ACKNOWLEDGEMENTS

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RATIONALE

The purpose of this research is to consider to what extent the moby-go could be used to enhance teaching and learning in the sample room studio. A qualitative study was carried out in which I focused on using the visualiser, the cam-corder and the laptop to ascertain to what extent these various pieces of equipment could be imbedded in teaching and their effects on the students, the technicians and the tutor.

I have constantly sought to make the delivery of my lessons more creative, engaging and fresh. I have also considered how computers could play a useful or central part of the sample room. I will now endeavour to investigate if this could also lift my performance to another level in delivering more captivating and lively teaching sessions.

This research seeks to discover how user-friendly computer equipments are for tutors, technicians and above all the students. It seeks to discover its benefits, to whom and in what capacity. It also seeks to discover if the moby-go is fully developed to suit the requirements for use in the sample room.

1. INTRODUCTION

1. What is a Moby go

The moby-go is a multimedia mobile station used to create and deliver teaching and learning

materials to practical and academic classes. It consists of: -

- Laptop
- Projector
- Visualiser
- DVD Player
- VHS

Subsidiary equipment also available

- Cam-corder
- Camera

2. Who will the Moby-go Impact

I am investigating how some of these resources might enhance the teaching and learning experience in the sample room from the pattern cutting and sewing aspects. The groups of people immediately impacted will be students, tutors and sample room technicians. Will any of these teaching and learning tools have a positive outcome on personal development for all concerned? The components are designed to interact with each other and to provide the user with a variety of options. They are also designed to work with or without the projector.

Two groups of students aged 19 – 27 on the Fda Fashion Design and Marketing course were observer over one term, one day per week. In total there were 35 students observed – there was one male student. Approximately 60% of the students were home students; the others were mainly Europeans, followed by Asians, (Chinese) and one student from Canada. A small percentage of the students had prior workroom/studio experience.

2. METHODOLOGY

1. Interview two classes after using individual resource to analyse and evaluate the impact on learning and teaching.

2. Interview the two technicians after using individual resource to analyse and evaluate the impact on teaching and using the equipment.

3. Questionnaire 1 - four students from each class to complete questionnaire for their critical analysis and evaluation on the use of the resources and their impact on teaching and learning.

4. Questionnaire 2 – the two technicians to complete questionnaire for their critical analysis and evaluation on the use of the resources and their impact on teaching and learning for

classroom assistance and for open access.

5. Task list – students that completed the questionnaire to execute a 'task list' to evaluate their performance and their ability to use the various components of the moby-go for self-directed work.

6. Liaising with Oliver Furlong for further development of the visualiser.

3. FINDINGS

3.1. USING THE LAPTOP

The laptop provides the facility to use computer programmes, memory stick, DVD and the internet for presentations. The images can be projected onto the large overhead screen for large and small group sessions or displayed on the laptop screen for small group sessions, one to one sessions or self-directed study. The memory stick can be used for PowerPoint presentations, replacing the OHP and transparencies. The ability to interchange between a DVD and a memory stick is at the push of a button therefore it is almost seamless, providing smooth interchanges between operations and a continuous delivery of a lecture or a demonstration. Students are able to use the lap to recall teaching sessions by operating the laptop on their own or on a one-to-one session. Latecomers can use the laptop by themselves at convenient point of any sessions. Students may also use the laptop to present their work via a memory-stick or DVD – this is particularly useful for students' final assessment.

3.2 USING THE VISUALISER & PROJECTOR

The visualiser can be used to replace the traditional OHP and transparencies. It captures images from, paper, books, garments, fabrics, etc. through a lens and with the aid of a projector displays the images onto a screen. A camera lens is connected to the base of the visualiser via a flexible 'goose-neck' stand. Zoom facility is on the visualiser.

A benefit of the visualiser in the sample-room is to amplify the creation of a draft during a demonstration, making it possible for students in large classes to view clearly from their seats.

The visualiser has a rotating lens that allows the students to experience the objects or demonstration always facing them, regardless of the position of the actual demonstration being executed i.e. if the drawing is being created facing the tutor/demonstrator the students will still see it as if they were drawing it. Student participation in demonstrations is not restricted as a result of using this tool.

3.2.1 Use of the Visualiser from A Pattern-Cutting Aspect

I have attempted to use this for pattern cutting, during my trial I observed the following: -

Siting of the equipment present several restrictions. Seating must not be behind the demonstrator to prevent the demonstrator obstructing the view of the screen or the actual demonstration in progress. The moby-go is more effective if it is not too close to the screen. The camera lens has to be counter-balanced over the base because of its weight. The light in the room can impact enormously on the visibility quality. An observation I encountered was on a sunny day, the camera was set to give optimum clarity on the screen, however; when the clouds passed over, visibility on the screen was often obscured. It was often better to use blinds when setting up the visualiser. Coloured pencils or soft pencils also gave more visual clarity to the draft being created when reflected onto the screen. Pictures from books projected well onto the screen.

Interaction and student participation between teaching and learning remains effective as students continue to spontaneously ask questions. A major advantage was that over-crowding around the demonstration was not necessary. A setback was that projecting large articles to demonstrate, such as trousers and dresses, were more difficult to illustrate clearly due to the size of the camera. If sections of the demonstration were not out of shot, the drawings might be slightly out of focus. I experimented with the camera from various angles, i.e. placed high above the cutting table and flat on the table in order to capture the entire 'block' being used for demonstration. Some angles meant that thick coloured pens would be necessary to give clarity to the draft. Since we would need to focus on millimetres in measurements, drawing with thick nib pens would not be a favourable option. The best visibility means that the whole block cannot be viewed in its entirety.
The culture of the sample room is to gather around the demonstration to engage in group participation and taking notes. The visualiser was sometimes distracting for students and myself, as it did not always imbed into the pattern-cutting lecture effortlessly. To partly improve the situation would involve rearranging tables so that the moby-go unit is sited near the side of the classroom leaving a clear path between the projector and the screen and to be less obstructive to the normal use of the room. This may involved the assistance of extra staff and add to the setting up time. The classroom would also need to be re-arranged for subsequent tutors. The size of the camera could be reassessed and the weight of the base made heavier to allow more flexibility on arranging the camera angles.

Draping on the stand could be advantageous as the stand is able to rotate. The drawback is to find a secure position for the visualiser to be most effective for teaching and learning.

3.2.2 Using the Visualiser from a Sewing Aspect

(This was also used in conjunction with a cam-corder to record onto tape and later a DVD)

The stationary location of the visualiser, screen, sewing machine and demonstrator was crucial to the students being able to see the demonstrations in progress clearly. A sewing machine had to be removed from its usual site and strategically positioned. This presented health and safety hazards from cables stretching across the floor and the need for "extension leads". The positive outcome was that the visualiser has the ability to get very close to the needle. When more that one piece of fabric is being used, more clarity is achieved by using contrasting fabrics and contrasting colour threads. The visualiser lens is not very wide therefore, the demonstrator must be aware of 'being out of shot' when performing demonstrations – e.g. removing work from beneath the needle or not holding the completed samples close enough to the camera. Lingering at essential points and showing key aspects of the demonstration to the camera enable all the students to see the results closely without the need to overcrowd the sewing machine or jostle each other. Extra lighting on the sewing machine was an advantage.

Delivering of lesson need to be adjusted to compliment the demonstration in terms of pace and student interaction. The visualiser provided scope for large groups of students to have more visibility and less crowding around a sewing machine. Although the demonstration is visible on the screen, students like to watch the "demonstrator", and handle the samples produced for closer inspection and making notes, this keep the session lively and interactive.

3.2.3 Elements To Be Taken Into Consideration When Using The Visualiser

- Placement of the visualiser and angle of the camera is crucial and must be carefully considered.
- The weight of the gooseneck lens must counter-balance the weight of the base when trying to achieve the optimum angle to project your work. Care must be taken to prevent the visualiser from falling. Much time is needed to set up your workstation.
- Space is required on the demonstration table for additional equipment. The visualiser must remain at a short distance to the moby-go unit and projector due to cable length.
- Lighting is often an issue. It is advisable to deflect natural light from the screen.
- Coloured pens and soft B pencils provide optimum visibility from the screen.

3.3 USING THE CAM-CORDER

The cam-corder is a hand held camera used for recording active classes or for pre-recording presentations on tape or DVD. The cam-corder can also be used on a tripod. It provides the flexibility to plan ahead and record material for presentation. It is a vibrant, energetic and colourful way of presenting information that cannot be brought into the classroom, or presenting tasks that produces a finished product to several groups that would otherwise need to be repeated over and over again. It can be made easily available for self-directed or independent study. Recordings, in either format (DVD or tape), are easily stored, transportable and an engaging source for providing differentiation for students. Students can playback presentations at any time

on the large screen or on the laptop, in small groups or individually, throughout the class.

3.3.1 Use of the Live Recording/Pre-recording from A Sewing Aspect

It is preferable to use an IT technician to shoot the recordings. Live sessions can be useful to capture spontaneous questions/answers, incidents. Recording whilst students are working in the background can pick up unwanted background sounds from the students. Using close-up shots are important to assist the student learning cycle. If a second person (e.g. IT) is recording they will need to work instinctively and as unobtrusively as possible. Prior arrangements must be made with IT technician and sewing room technician to make this more successful. Demonstrations can be quickly recorded and formatted by IT (prior booking taking into consideration). When recording the tasks, be careful to adjust your timing, i.e. pause at the end of each task and show clearly to the camera the completed outcome. Allow for close-up on minute or important details.

3.3.2 Advantages of Making a DVD or Tape from A Sewing Aspect

The tutor can have total control of the content. If the DVD is recorded with chapters/sections it will be easy to select information quickly, thereby aiding differentiation or for self-directed study.

The visual recordings are clear and of a professional quality. The IT technicians record to a professional standard. Handouts and samples can be produced to compliment the recordings. This method of teaching enhances some teaching and learning styles. Students have commented that this modern way of learning is complementary to how they work at home – making the computer central to their way of learning and playing. This can, therefore, be an interactive way of learning by allowing the computer to be integrated into fashion in the classroom.

3.3.3 Elements To Be Taken Into Consideration When Using The Cam-Corder

- When recording during a class with the volume on, it picks up background noise.
- Cables needs to be covered – beware of health and safety issues with students.
- A camera operator is needed for the best outcome. Prior booking for an IT technician is essential as demand could put strain on limited staff numbers.
- Co-operation of other members of staff is essential i.e. the IT and sewing technicians.
- Technicians need to be briefed prior to filming. Students may find the cameraperson distracting.
- Users must be made aware of any legal infringements – regarding students caught on camera, health and safety regulations should injury/accident occur.

3.4 STUDENTS PERSPECTIVE ON USING THE MOBY-GO

Seven students completed questionnaires and task sheets (appendix B). The feedback was evaluated and some of the responses to specific questions relating to students learning are

illustrated in a bar chart (see appendix A).

When I questioned both classes I determined that the majority of the students thought that they: -

- found the moby-go unit cumbersome and took up vital space in a tight workroom.
- found the equipment easy to operate and user friendly
- found the visualiser a distraction, as it could not capture all of the demonstration at once and the physical presence obscured their vision. This was partially due to the size of the '*blocks'* being used.
- prefer the DVD for practical exercises. DVDs with voice-over were much better received.
- found the DVD and power-point presentations useful for recapping exercises and catching up on sessions missed.
- it was a private and independent way to learn.

During the open forum interviews the majority of students said they would use DVDs in open access or during class if a computer workstation were available. All students believed that the equipment assisted their learning because it is

"good in terms of remembering and reminding of processes. Good for one-to-one, I can go to sections which I need for myself, I can go back and forth is miss-understood"; "Help to have something to go back to when you have questions and the tutor is busy. Visual and self directed"; "Easy to follow, clear and avoid time wastage. DVD is quick, avoid the time to prepare (stages) samples that can prohibit a lesson. Power-point excites the lesson, made the lessons more student friendly especially as the students now are more technologically inclined"; "More easily accessible angles to view the pattern cutting"; "The DVD makes it easier to understand when the teacher is not there, it is better than the power-point".

I was able to observe that the students were most willing to use the equipment whether guided to do so or not. The sessions were very active, lively and productive.

3.5 TECHNICIANS PERSPECTIVE ON USING THE M0BY-GO

Both the technicians embraced the moby-go. Once I had set up the visualiser they were able to demonstrate as usual. Initially it was necessary for me to sit at a vantage point where I could guide the technician when and where to hold the completed samples in view of the camera. During the interviews both technicians embraced the use of the visualiser and the camcorder. They believe if students were able to cope with simple exercises that would free up their time enabling them to deliver 1-1 for more complex exercises. This is particularly useful if it is available in open access, samples made during demonstration could be used at open access in conjunction with DVD. They also felt that only the initial demonstration might be necessary. The technician's questionnaires revealed that they were like-minded in all areas (see appendix C). They felt that: -

- it would prevent several repetitions of a demonstrations (or kept to a minimum)
- it would give students a new way of viewing demonstrations
- it would assist students in understanding processes more clearly
- they would strongly support the use of the equipment in open access
- would assist in creating a library of DVD's
- using the moby-go has been a positive experience

4. EVALUATION

1. Cam-corder Impact on Teaching and Learning

The moby-go at first appears to be highly technical and intimidating. Having more that one media resource in one area allows tutors flexibility and variety in lesson presentation throughout a teaching and learning session. Equally, it appeals to different learning styles and adds a new creative dimension to teaching and learning. Tutors are dependant upon technical staff for some of the media selection such as using the cam-corder and making recordings. This could mean that technical support needs to be booked a long time ahead of the delivery date of the teaching sessions to relieve the demand on technical staff. When making a pre-recording it is preferable to have your presentation well scripted and to use a microphone for best results. Using a "voice over" is very time consuming but produces the best quality. Chapters enable the user to select specific content quickly. Captions can be added in various languages to the final product to language difficulties for international students and home students. Distance learning and self-directed study could be supported by the availability of recordings on blackboard.

IT technical staff is not available at all university sites or during evenings classes. Initially this would not inspire confidence in some tutors should they run into difficulties. The starting up instructions posted on the unit is simple and easy to follow but does not cover all eventualities. A check list/trouble shooting/guide master could be laminated and secured to the unit for the users peace of mind/assurance, especially when they do not use the moby-go regularly. Regular use of the moby-go will help with trouble shooting thereby building self confidence and shorten the time it takes to set up the equipment (and room) before class.

2. Laptop Impact on Teaching and Learning

Using the moby-go is a shared experience between students and tutors and to a large extent, the sewing technicians. These computer technologies embrace teaching and fashion comfortably and creatively. It can be imbedded seamlessly into teaching and learning evoking interaction, colour and changing the dynamic and pace of the class. Students appear to like the use of these media resources as it appeals to their social lifestyle and prior learning skills. They are conversant with computers and welcome the use of them for independent and self-directed study. Using the laptop transcends language barriers. Specific training for students is unnecessary as they receive IT lessons, use it in their daily lives and are very familiar with the universities' IT student services. International students appreciate the fact that they can overcome the language barrier by using visuals and playback facilities in their own time to enhance their learning. The laptop enables tutors and students to make presentations via memory sticks or DVD with the ability to imbedded the Internet seamlessly into them.

Visualiser's Impact on Teaching and Learning

The visualiser is the most time consuming media to set up. When this is achieved satisfactorily the students respond favourably. They appreciate the fact that they can view live demonstration and have "close-up" views from different angles. Fewer students find its physical presence interfere with their concentration, on the whole it does not hinder the usual class interactions/Q & A.

Tutors must be mindful to operate within the scope of the lens at all times. The angle of the lens can create a wide-angle view or a close up view. Once the angle is decided upon it is not advisable to change it during the session as this may take some time and disrupt the flow and focus of the session/group.

5. SUMMARY

5.1 THE LAPTOP

The laptop is versatile to use for both students and tutors. The biggest advantage is that it replaces the OHP and uses both memory sticks and DVDs instead of transparencies. It can also connect to the internet which brings immediacy and student interaction into sessions. Hyperlinks can be prepared before to make finding the internet sites effortlessly. Students enjoy power-point

presentations and being able to use the equipment/teaching aids by them-selves.

5.2 THE VISUALISER

The visualiser, at present, is more suited for using with the sewing machine. It can be sited on the sewing machine or close to it without distracting the students. The projector could benefit from being raised to project higher on the screen allowing students to still have the option to view the demonstration direct. Extra lighting helps if dark fabrics are used but another alternative is to use contracting fabrics and threads.

From the pattern cutting aspect the visualiser still needs more development. Much effort is needed to find the optimum position to work from. The main drawbacks are that the lens is small; the demonstrator needs to move around frequently; the draft is not always static; some the 'blocks' are large pieces; the details on the blocks also needs to be clearly visible and the visualiser occupies vital table space. When the visualiser is used successfully for pattern cutting the students reactions are encouraging – some students have even looked forward to using it. The different angles that the camera can project from can be advantageous for the students. It also allows students to make notes from their table, make drawings or copy the demonstration whilst it is happening. Students appear to be less inhibited and less concerned about missing details. Student participation and interactions had not deteriorated when using the visualiser.

5.3 CAM-CORDER

An IT technician makes the recordings for the DVD or tape. The DVD proved more successful than the tape. The DVD is easier to store and more user friendly. A useful outcome is that these recordings could be made available on blackboard (very short recordings only). Students embrace the prospect of finding recorded images on blackboard and would be willing to use it for self-directed study. This prospect has been discussed with Oliver Furlong who is looking into the technology to make this possible in the near future.

Recordings can be made at class demonstrations or pre-recorded. The classes used for this study said they thought the recordings were a good idea and would be willing to use it in open access or borrow them from the library or purchase their own copies. A computer station would, therefore, be needed in the sample room/open access.

The sewing room and technicians said that they would find recordings beneficial if available on computer in open access to aid explanation for simple task particularly during very busy times of the term. The student appears motivated to use the computer equipment for self-directed study. Teaching needs to be adaptable and some adjustments are needed to the delivery of the lessons to imbed the resources successfully.

6. CONCLUSION

These resources can enhance teaching and learning for students, tutors and technicians. The unit enable the tutor to have multi-media resource in one space and is able to switch from one media resource to another at a moments notice. These resources can make teaching sessions more captivating and versatile for the students and more inspiring for the tutor. Students find the resources easy, simple and friendly to use. Students, technicians and myself find the DVD practical and useful. With practice the recordings could be developed with a more 'fun and lively' aspect make it more fun to learn and appearing less technical.

Setting up the mobigo is time consuming so it is vital that they are available in good time before the start of each teaching session. Connecting the equipment is relatively easy as everything is colour co-ordinated. Training sessions in presenting lessons, becoming familiar with the equipment and using it with confidence might take a little time. A lot of pre-planning is necessary on the part of the tutor but once a routine has been established it becomes much more simple to use. If tutors were apprehensive about using the unit, I would suggest that initially they become familiar with using one piece of resource and gradually add others. Students will be encourage their tutor's attitude to the unit and should in turn be encouraged to use the unit to foster their own learning. Many students on this study declared that they learn by watching and touching, the moby-go could therefore enhance their learning styles. This tactile way of learning allows the students to take learning, to a great extent, at their own pace and without the pressure of being observed by tutor or fellow student. Students can use handouts provided alongside the presentations or to make their own notes without necessarily impinging on other students learning. Private group learning can also take place spontaneously; this largely depends upon the interaction of the group.

There are modifications necessary to make the visualiser user-friendlier for pattern-cutting. However, I would propose the continued use of the visualiser to establish it in the classroom and to discover any further shortcomings. The sample room layout also needs to be modified to accommodate the use of the moby-go and the students are to be encouraged to share the equipment.

7. RECOMMENDATIONS

7.1 Technical Support/IT Support/Finance

- IT to develop more suitable lens for visualiser.
- Consider ways of using visualiser and cam-corder safely above the cutting table or dress stand.
- Consider an alternative to the gooseneck for the lens.
- If the gooseneck is maintained, consider the counterbalance of the base of the visualiser
- The moby-go unit desktop could be re-evaluated. The layout prevents multi-purpose use or positioning of the visualiser and any other subsidiary equipment. The sides could be

made into a fold down table for a file etc.

- Provide a computer workstation for each classroom for students to use. DVD's created for specific courses could that be used by students and would address the previous OFSTED inspection requiring a computer in each classroom.
- Facility for recordings to be made available in the library and on blackboard.
- Cable length improved to create more use of space and use of existing furniture in the classroom.
- Screens need to be sited away from the natural light if possible. Reading lamps/lights to be made available for use with the visualiser and the camera.

Tutor/Sewing Technician/IT Technician

- Tailor the delivery of the lesson to the value of the resource being used. Provide training sessions/forum for sharing experience for delivering course material to students when presenting lectures and demonstration, for use with the use of cam-corder and visualiser.
- The pace and delivery of the lectures needs to be tempered when using the cam-corder.
- The layout of the demonstration table needs to be considerably thought through when using the visualiser.
- When using the visualiser with the sewing machine, use contrasting fabrics and threads for clarity. An extra reading light could be advantageous by the sewing machine.
- When using the visualiser with the sewing machine, re-site the sewing machine for a compatible relationship with the projector, demonstrator and students.
- Arrange demonstration site e.g. table, sewing machine, dress stand to avoid accidents and for optimum viewing for all students

- Allow plenty of time to set up equipment (approx. 20 - 30 mins.) dependant upon number of resources to be used.
- Tutors and technicians to plan ahead of class in order to demonstrate in harmony.
- Use screen to control the natural light on the screen.
- Edit video and DVD with chapters for easy search
- Edit video and DVD with captions in various languages and even voice over to aid language barriers and learning difficulties i.e. visual and hearing impairment.

APPENDIX A

Bar Chart

Key to bar chart questions: -

Did you find the equipment easy to operate?

A. Did the equipment get in the way of learning in the classroom?

B. Do you find it beneficial to have sewing and pattern cutting exercises on DVD in the class?

C. Would you use the information if it were available on blackboard?

D. Was the PP presentation used appropriately during the lecture?

E. Were you able to use the PP and DVD for self-directed learning?

F. Were you able to use the PP and DVD for group study?

G. Were you able to see the screen clearly during the sewing demonstrations?

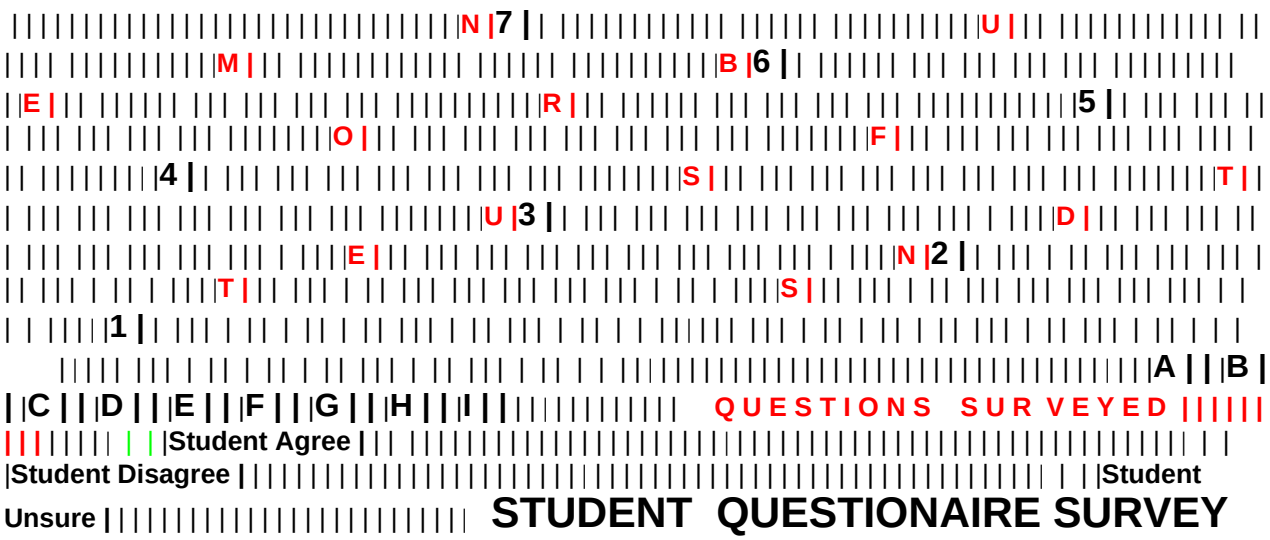
H. Did you find using the DVD or PP without the tutor beneficial?

APPENDIX B

Student Questionnaires and Task Sheets

APPENDIX C

Technician Questionnaires



SEE FULL LIST OF QUESTIONS OVERLEAF