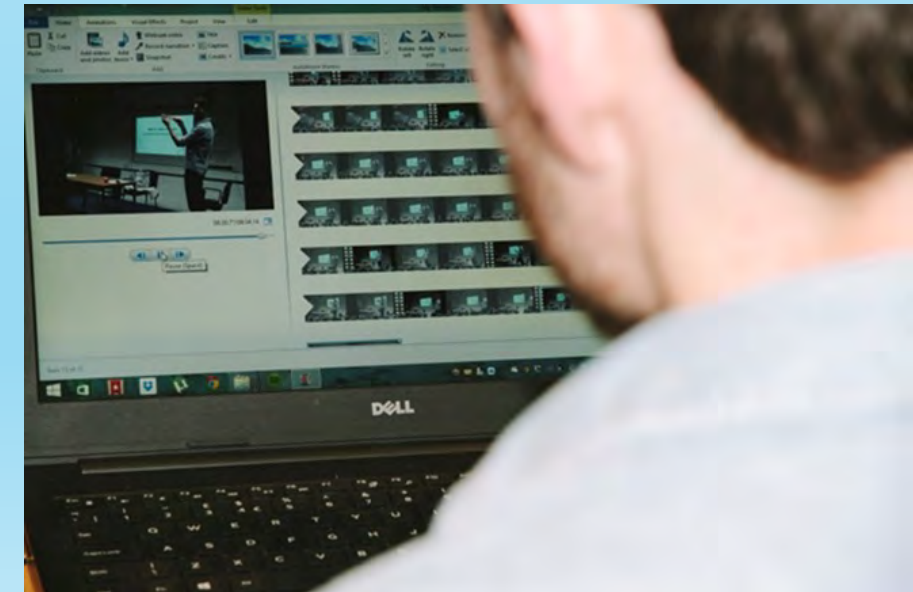
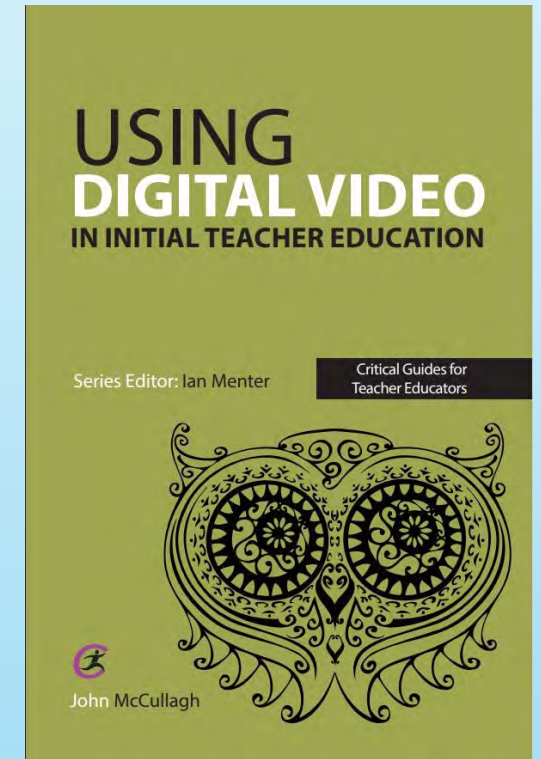


# Having the best of both worlds

## *Using Digital Video in Initial Teacher Education*

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*'Digital video technology has much to offer initial teacher education (ITE), both through the technological affordances it brings to the study of teaching and from its potential to mediate the collective construction of knowledge.'* (p. 1)



## Initial Teacher Education (ITE) is challenging because

- Pre-service teachers bring their own perceptions of 'good teaching' and their beliefs and values regarding education
- To the untrained eye, teaching can seem straightforward- its craft can be subtle and often hidden. Its complexity can be overwhelming.
- Tutors have little control of the experiences which their students are exposed to.



# Three key concepts for understanding the pedagogies of practice in professional education

## **Representations of practice**

-activities which make practice explicit and learners more mindful of its elements.

## **Deconstructions of practice**

-breaking down classroom footage into smaller units of action and thought

## **Approximations of practice**

-activities which take place away from the professional setting.

(Grossman et al,2009)



# Representations of practice

By providing a shared experience across a range of diverse classrooms and teaching scenarios video unearths assumptions and challenges mindsets.



Teachers TV: Light  
John McCullagh



MJoyce-CHEM-Nov2009  
John McCullagh



Reality PD | Middle School Sci...  
John McCullagh

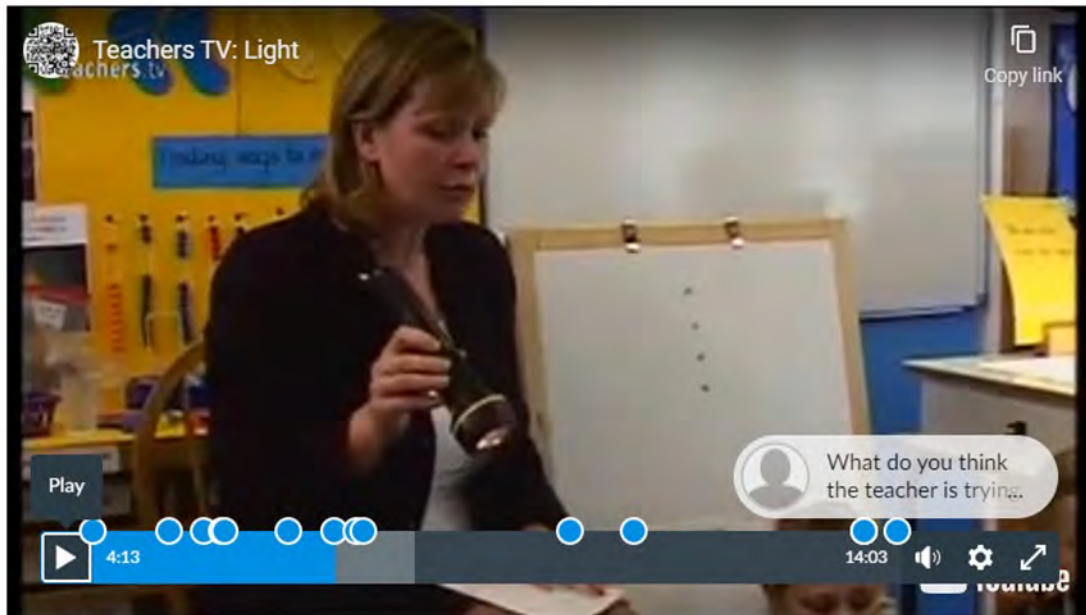
# Deconstruction of practice

Video annotation provides situated guidance. Questions can provide a narrative of enquiry and access the learner's thinking, assess progress and begin to model lesson evaluation.

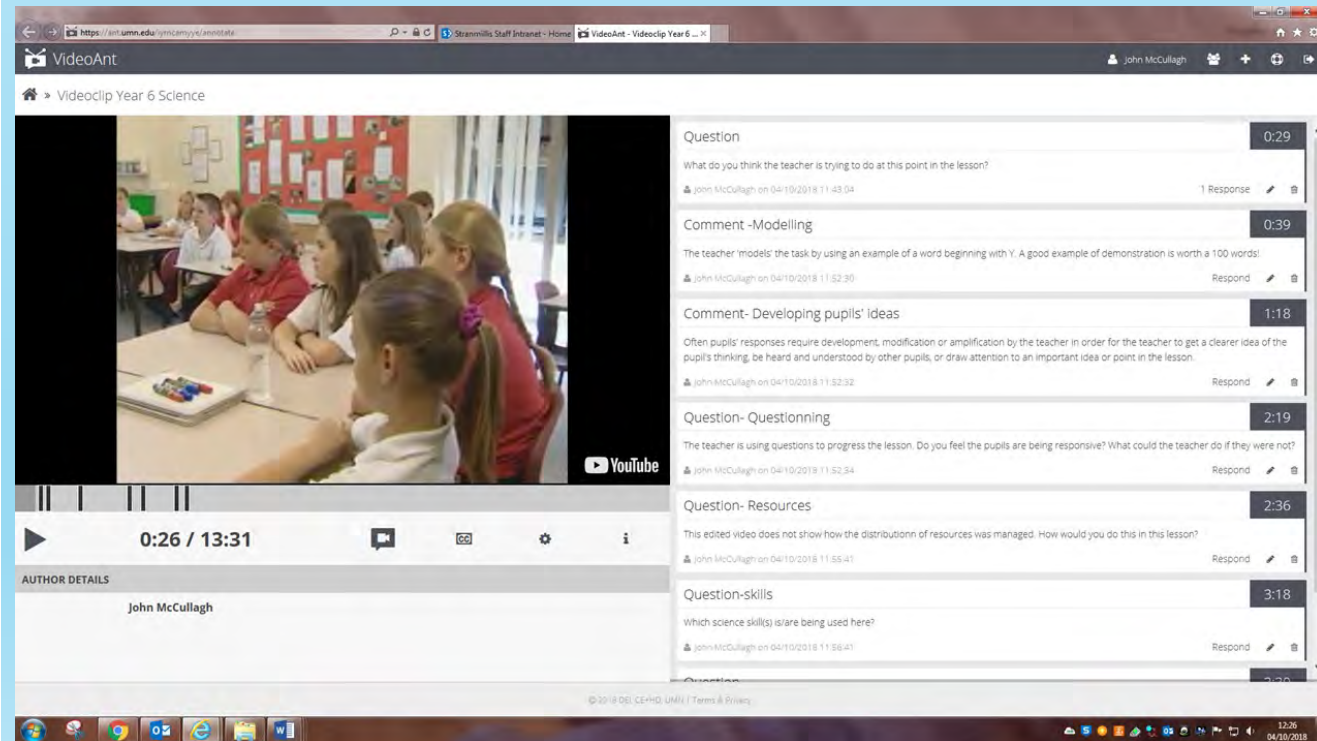
Since this is a group discussion, each group has its own conversation for this topic. Here are the ones you have access to:

- Science & Technology

 Actual Light Lesson!  
John McCullagh



Details Comments Insights Captions



Question	0:29
What do you think the teacher is trying to do at this point in the lesson?	1 Response
Comment -Modelling	0:39
The teacher 'models' the task by using an example of a word beginning with Y. A good example of demonstration is worth a 100 words!	Respond
Comment- Developing pupils' Ideas	1:18
Often pupils' responses require development, modification or amplification by the teacher in order for the teacher to get a clearer idea of the pupils thinking, be heard and understood by other pupils, or draw attention to an important idea or point in the lesson.	Respond
Question- Questioning	2:19
The teacher is using questions to progress the lesson. Do you feel the pupils are being responsive? What could the teacher do if they were not?	Respond
Question- Resources	2:36
This edited video does not show how the distributionn of resources was managed. How would you do this in this lesson?	Respond
Question-skills	3:18
Which science skill(s) is/are being used here?	Respond

# Approximations of practice

Activities reduce complexity of the planning, teaching and evaluating.

Microteaching - scaffolds the progression to enactment of practice.

Draft a lesson plan or a lesson evaluation based on a video.





# Digital video provides **both** the **resource** and a **means** to.....



Access PSTs' prior experience and beliefs about learning.  
Arouse PSTs' interest and curiosity in teaching.

Activate



Analyse and deconstruct practice to develop an understanding of teaching and its relationship to learning

Acquire



Rehearse, develop and enact practice across authentic settings

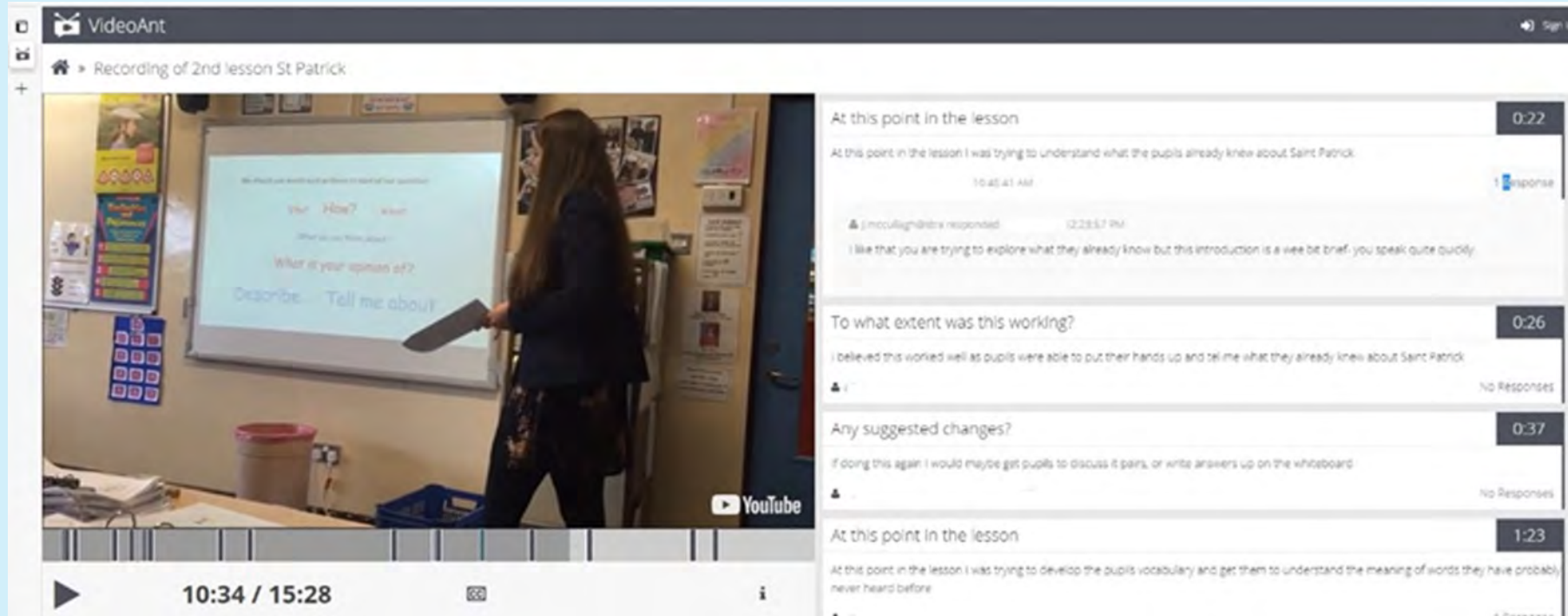
Apply

Digital video provides teacher educators with the means to capture and present practice with its complexity unravelled, yet its detail and its authenticity preserved.

# Interacting with video and Active Learning

Though it is difficult to provide a specific description of active learning it is considered to have three distinct dimensions: (Prince, 2004; Watkins et al, 2007)

- 1. behavioural- the active deployment and the creating of resources and learning materials,
- 2. cognitive-deliberate thought about experiences in order to construct knowledge,
- 3. social- learning through talk during a collaborative resource-orientated task.



The screenshot displays the VideoAnt interface. On the left, a video player shows a teacher standing in a classroom, pointing at a whiteboard. The whiteboard contains the following text: "What do you think about...?", "What is your opinion of?", and "Describe... Tell me about". The video player shows a timestamp of 10:34 / 15:28. On the right, a feedback panel titled "Recording of 2nd lesson St Patrick" contains three sections:

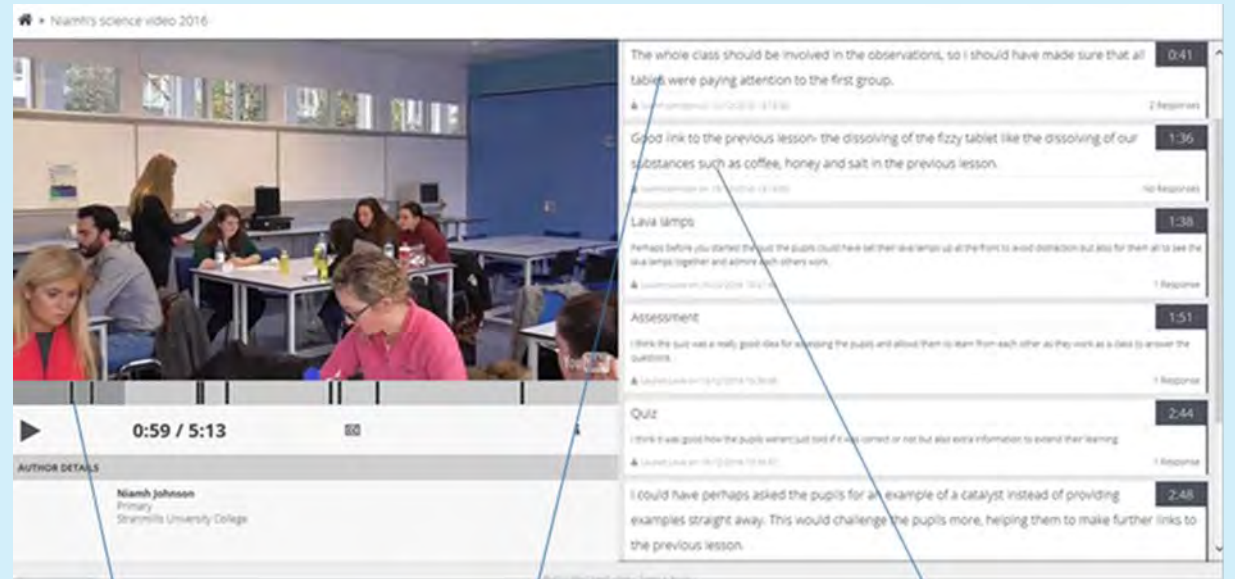
- At this point in the lesson** (0:22): "At this point in the lesson I was trying to understand what the pupils already knew about Saint Patrick." (10:45:41 AM) 1 response. A response from j.mccullagh@btbt.com (12:28:57 PM) says: "I like that you are trying to explore what they already know but this introduction is a wee bit brief, you speak quite quickly."
- To what extent was this working?** (0:26): "I believed this worked well as pupils were able to put their hands up and tell me what they already knew about Saint Patrick." No Responses.
- Any suggested changes?** (0:37): "If doing this again I would maybe get pupils to discuss it pairs, or write answers up on the whiteboard." No Responses.

At the bottom of the feedback panel, another section titled "At this point in the lesson" (1:23) begins with the text: "At this point in the lesson I was trying to develop the pupils vocabulary and get them to understand the meaning of words they have probably never heard before." 1 Response.

# Modes of Interaction

## Video Annotation

This can serve provide the learner with  
a viewing guide  
a tool for self-analysis  
Detailed feedback from tutor.



The screenshot shows a video player interface for a video titled "Niamh's science video 2016". The video is currently at 0:59 / 5:13. The video content shows a classroom scene with a teacher and students. The right sidebar contains a list of annotations with their timestamps and response counts:

- 0:41: The whole class should be involved in the observations, so I should have made sure that all tables were paying attention to the first group. (2 Responses)
- 1:36: Good link to the previous lesson- the dissolving of the fizzy tablet like the dissolving of our substances such as coffee, honey and salt in the previous lesson. (No Responses)
- 1:38: Lava lamps. Perhaps before you started the put the pupils could have set their observations up at the front to avoid distraction but also for them all to see the lava lamps together and admire each others work. (1 Response)
- 1:51: Assessment. I think the suit was a really good idea for watching the pupils and allow them to learn from each other as they work as a task to answer the questions. (1 Response)
- 2:44: Quiz. I think it was good how the pupils weren't just told if it was correct or not but also extra information to extend their learning. (1 Response)
- 2:48: I could have perhaps asked the pupils for an example of a catalyst instead of providing examples straight away. This would challenge the pupils more, helping them to make further links to the previous lesson. (No Responses)

Below the video player, there are three callout boxes with lines pointing to specific elements in the screenshot:

- Time mark of annotation**: Points to the 0:41 timestamp in the sidebar.
- Author's comment**: Points to the text of the first annotation.
- Response from peer**: Points to the "2 Responses" count for the first annotation.

## Video Editing

Greater control over which clips to include and what comments they want to make. It allows PSTs to accurately recount the story of their personal experience of teaching. For both teller and audience, story-telling can be compelling and emotionally engaging allowing an individual to reshape, reassess and reconstruct events and create the possibility for change and growth (Williams et al, 2006).

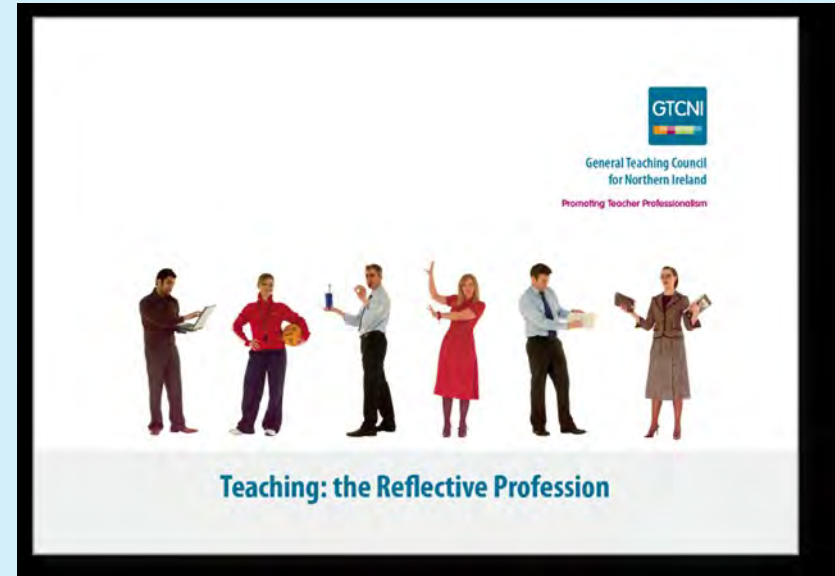
# The Challenge of Reflection

Despite its importance within ITE reflection can seem.....

- vague and abstract
- rooted in the past
- of limited value

Reflecting limited by

- limited time and opportunity during placement
- competing priorities
- the format for reflection



# DEVELOPING REFLECTIVE PRACTICE LESSON ANALYSIS FRAMEWORK

Annotation provides access to student thinking

Scaffolds the process of analysis



Explain



Assess



Modify



Curlett, Olivia 4 months ago Delete

1. Opening 00:08

**Explain:** My lesson was for a Primary 3 class on the topic of 'Floating and Sinking'. To introduce the lesson, I asked the pupils to reflect on the book we had read together the previous day called 'Who Sank the Boat' by Pamela Allen. I also introduced the investigation the pupils would take part in by reading a letter from Pirate Pete.

**Assess:** My tone during the opening was enthusiastic and confident, and helped to capture the class's attention. I tried to get the pupils to recall for themselves as much information as they could from the previous day through effective questioning, rather than me relaying the information. I spoke clearly and the language I used with relation to floating and sinking was suitably tailored for a P3 class. The book I chose was highly suitable for this lesson; it focuses on the theme of floating and sinking, and it gets pupils to think scientifically; the book does not reveal to the children what animal is responsible for sinking the boat, but rather gets the pupils to solve this puzzle using their knowledge of why things float and sink. To engage the pupils and give the lesson a sense of purpose, I read a letter I had received from Pirate Pete that had a task for them to complete.

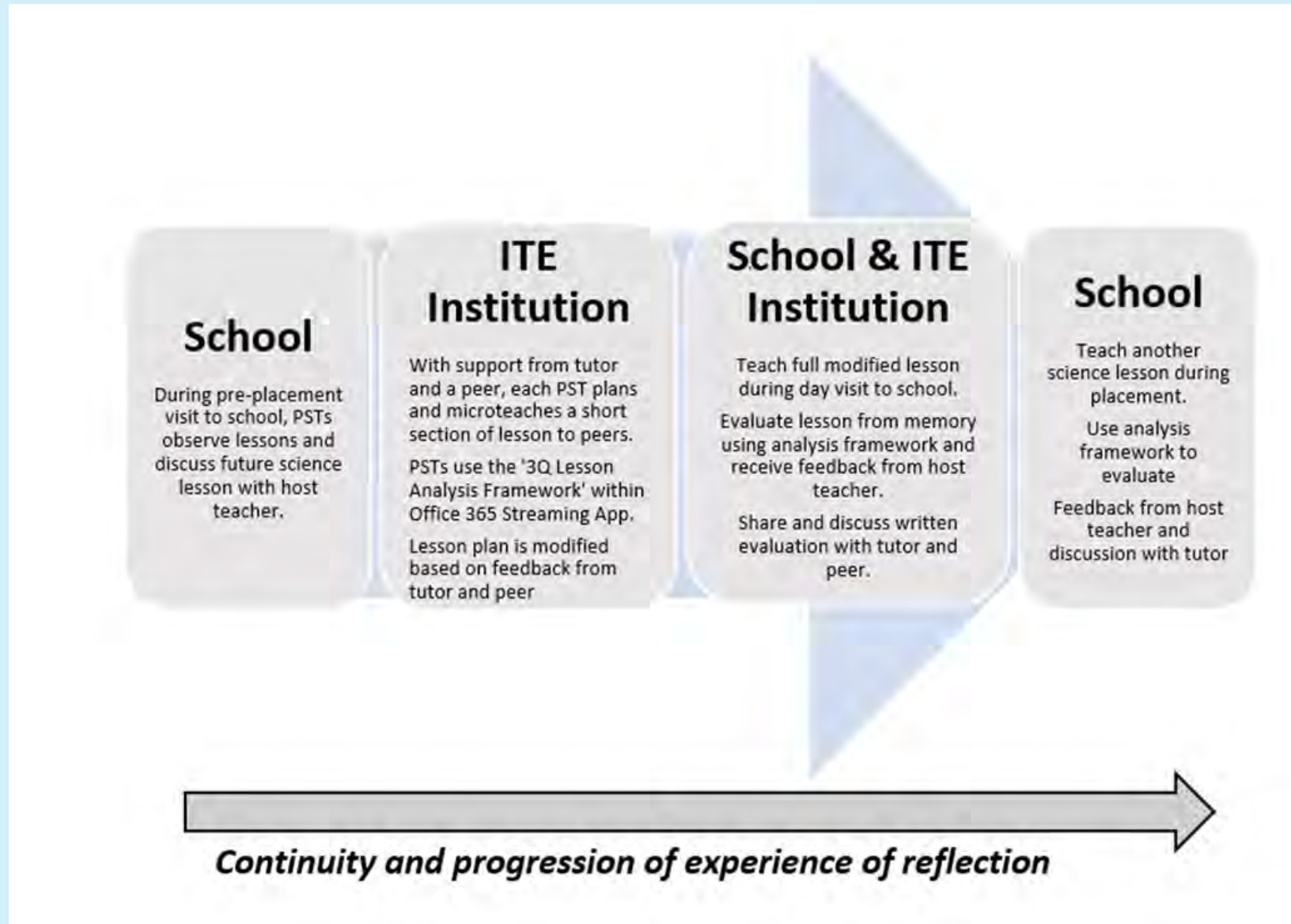
**Modify:** In order to make the opening of my lesson more effective, it would be beneficial to gather the pupils together in the carpeted area at the front of the class; together we could look at the book again, but I would ask the pupils what is happening in each picture; they would become the narrator. In addition, I would send the pupils back to their tables and get them to discuss with their table partner why the boat sank or who they think sank the boat; this would have helped pupils' understanding of the book, and also helped them to develop their ideas and be more prepared to give an answer. It would build their communication skills and ability to work with others. Also, alongside the letter from Pirate Pete, I would use a puppet; questioning pupils using a Pirate Pete puppet may have encouraged pupils to contribute and also think about the questions more carefully.

[Read Less](#)

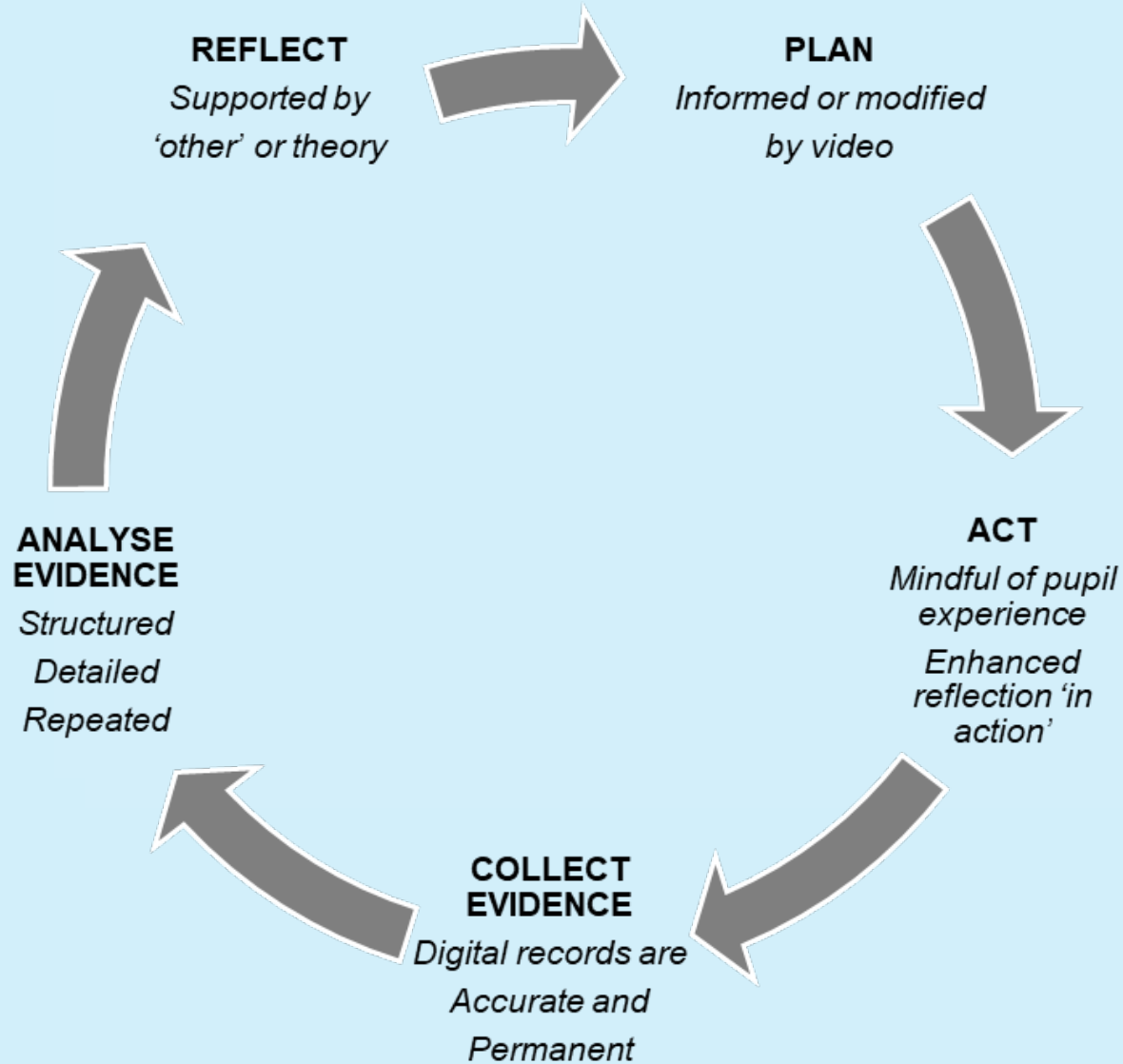
No more comments

Developed from Amobi's (2005)  
rubric for written reflections.

# PSTs use analysis framework before and during school placement.



# Video Supported Reflection



(Adapted from Pollard, 2019)

# How can the use of digital video inform practice and structures within ITE?

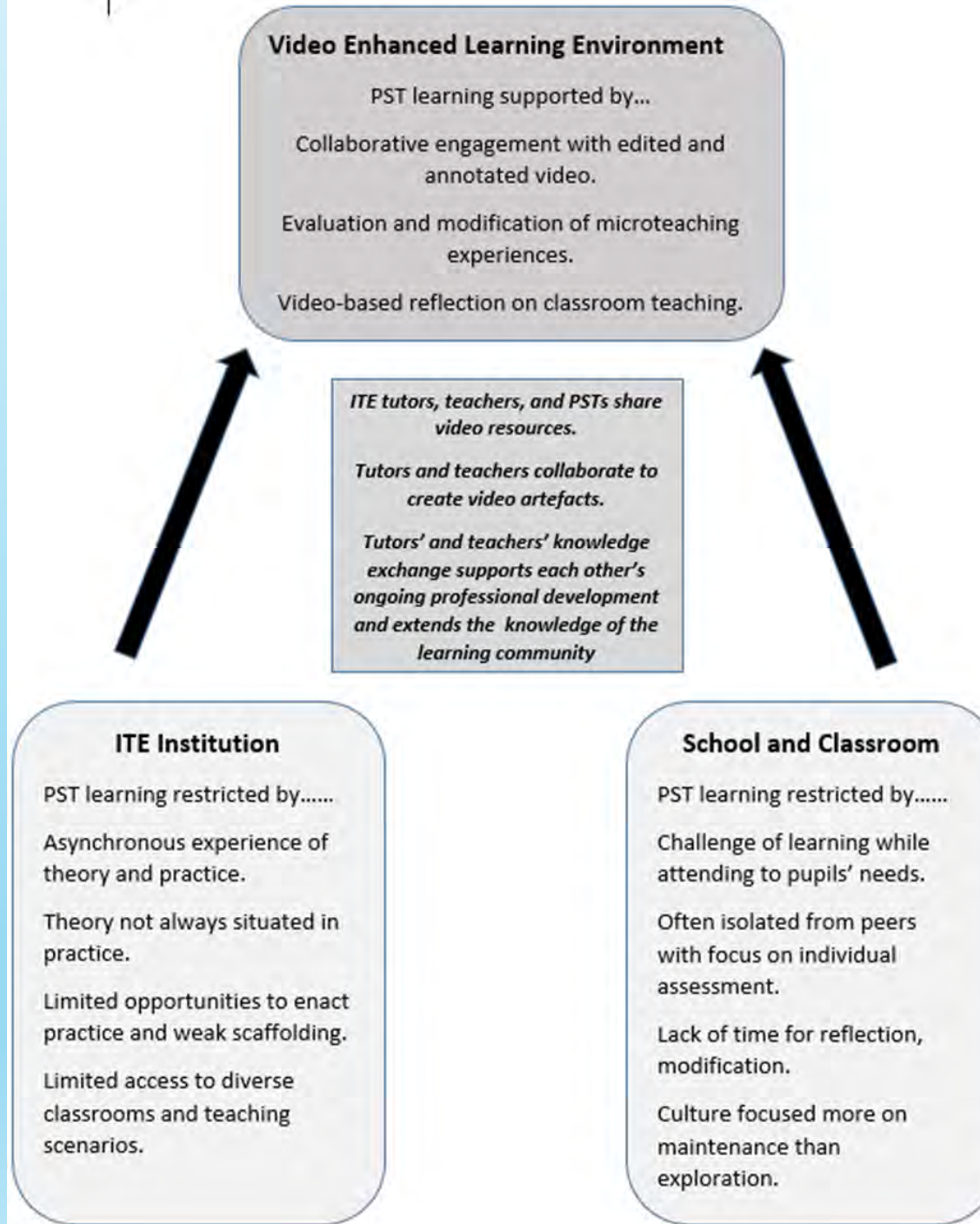
From their study of effective ITE programmes, Korthagen et al (2006) identified seven 'fundamental principles' across the following three key components.

1. *Views of knowledge and learning*- something which is **created**
2. *Program structures and practices*- **centred on classroom practice** which is collaborative and exploratory
3. *Quality of staff and organisation*- strong **partnership** between ITE institutions and schools.

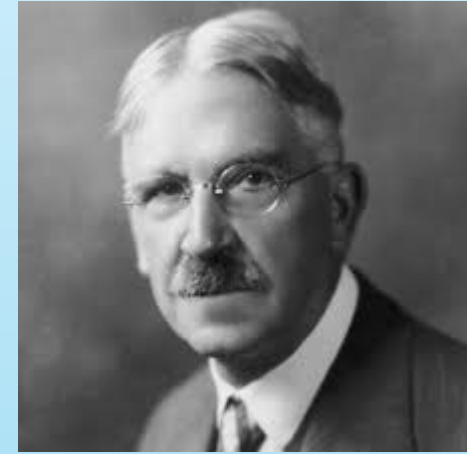
Their prescription is consistent with Darling-Hammond's (2006, p 1) view that twenty-first century ITE programmes should prioritise '*extensive and intensely supervised clinical work integrated with coursework using pedagogies linking theory and practice, and closer, proactive relationships with schools.*'



Digital Video can provide a 'third space' where PSTs can explore and develop their practice.



Above all else, digital video empowers teacher educators to respond to Dewey's condemnation of 'teaching by pouring' and 'education by telling', by providing the resource and the processes for the construction of understanding and the development of professional agency.



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Interacting with videos of their own and their peers' teaching enhances pre-service teachers' self-efficacy belief

