

Image inventory: Design and use with the Dartfish software

Brief

This case study is about what an image inventory is, and how it has been used to aid the collection of teaching and reference clips. "Teaching clips" are digital video clips that are collated and shown to pupils during a lesson, while "Reference clips" are the digital video (DV) images which a teacher will collect over time, and place into an DV image database to be use again and again as a resource in a lesson.

Image inventory: What is it?

An image inventory is a detailed list of images, which have been selected through a structured process. The process was designed to help project teachers to maximise the use of the Dartfish software when they were teaching groups.

Image Inventory Process

Examine your units of work and highlight all the areas you could video.

Things to consider:

- What is the emphasis of this unit of work? E.g. is it centred on acquiring and developing? Is it about applying?
- What are the skills that pupils are acquiring? List them.
- What are the skills that pupils will be developing? List them.
- What skills/game play are pupils going to be evaluating and improving?
- Which skills/game play/strategies are pupils going to be selecting?
- Which skills/game play/strategies are pupils going to be applying?
- Which aspects are going to be covered to develop pupils' knowledge and understanding of fitness and health?

Having done this, break down each aspect highlighted even further and do a "What you are going to video?" list. The example given to the teachers was:

This is part of a list of WHAT you might video during a volleyball unit of work:

- **Clip 1** Volleyball dig showing: flat arm platform, shoulder shrug & leg action.
- **Clip 2** Dig which shows good adjustment & movement to get under a dig.
- **Clip 3** Dig which shows volleyball trajectory off the arm platform.
- **Clip 4** More advanced dig taken to the side of the body.
- **Clip 5** Diving dig.
- **Clip 6** One handed dig.
- **Clip 7** Digs received from serve & their impact on the game.
- **Clip 8** Dig received from serve & selection of dig direction.
- **Clip 9** Dig practice by 4 players for pupils to evaluate/ improve.
- **Clip 10** Digs in a game for analysis of which specific aspects of fitness are required by the skill of dig.
- **Clip 11** Game of 4v4 volleyball showing skills so that skill of dig, set, smash can be recorded in relation to: occurrence, accuracy, application, etc.

Having done an extensive unit of work list, decide which clips you would like to collect as permanent reference clips, and which clips would you like to take and use in lesson

time. It might be that the video clips you take in lesson could also be used as a reference clip if the quality of footage is good. Produce a list of reference clips and a list of teaching clips.

Using the comments below - adjust your two lists:

- Under each of the above clip titles there could be several clip versions, showing both good and bad practice: clip 1 could have several versions showing different performances, e.g. one showing good platform and shoulder shrug but no leg action, another showing good leg action only.
- Consider which clips would be enhanced by special effects, e.g. Clip 3 could be a Stimulation Clip.
- When compiling your clip inventory try to provide information on the content of the clip. See on Image inventory example.
- For evaluating and improving purposes you might like to collect several clips of pupils performing the same skill; capture game play etc., and save the clips in a multiplay format.

Teaching Image Inventory

Clips will be collected throughout several units of work, but use the image inventory so that you go to each lesson knowing which clips you are going to record and show to the pupils. Set up short, mid, and long-term image collecting plans.

Reference Image Inventory

There will be a need to manufacture clips for use with your groups, for example by getting clips of your better performers ("The Collection of good quality reference clips" case study).

What the teachers are doing

Below is a copy of a section of an image inventory compiled by one of the project team. It is incomplete, but gives you some idea of an image inventory in Excel or Word format, which has commonly been adopted by schools in the project.

Activity	Badminton	Year Group:				
Content Label	Contents	Good	Bad	Multi	Simul	Strobe
Bad Doubles	<ul style="list-style-type: none"> • Keeping the attack in doubles • Attacking formation in doubles (front & back) continuous smashes and attack at the net. • Use of the net shot to force the lift to keep attack 					
Bad Doubles (1)	<ul style="list-style-type: none"> • Attacking the service • Use of drop shot from rear court to encourage lift. • Smash from rear court and kill at the net 					

Bad Doubles (2)	<ul style="list-style-type: none"> • Transition from attacking to defensive formation • Continues attacks using smashes • Backhand lift resulting in defensive formation (side by side) 					
Bad Doubles (3)	<ul style="list-style-type: none"> • Defensive formation due to return of service being lifted. • Attacking drive from oppositions smashes • Backhand lift resulting in defensive formation (side by side) 					
Bad Doubles (4)	<ul style="list-style-type: none"> • Using the drop shot to keep the attack • Defensive formation following a defensive clear • Smashes followed by kill at the net 					
Bad Doubles (5)	<ul style="list-style-type: none"> • Transition from defence into attack. • Lift by opponent enables attack. • Smash from rear court and kill at the net. 					
Bad Doubles (6)	<ul style="list-style-type: none"> • Disadvantage of lifting a service in doubles. • Attacking a lift service with a smash and kill at net. 					
Bad Doubles (7)	<ul style="list-style-type: none"> • Defending following a flick service. • Blocking of a smash forcing opponents to lift. • Attacking formation enabling smash and kill at the net. 					
Bad Doubles (8)	<ul style="list-style-type: none"> • Defending following a flick service. • Attacking smash forcing opponents to clear. • Attacking formation enabling smashes and kill at the net. 					
Bad Doubles (9)	<ul style="list-style-type: none"> • Using the drop shot to force the lift • Lift attacked using smashes from rear and mid court 					
Bad Doubles (10)	<ul style="list-style-type: none"> • Attacking the flick service by playing a winning drop shot. 					
Bad Doubles (11)	<ul style="list-style-type: none"> • How lifting at the net gives the opponents the attack • Use of the short backhand service 					
Bad Doubles (12)	<ul style="list-style-type: none"> • Continuous changes in attacking a defensive formations • Attacking the short service forcing opponents to lift allowing attack in the form of smashes (attacking formation) • Use of the net shot to change defence into attack due to lifting of the shuttle. 					

What the teachers are saying

"Compiling an inventory has been useful, but it is time consuming."

All the project PE departments felt that "despite the time aspect, reference clips and image inventories are a teaching and management tool of the future."

"In 6-8 months time part of our units of work will have a reference image inventory attached to them. For example, in badminton the reference clips available for this unit of work are: in lesson one - rebound action, ready position, racket returning to upright position etc."

Another advantage of compiling a reference inventory is that "it focuses you on good and bad practice. It also raises the issue about the gap in between. When we are assessing we do not talk about the top performers who are levels 7 and 8, they stand out like a sore thumb. So do the weaker ones who are still level 3. It is those pupils at level 4-5, the middle ground, who are a real issue when collecting reference images."

Another school is looking at getting reference images of pupils performing core tasks at the end of a unit of work. These images can then be used as examples of performance standards against which pupils can measure their own performance.

"The compilation of a teaching image inventory has been useful in focusing on how we can maximise the use of the Dartfish software to achieve our lesson objectives."