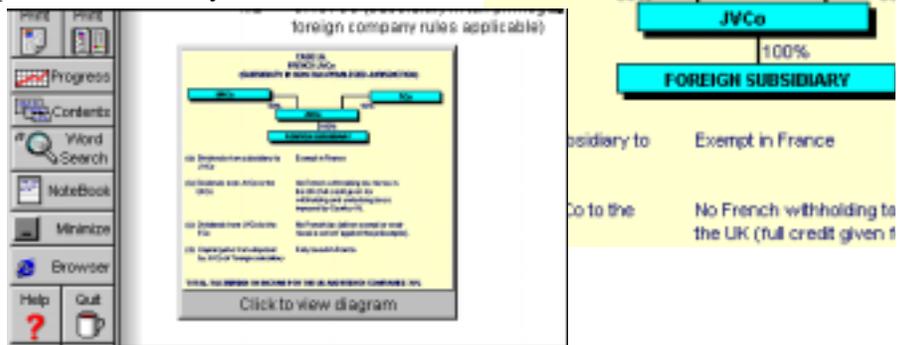
Sound
Sound not only can enhance the experience of the user but could also be essential to the material (e.g. pronunciation for a French language course).

Video and Animation
For powerful presentations, video clips and animations can be included in the VirtualBook™.

Launch Browser
Users can select and launch an Internet browser from within their VirtualBook™ in order to access any of the facilities offered on the WWW. This connection can be pre-programmed to a particular web address or home page. Users can "toggle" between the VirtualBook™ and web until the connection is terminated by closing the browser.

Internet Links
Links to interesting pages on the web can also be included in VirtualBook™. The
browser will launch automatically from any URL contained in the material. The
link to the Internet will automatically be terminated once the user return to the
VirtualBook™.

Embedded Applications
From within the VirtualBook™, users may launch affiliated applications (MS
Word, Excel, Paint), and then easily "toggle" between VirtualBook™ and the
application. This allows them to practice and apply what they are learning without
the need to exit from the material. The work is then saved and incorporated into
the VirtualBook™ where it will remain until deleted.

3. STUDY AIDS

Many familiar and user friendly study aids are available in VirtualBook™

Highlighters
Highlighters are provided to help users make important text easily
visible. These are used by dragging the pen across the relevant
text or by marking margins to highlight particular paragraphs. A
colour palette is also provided for users to select their colour choice.
Highlights will remain in the VirtualBook™ until deleted

Interactive Course Bookmarks
Additional interactive bookmarks are also provided for users
to mark pages of interest. These bookmarks can be labeled
for easy reference and a colour palette is provided for users
to select their colour choice. Bookmarks will remain in the
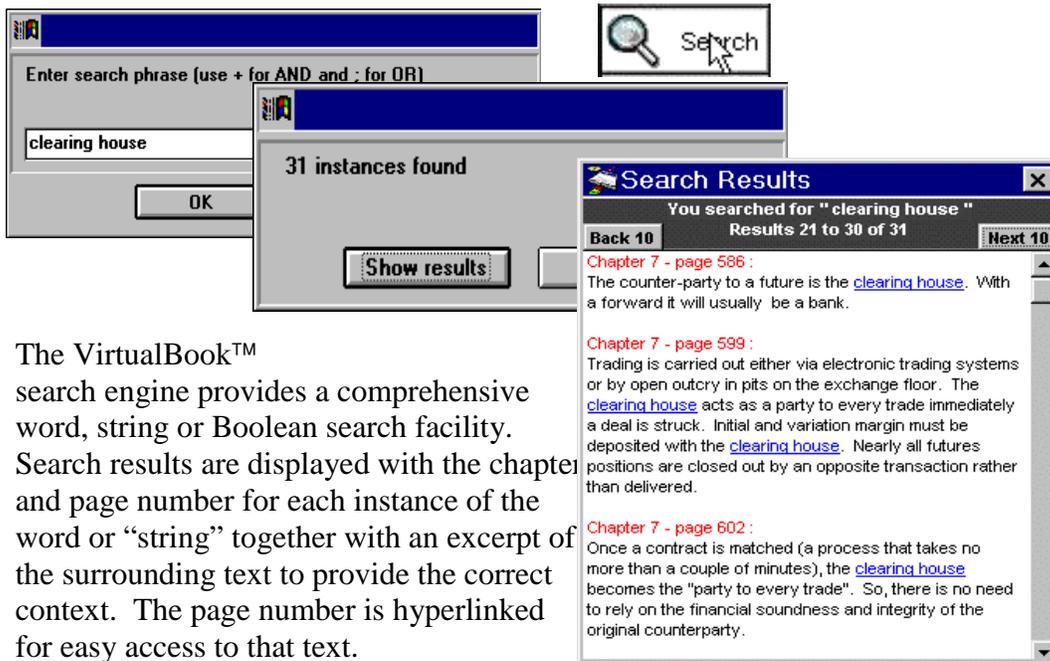VirtualBook™ until removed.
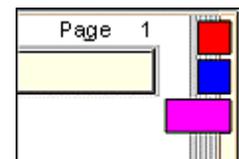
Notes

VirtualBook™ also has a facility to make electronic notes about important aspects of the study text. Users can write their notes on the electronic pad and then "park" them on the relevant text (or in the margin) for easy reference. Notes can be re-opened at any time and will remain in the VirtualBook™ until deleted.
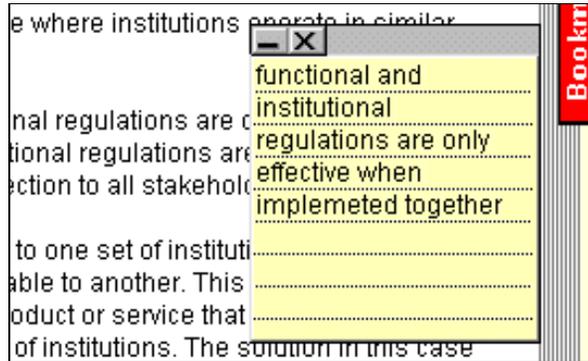
Search

The VirtualBook™ search engine provides a comprehensive word, string or Boolean search facility. Search results are displayed with the chapter and page number for each instance of the word or "string" together with an excerpt of the surrounding text to provide the correct context. The page number is hyperlinked for easy access to that text.

Notebook

VirtualBook™ provides an electronic notebook to provide clipboard-type functionality in which users can copy and paste paragraphs, and later use this information, for example, in an essay, assignment or report.
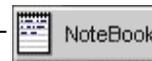
Step-by-Step

VirtualBook™ is the ideal medium for learning complex or elaborate study material. Step-by-step instructions for performing a designated assignment

or project can be floated onto the user's screen in a special drop-down window that sits inside the application.

Hotwords and Footnotes
Hotwords appear in red, which, when clicked, open a useful explanation, contextual definition or footnote.
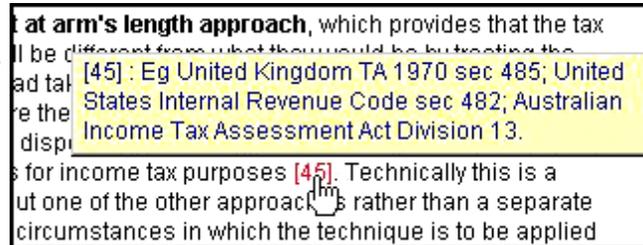
Hints and supplementary Notes
Hints and notes icons within the text can be included to provide a rich portfolio of hints, anecdotes and other special messages to make the material more interesting.

Hide Toolbar
Users who find the array of buttons on the control panel distracting when studying, can hide them until such time as they are required again.

Hotwords in a bright colours are also inclined to stand out on the page, their relative importance over-emphasized, which may be a source of annoyance to some. These can also be "turned off", which will leave users in peace to read, and study the material just like a book, without any "bells and whistles" to compete for their attention. They can be re-activated at any time.
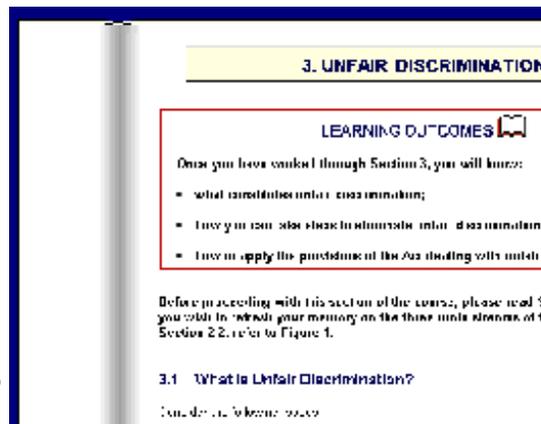
Minimise
The VirtualBook™ can be minimised into a desktop icon to allow users to access other applications.

Printing
Three options are available to print VirtualBook™ material; printing by page, by chapter, or by selecting a range of pages. When printing a chapter or page range, users will be asked to reconfirm the number of

pages prior to actual printing. All pages are printed in A4 format with VirtualBook page numbering for easy reference.

Help
All the features and functions of the VirtualBook™ are also explained in the Help pages of VirtualBook™. A Help icon is provided so that users can get Help at the click of the mouse. Users return to their text by clicking the "back to text" button.
In addition, a guided tour of VirtualBook™ is included with each course. This tour explains and simulates all the functionality that the user will come across in their course. Users are advised to work through the demo before using the VirtualBook™.
A live link to student support via Vbookhelp@eduflex.com is also included in each VirtualBook™.
A list of FAQs(frequently asked questions) can also be accessed on the eduflex.com website at any time.

---

4. COMMUNICATION AND SUPPORT

VirtualBook™ interacts seamlessly with the web to provide easy access to the internet, thereby allowing users to link to websites referred to in the material and to communicate with tutors, fellow students or mentors.

Email Query Submission
Users can contact online tutors for help and guidance by dragging the query icon onto the relevant paragraph of text. The student's name, return email address, the page reference and paragraph of text will be automatically included in the query form. In addition, the amount of time spent studying that particular chapter is recorded, which enables the tutor to understand the difficulties in the context with the amount of time spent on studies.
The query is emailed to the tutor using the web browser. The query icon remains in the VirtualBook™ until removed and can be reopened and read at any time.

Similarly, the tutor's response is saved on the VirtualBook™ page with the query for later reference.

Online Campus

By using Internet connectivity, most VirtualBook™ courses can link directly to a unique online campus and Web site. Online campuses provide valuable links to support functions including searchable banks of FAQs (frequently asked questions), news groups and chat groups to communicate with fellow students and tutors, online testing, and other facilities. After gathering the information needed, users simply return to VirtualBook™ and terminate the connection to the Internet.
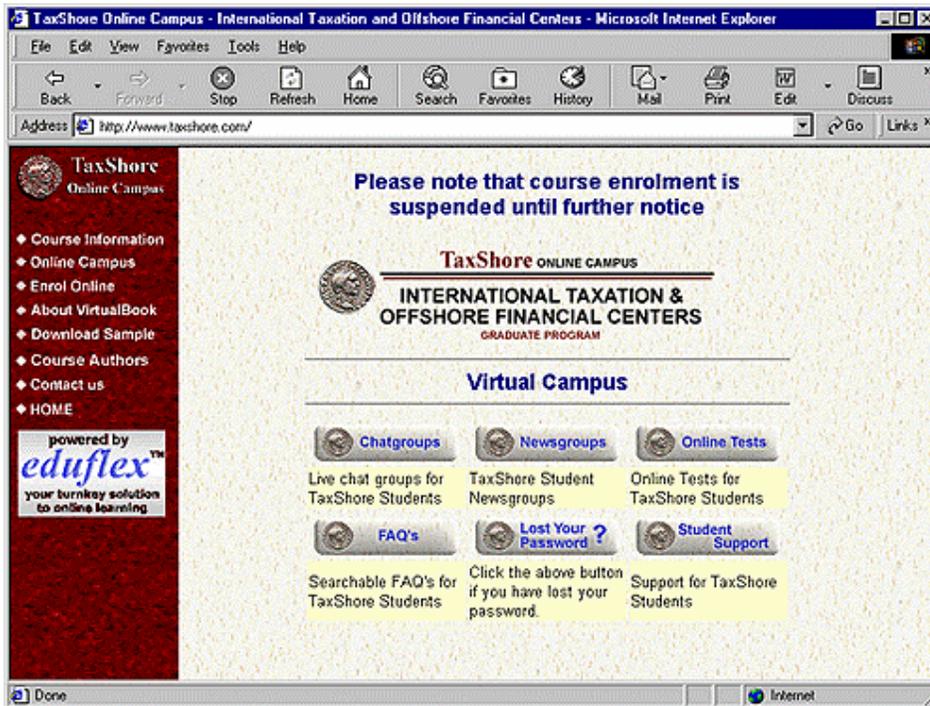

5. ASSESSMENT

Various styles of testing, assessment and tracking mechanisms can be included in VirtualBook™.

Progress Measurement

Progress charts enable tutors or facilitators to monitor users and manage their strengths and weaknesses, and to pinpoint where they need to spend time on revision and where the course material may need amendment.

Progress charts can be configured to keep track of how long a user
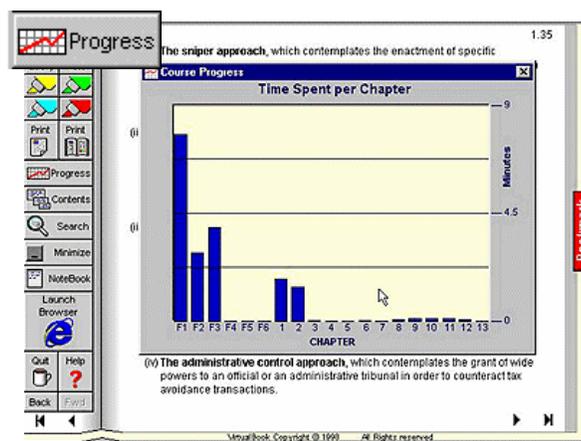
spends working on each chapter, how many of the self-tests have been completed and the average score for self-tests achieved. All of this information is included when a user sends a query for assistance.

Test Formats

Various styles of testing and assessment can be included in VirtualBook™, most can be configured for self-marking and can be reset for revision purposes. They can also be configured to force users to attempt questions before gaining access to the solutions.

The simplest type of test is the true/false kind.
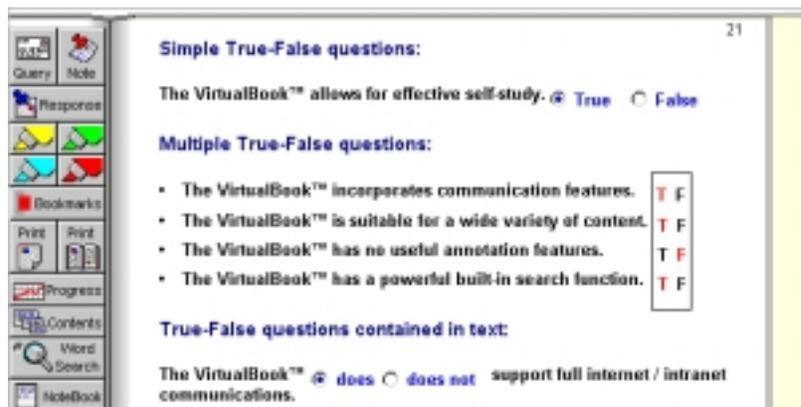
Multiple choice questions may be provided using radio buttons, check boxes or drop-down lists for variation and may be of the type where one answer only is correct or where more than one answer is correct.
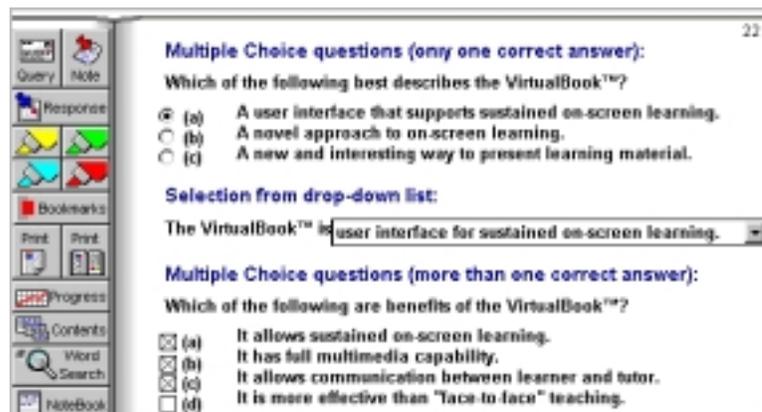
Fill in the blank questions could also be included. Where appropriate, they may be programmed so that a sub-set of any given possible answers is correct.

Free-form questions are generally included as either part of a self-test or part of an assignment that is to be submitted to a tutor. The free form boxes will automatically scroll up and down, as answers are inputted.

Test Submission
Students may be required to submit assignments at regular intervals for assessment. These are submitted to the tutor in a process that is identical to the submission of a query. The user's name, return e-mail address, assignment details and the date are automatically included. Once again, the time that you have spent on the test is also recorded. The test is e-mailed to the tutor using the web browser.
Submittable assignments can be configured so that users are only able to attempt

the test on one occasion, and where tutors will be able to monitor the time spent on each section.