

Section One

> Critique of CAI Music Software

CAI is a technological term that refers to Computer Assisted Instruction for use in, and out of the classroom. There are many varieties of CAI packages and their role has been one of supporting and enhancing the learning experiences presented by an educator. The benefits of utilising technology to *aid*, *assess* or *manage* learning means that an educator can ask themselves,

“As a (music) teacher, what kinds of (music) experiences do I want the software and hardware to support in order to make my teaching more effective?”¹

Therefore, the music software presented in this critique come from two commonly identified categories of CAI (see below) designed to address different ‘learning styles’² and pedagogical approaches. The first is *Musition* by Rising Software³ and the second will be a group of *Music Games* from The Music Interactive.⁴ What will be made clear is that each software package needs to be integrated directly into an educator’s personal philosophy and curriculum, to make it truly effective from a pedagogical point of view.

> Categories of CAI Software ⁵

- **Drill & Practice** – A common approach for listening and theoretical content, mainly ‘computer-determined’ and focuses on specific skills (e.g. previous versions of [Auralia](#) and [Musition](#)).
- **Flexible Practice** – Focuses on developing specific skills however is it also student and teacher centered allowing choice in the path of skill development with dialogue boxes, record keeping tools, audio & MIDI as well as networkable features (e.g. latest versions of [Auralia](#) and [Musition](#)).
- **Guided Instruction** – Includes software with tasks that guide a student through a certain path to a predetermined end for developing a range of skills. It involves text, audio, images and other multimedia arranged in an “...imaginative and entertaining,”⁶ manner (e.g. [Jazz Piano](#) or [Latin Jazz](#) from [The Music Interactive](#)).
- **Game-Based** – Focusing on mainly one musical element (such as pitch or rhythm) this software employs ‘fun, competitiveness and puzzles’ to deliver its content (e.g. [Staff Wars](#), [Boom](#), or [Rhythm Blocks](#) from [The Music Interactive](#)).
- **Exploratory/Creative** – This is software that ‘encourages students to explore and create music.’⁷ There is no *linear process* or *pre-determined path* allowing more creative control of media in the program (e.g. [Band in a Box](#) by PG Music⁸).
To be explored in Section Two

(Other categories include Teacher Resources & Internet Based CAI)

¹ Williams DB, Webster PR, *Experiencing Music Technology*, 3rd edn, Thomson Learning, VIC Australia

² *Ibid.*

³ Rising Software, *Auralia & Musition*, accessed Oct 2010, <<http://www.risingsoftware.com/home.php>>

⁴ Gonci C, Jacoby M 2006, *The Music Interactive*, accessed Oct 2010, <http://www.themusicinteractive.com/TMI/The_Music_Interactive_-_Welcome.html>

⁵ Williams DB, Webster PR, *Experiencing Music Technology*, 3rd edn, Thomson Learning, VIC Australia, p408

⁶ *Ibid.* p410

⁷ *Ibid.*

⁸ PG Music, *Band in a Box*, accessed Oct 2010, <<http://www.pgmusic.com/>>

> Musition 4

Developed by *Rising Software* Musition 4 is "...a complete theory and musicianship package, suitable for students of all ages."⁹ It would have been classified in the *CAI Drill and Practice* category in previous versions but it now comes with customisable content as well as a reporting system moving it into the *Flexible Practice* category of CAI software.¹⁰

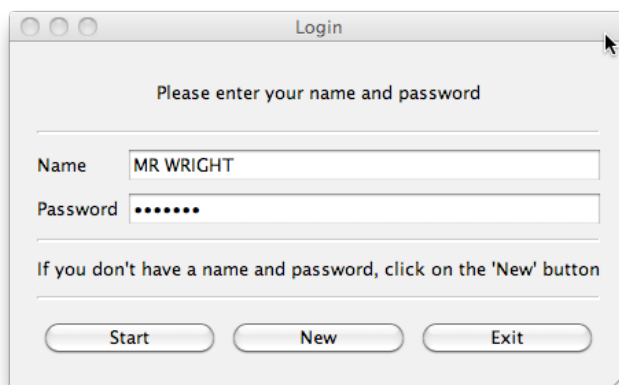


> CAI Category – Flexible Practice¹¹

"Software in this category is student –and teacher – centered in that choices allow the user to have a hand in engineering their own learning. This typically involves menus and dialogue boxes that allows the user to create a tailor-made curriculum for himself/herself or a class – additionally providing a form of record keeping for each user."

> Basic Features

Musition opens directly to a log in window (fig 1.1) so that it can keep records of lessons undertaken by that user:



"Everybody who uses Musition needs to have a user name and password, under which scores will be recorded. Each user also belongs to a Class, allowing you to easily group students for reporting and testing. These types of settings are invaluable when using Musition with students of varying age and ability levels."¹²

Fig 1.1

The user is immediately presented with 5 topics containing related drills and content for each topic (fig 1.2). Furthermore, teachers and students alike can choose from a variety of Syllabi to customise each topic's lessons as well as the degree of difficulty of each lesson (fig 1.3).



Fig 1.2

⁹ Rising Software, *Auralia & Musition*, accessed Oct 2010, <<http://www.risingsoftware.com/home.php>>

¹⁰ Williams DB, Webster PR, *Experiencing Music Technology*, 3rd edn, Thomson Learning, VIC Australia, p415

¹¹ *Ibid* p409

¹² Rising Software, *Auralia & Musition*, accessed Oct 2010, <http://www.risingsoftware.com/musition/tour/record_keeping.php>

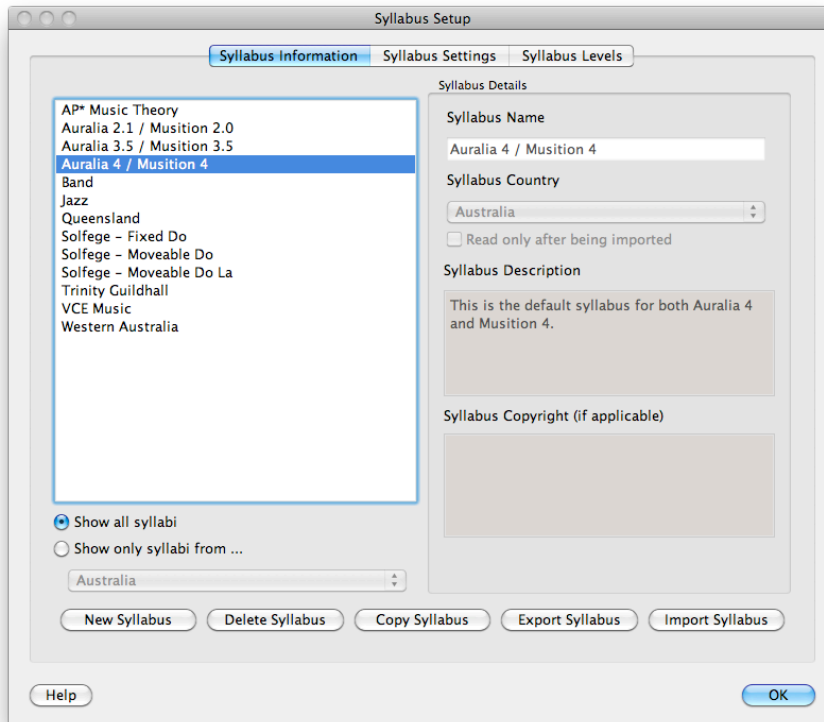


Fig 1.3

A new *Courses* feature (fig 1.4) automatically guides students through various topics and lessons building essential aural and theory skills. Not unlike the *Drill and Practice* category these *Courses* are predefined and integrated pathways of lessons and tests that target a particular pedagogical requirement of one of the 5 topic groups (Pitch, Rhythm, Terms & Symbols, Harmony and Instruments)¹³ - the difference being in the amount of customisation available within the program itself for content, difficulty, syllabi etc.

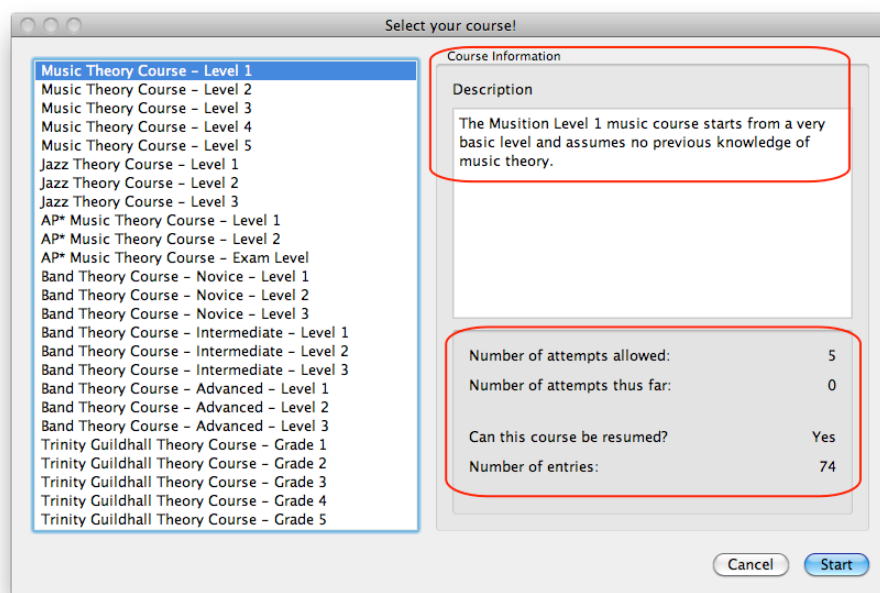


Fig 1.4

¹³ Music Education Network, *Catalogue – Musition*, accessed Oct 2010, <http://www.musicednet.com/cat_detail.asp?ID=12>

Then each lesson provides the user with a choice (fig 1.5) to customise the level, view lesson handouts with interactive text/scores/audio to learn the content or to focus on specific parts of the level (such as only one type of Jazz chord instead all).

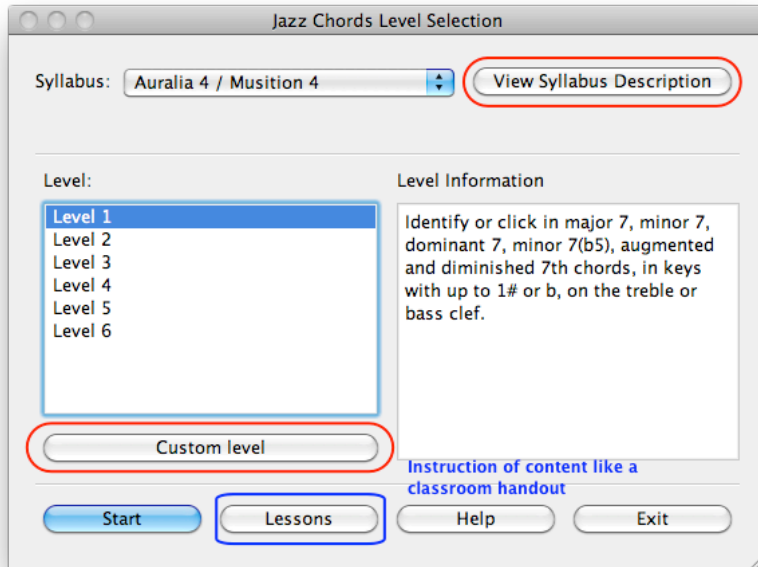


Fig 1.5

In figure 1.6 you can see the extensive customisation options for the Jazz Chords lesson complete with external MIDI control option for entering answers.

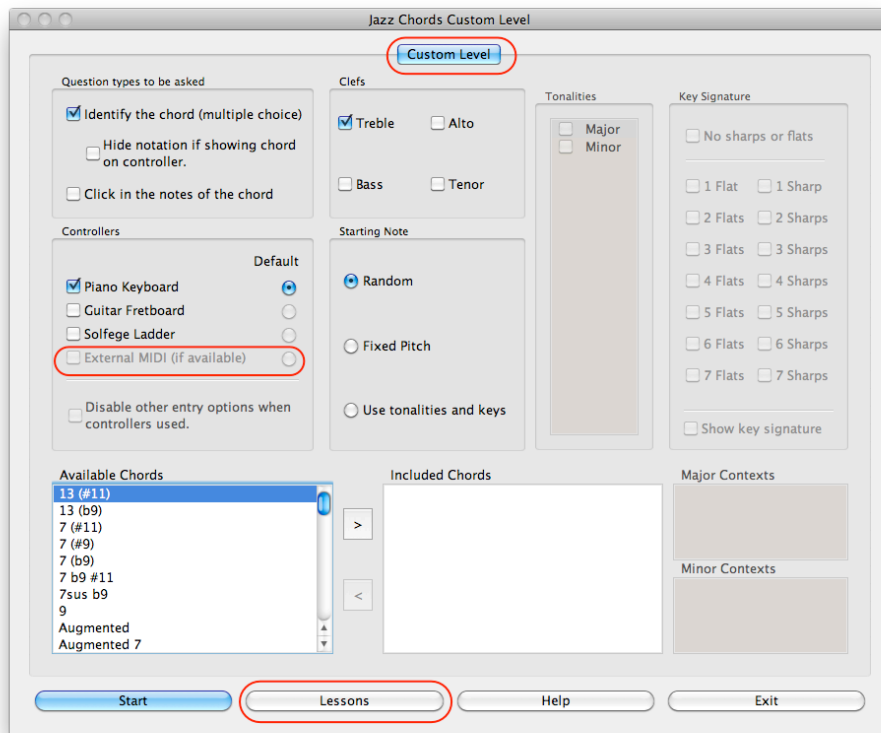


Fig 1.6

The final basic feature is Musition's ability to keep track of all lessons and content viewed for a logged-in user and to generate individual reports with grading (fig 1.7).

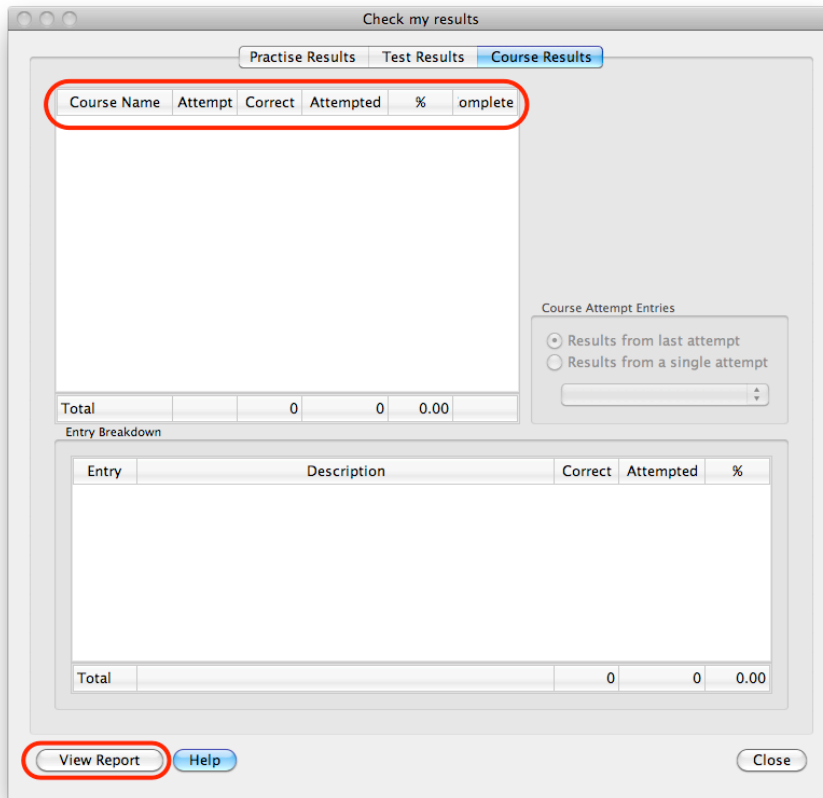


Fig 1.7

As you will notice in Figure 1.8 even the forms exporting features are customisable.

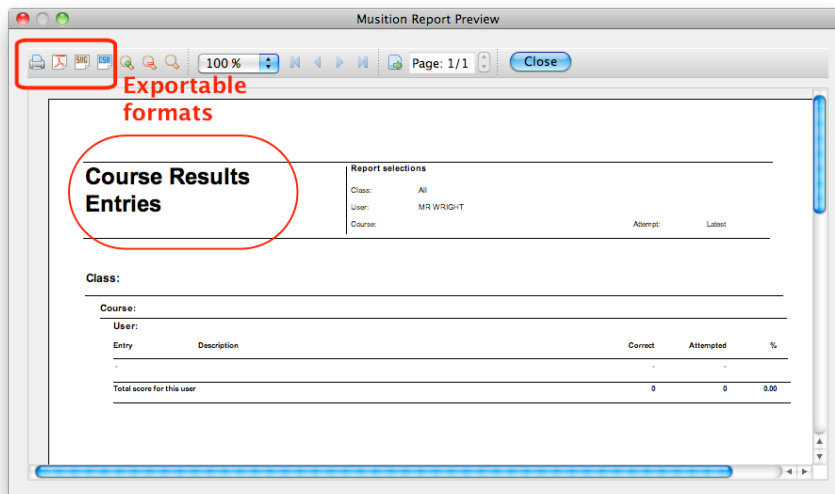


Fig 1.8

> Intended Market

Musition 4 is marketed towards music educators, their students and those interested in learning music theory interactively. There are many books out there but this program consolidates audio, score, text, feedback and choice into a neat package for both PC and Mac platforms.

> GUI

The interface is a cool blue colour with a clutter free menu. Everything is viewable from the welcome screen and only becomes more complex as the user delves into the lessons. The sounds work well with no lag and the speed of the program in full operation is excellent. For an uneducated operator the functionality of this program will not suffer, rather, exploration is the key. All windows have clear key navigation or 'click me' interactive points. In figure 1.9 is an example of an interactive lesson including audio, score and text with the interactive elements highlighted.

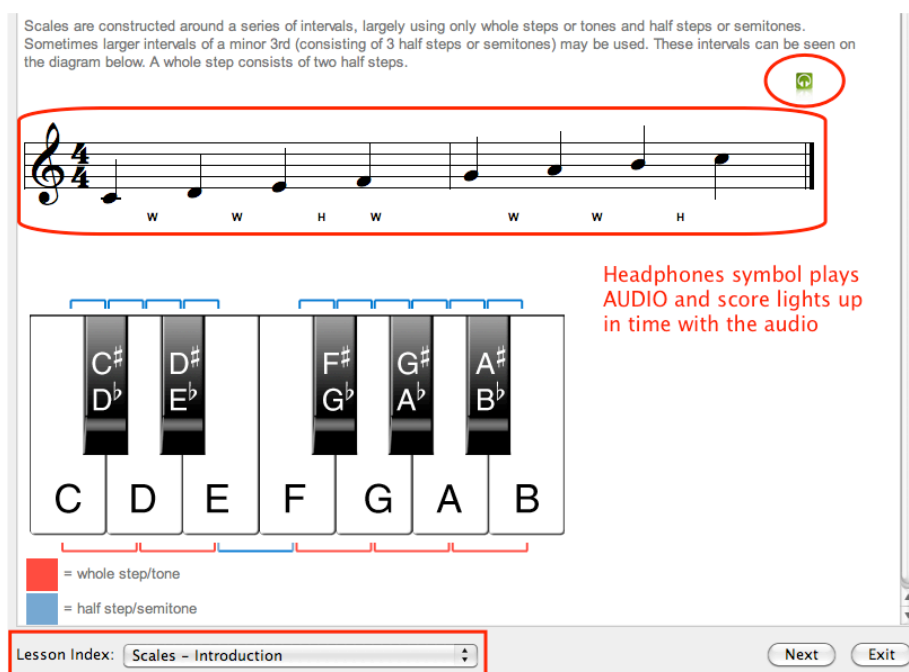


Fig 1.9

> Pedagogical Spotlight

The focus of this software is the building of theoretical knowledge or musicianship. Musition includes lessons and aural drills but also audio, singing drills (incl. solfege recognition through your computer's microphone) and interactive scores. Obviously it is designed to test your musicianship from basic to advanced skill levels but each step provides systemic revision opportunities. Additionally, if you own MIDI interface hardware these will also connect to the program (such as keyboards in a classroom setting) so that it is not always 'mouse driven.'

It is ideal in an educational setting because of the teacher's settings (customising classes, score keeping, grading, lesson materials or teaching from an interactive whiteboard IWB) while also allowing students to test broad areas or specific ones within each topic making it an individual learning experience.

I also found it very useful for Australian AMEB preparation with Terms & Signs as well as the scales lessons on an IWB.

> Rating

Musically creative programmers have made Musition 4, as the content is correct, clearly presented and all lessons progress naturally. Any user can access the software easily and begin to develop their skills. Additionally, the immediate feedback is a fun and easy sequence of sounds and pop-up boxes making it a rewarding experience to go through lesson drills.

The best feature is for me the GUI as it invites me to participate in its lessons. The success of the program is its entire package of drills, lessons, records and immediate rewards. The only downside is that too much choice in each topic can become confusing.

> All About

Musition 4: available for Mac or PC, single or licensed seats

Developer: <http://www.risingsoftware.com/home.php>

Price: \$199 AUD, \$99AUD Student Price

Get the demo here: <http://www.risingsoftware.com/downloads/>

> The Music Interactive

Boom, Rhythm Blocks & Staff Wars



With a rise in interactive surfaces, the apple app-store and the need to have specific instructional games/tools for the music classroom, teachers Craig Gonci and Marc Jacoby created *The Music Interactive*¹⁴ website. This website provides small music applications, games, and instructional tools as freeware or shareware that "...cover a broad range of uses in both classroom and performance based environments."¹⁵ The three small applications mentioned here fall under the *Games-Based CAI* category because of their *intent*, focus on one concept and puzzle/game characteristics.

> CAI Category – Games Based¹⁶

"Software in this category places an emphasis on basic-skill development and knowledge of the musical concepts such as pitch or rhythm. This is accomplished through puzzles, games, interactive competition and the chance to retry ones efforts to 'get a better score.' This software relies on graphics, animations, sound and sometimes adds an element of creativity."

> Basic Features

Boom

This program is based upon the popular Boom Whacker musical instruments that are coloured and sized in corresponding pitch order (fig 2.1).



Fig 2.1

The opening window *is* the program with its click-n-drag *boom whackers*, text box for writing in pitches or graphic scoring and clickable trigger pads. The aim of the game is to rearrange the pitches as played by a teacher (with a small creative element of composition). The animations and sounds are instantly playable and rely upon the users ears and experimentation (fig 2.2).

¹⁴ Gonci C, Jacoby M 2006, *The Music Interactive*, accessed Oct 2010, <http://www.themusicinteractive.com/TMI/The_Music_Interactive_-_Welcome.html>

¹⁵ *Ibid*

¹⁶ Williams DB, Webster PR, *Experiencing Music Technology*, 3rd edn, Thomson Learning, VIC Australia, p410

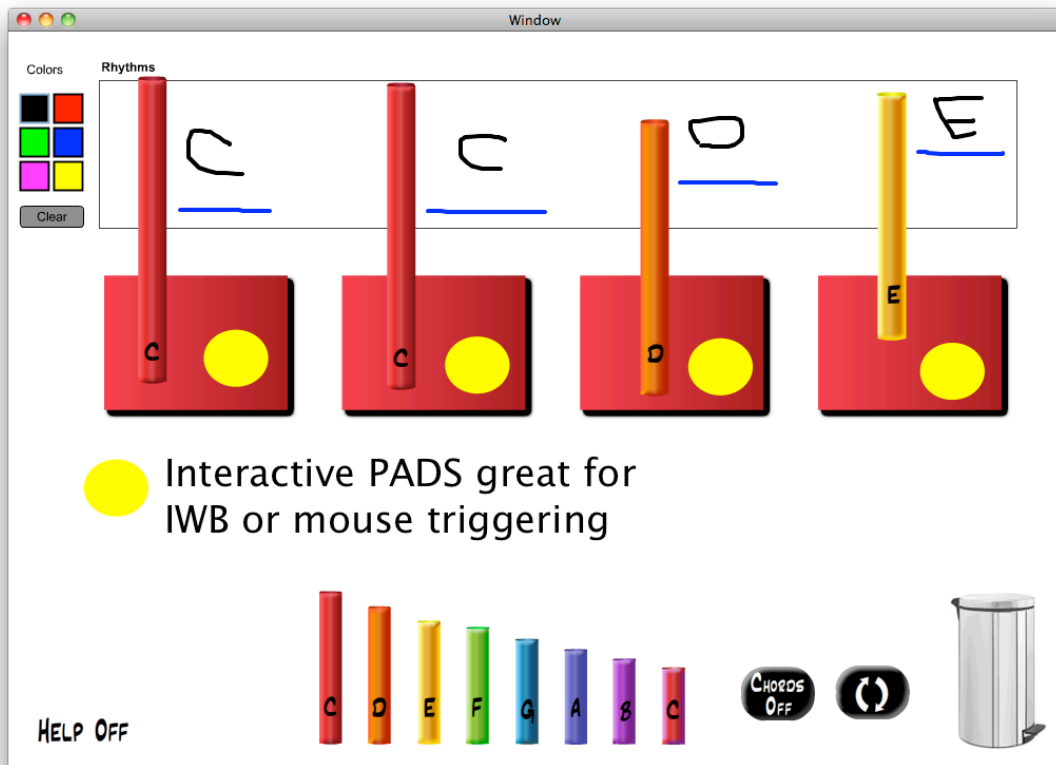


Fig 2.2

Rhythm Blocks

This program is based upon rhythmic pattern recognition or dictation. The aim of the game is to listen to each played rhythm and to arrange the blocks of patterns in the correct order. Three playings are given, the animations are fun and colourful and there is immediate feedback on what was correct or not (figures 2.3, 2.4).

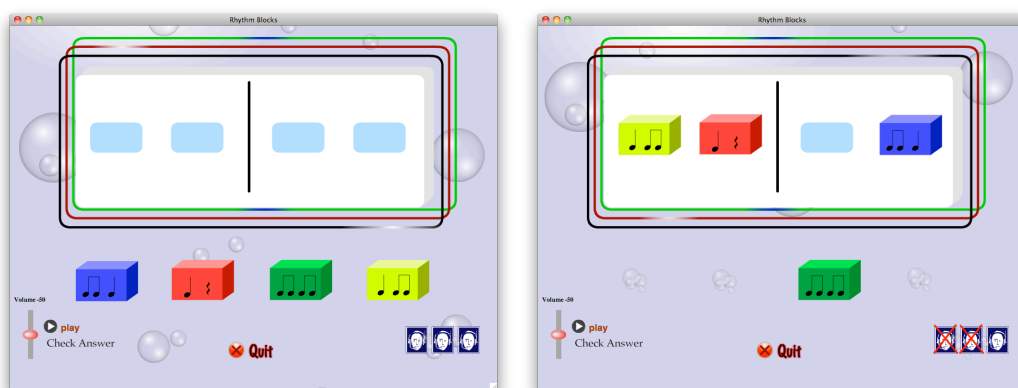


Fig 2.3, 2.4

The floating bubbles, moveable blocks and overall experience allow for class competition playing or teacher instruction from an IWB.

Staff Wars

This program is based upon a 'shoot-em up' game set in the theme of *Star Wars*. Users can set levels or Clefs and as the notes move from right to left across the screen you need to click on the correct note name to 'shoot it down,' – otherwise one out of three lives is lost (fig 2.5).

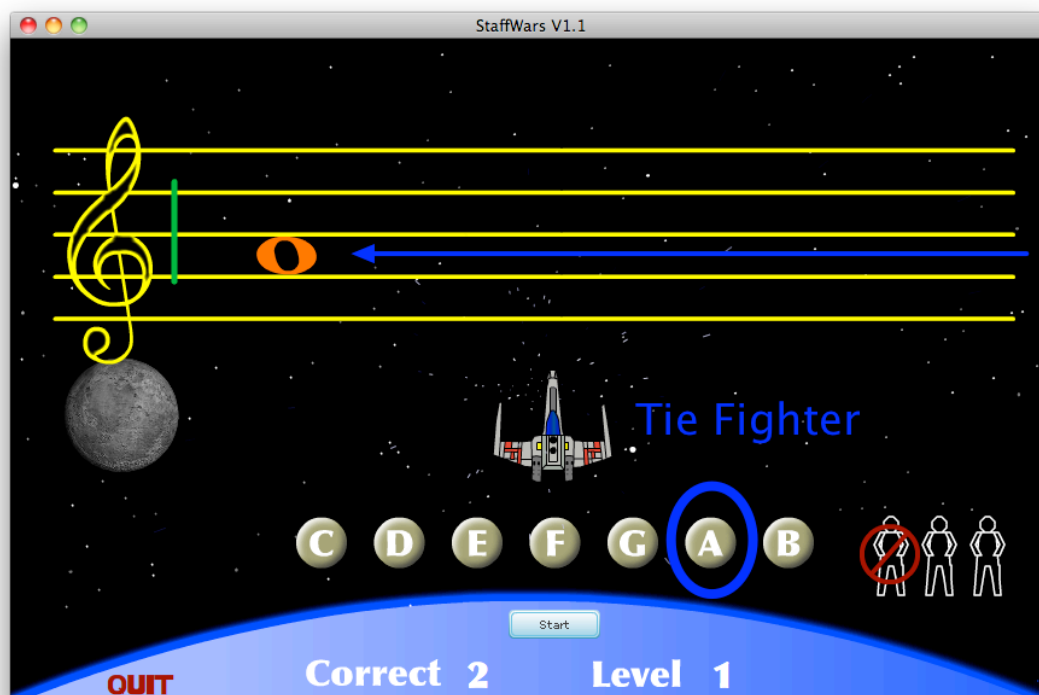


Fig 2.5

As the user progresses the notes move faster and their range is extended, thereby presenting more of a challenge. It is humorous, fun and even opens with the sound of R2D2 from the Star Wars films. This game lends itself to class play on an IWB wonderfully.

> Intended Market

As stated by their creators these programs are made for music educators to fill a niche created by interactive surfaces in the classroom. They are to focus on specific skills and repetitively reinforce concepts in the classroom with the aid of an IWB. Mouse entry and individual play could also work but would not be as 'fun.' The competitive element of each game is rewarding and students will remember this interaction more so than in individual play.

> GUI

The interface of each application is designed to focus on its own musical concept (e.g. Pitch names in *Staff Wars*) with the added bonus of intriguing colours, animations and sounds. Each application has one main window and limits the amount of customisation so that the game can be played quickly and allows the concept to be communicated in an effective manner. For example, *Rhythm Blocks* plays the rhythm after a simple level

choice (from 1, 2, 3 or 4) and it is now up to the user to interact with the software. The graphics intuitively imply moving the four coloured blocks into a pattern on the blank spots above them. Each game is set out to imply the rules without having to teach the concept explicitly. A first time user (music teacher) can install, open and include the software in his/her lesson quicker than connecting to an IWB – the software does not get in the way of its operation or learning.

(Note: these do not support MIDI hardware).

> Pedagogical Spotlight

The focus of this software is the building of theoretical and practical knowledge via games that involve cerebral and tactile processes. Yes students need to think and engage with the concept (e.g. Pitch in Boom) but also involve their hands (mouse or on IWB) to interact with the games – making a more meaningful connection to the conveyed concept. The software suits the classroom setting well and it comes alive with an IWB.

I have used these games in my classroom and the competitive nature of Staff Wars alone involves the class, extends their knowledge and lends to application in performance on keyboards.

> Rating

Music Teachers are behind the creation of these applications so it is expected that the content be fun, accurate and instructional. These two teachers do not have a large company behind them like *Rising Software* (Musition & Auralia) so their applications are smaller and lighter in choice and programming. They do not boast to be great drill and practice tools but interactive games to enhance the learning of particular musical concepts through entertainment and play.

The best feature for me is the focus on only one concept and repetitively reinforcing it through game play. The only downside is that classes can become bored with the games after a few turns. They are not always for the 'whole class' to use at once unless a specific lesson is designed by the teacher (e.g. Melodic imitation in *Boom* – yet, there are only 4 notes to play with).

> All About

The Music Interactive: available for Mac or PC as single applications

Developer: <http://www.themusicinteractive.com/>

Price: Free or \$5 to \$15 AUD

Get the software here:

http://www.themusicinteractive.com/TMI/The_Music_Interactive_-_Classroom_Apps.html

Support in downloading Applications:

http://www.themusicinteractive.com/TMI/The_Music_Interactive_-_About.html