If I explore key threshold concepts more explicitly with my Year 12 photography students will they develop a stronger sense of themselves as artists, able to reflect critically on their own and others’ work?

Section 1: Context

I have been teaching A level photography for several years at Thomas Tallis School. The discipline of photography is both well established in the curriculum and popular with students. Photography forms part of the AQA Art & Design specification. At A level, classes are taught by at least two teachers. Classes are relatively large and facilities are good although, with so many having opted to study the subject, not all of the students have access to the specialist teaching space every lesson. I have selected a Year 12 photography class as the subject of this Action Research Project. The class currently contains 19 students, 18 of them female. I share the teaching of this class with an experienced male colleague. I see the class for 40% of their teaching time. The class is mixed in ability with 4 students below 40 APS, 8 students below 42 APS and only 2 above 48. The average point score for the whole class is 43.2. 11 of the students have moved to Tallis from other schools, 3 of whom having studied GCSE photography achieving grades A, B and D. The class is generally well-motivated and enthusiastic about the subject.

Students were given a choice at the start of the course about how they wanted to document their work. The majority chose books but several elected to create websites. In order to support the students in both the AS photography groups, I decided to create an exemplar website that could be used both as a teaching resource by all photography teachers and as a student guide to best practice. The creation of this site prompted me to reflect on the type of resources and stimuli I showed the students this year. I had re-designed, in collaboration with colleagues, the AS course in 2013, creating a new programme of study on the theme of ‘Contrasts’. The new site provided a way for me to model for students (and colleagues) ways of documenting and responding to a variety of stimulus material using a website format. This site is the primary vehicle for sharing information with students in and outside lessons.

Section 2: The Issue

This study evolves from a previous eedNET Action Research project in 2013-14. The focus of the project was also an A level photography group and the resulting report indicated several issues for further research:

There is tentative evidence that some students are aware of having developed a new understanding of art and themselves. I am aware that further research is needed here. Whereas schools tend to focus on and assess progress in acquiring propositional (knowing what) and procedural (knowing how) types of learning, I am interested in attempting further research about other learning outcomes less easily assessed and yet central to an arts pedagogy. These might include axiological learning (changed values) and ontological learning (feeling differently related to things). I feel fortunate to be part of a reference group at Tate which is engaged in evaluating the particular affordances of its own model of CPD for teachers and for whom these alternative frameworks are key to understanding what happens when teachers learn in a gallery setting. This, I hope, will help me structure similar enquiries in school.

My ongoing membership of a reference group at Tate, an emerging research partnership with artist Anna Lucas and an invitation to visit Tate Britain with the class in question to explore part of the collection with artist/researcher Nicholas Addison, were also factors in helping me identify the focus of my project this year. I was interested in several issues affecting the signature pedagogy of the photography department at Tallis and, consequently, the quality of learning afforded our A level students:

- How well do we teach students how to think and behave like artists/photographers? What does this mean? How do we make better use of practising artists/photographers and links with cultural organisations?
- Do we spend enough time questioning and discussing the nature of the subject? Is this necessary or would it get in the way? Is there sufficient time for this kind of discursive enquiry?
- How effectively do we ask students to reflect on how they feel about photography, specific examples of photographic practice and the value of photography? Is it possible or appropriate to engage explicitly with aspects of affective, axiological and ontological learning?
- Does the AS course adequately prepare students for the demands of increased individual study at A2 level?
- Do we agree in the department about the key threshold concepts in photography? How can we adopt a shared approach to the teaching of threshold concepts in an imaginative and engaging way? What do we think is the benefit of doing this?

Section 3: Research

I attempt to teach photography as a branch of contemporary art practice. Having been trained as an art historian I am also committed to making the history of photography and aspects of photography theory a key feature of the A level course. I am interested in the creative tension associated with encouraging students to exercise their capacity for play and wonder whilst also developing their critical and conceptual faculties. I am also interested in the relationship between knowing and not knowing (or unknowing) and between the ability to engage in both art practice and critique. The relative absence of overt teaching of historical knowledge and critical skills on our current A level photography course concerns me for three reasons:

1. Students tend to assume that the subject is largely `practical' and academic modes of study play a very minor role. This can lead to a lack of parity between technical and conceptual processes.
2. In order to create photographic works of art that are meaningful, students need to develop a sophisticated understanding of the methods, materials, processes and attitudes of artists alongside an awareness of critical viewpoints that call into question some of the historical assumptions made about the medium.
3. The ability to engage in critical thinking is empowering for students. This is especially true for a medium like photography which so dominates our everyday visual experience. A lack of critically engaged understanding of photography means that students are more likely to be ignorant of and potentially coerced by the dominant forces of power and privilege. As Liz Wells has written:

> Given the inter-relation of theory and practice, critical skills inform and support artistic development as well as contributing to more general involvement with ideas and cultural processes. To lack critical skills, knowledge and confidence in judgement involved in critical engagement is, in effect, to be disempowered.⁶

I discovered the following notion which helped me reflect on the role of threshold concepts in learning:

> A threshold concept can be considered as akin to a portal, opening up a new and previously inaccessible way of thinking about something. It represents a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress. As a consequence of comprehending a threshold concept there may thus be a transformed internal view of subject matter, subject landscape, or even world view. This transformation may be sudden or it may be protracted over a considerable period of time, with the transition to understanding proving troublesome. Such a transformed view or landscape may represent how people `think' in a particular discipline, or how they perceive, apprehend, or experience particular phenomena within that discipline (or more generally).⁷

The idea of troublesome knowledge appealed to me as well as the notion that students often inhabit a liminal space, 'a suspended state of partial understanding, or `stuck place', in which understanding approximates to a kind of `mimicry' or lack of authenticity⁸. I began to wonder whether we have perhaps avoided the big ideas in photography, concentrating instead on developing techniques and a necessarily inauthentic process of responding to the work of other artist photographers as our primary pedagogic strategy. What passes for research at AS level can be relatively superficial. This can consequently lead to equally superficial, pastiche responses. Although there is some merit in students imitating the work of established artists, especially those new to the subject or unconfident about their own identity as artists and aesthetic preferences, my sense is that it might be beneficial for all students, regardless of ability or disposition, to also attempt to tackle some of the big ideas that help to shape the discipline of photography. My hope would be that grappling with this tricky or troublesome knowledge would deepen their engagement with the subject, encouraging them to adopt a more critical relationship to their own work and that of others. I was interested in the connection between the development of students' aesthetic appreciation through making works of art and their understanding of key ideas related to aesthetics, a dialectic articulated here by Elliott W. Eisner in a conversation with Ron Brandt:

> There is a difference between aesthetics in learning and the learning of aesthetics. Aesthetics in learning is the feeling of satisfaction one gets from making a beautiful object, for example, or in doing a scientific experiment, for that matter. The learning of aesthetics is introducing children and adolescents to a set of ideas that have been around for along time: questions that have never been adequately resolved. For example, do works of art need to be beautiful . . . Can something that is fictional tell the truth? Do you need to understand the intention of an artist to evaluate the adequacy of his or her work? . . . Raising those kinds of questions, particularly with adolescents, opens up the artistic world in a way that the making of images does not.⁹

I began to think about what these threshold concepts might be and how to share them with the students. I discovered an excellent blog post by artist and academic Jim Hamlyn entitled 'Thought • Art • Representation: Ten Threshold Concepts in Fine Art'¹⁰. Although focused on undergraduate level fine art study, Hamlyn identifies a useful set of concepts (which I have summarised below):

1. **Leaving “Home”** - a separating from friends and family, metaphorically as well as perhaps physically.
2. **The shift from aesthetic to conceptual awareness** - an understanding of the creative process as one which requires critical thinking and idea development through research and reflection conducted using a variety of approaches, methods and materials.
3. **Understanding ideas surrounding authorship & appropriation** - a realisation that contemporary art is just as much an intellectual process as a technical one.
4. **Understanding how research influences and informs practice** - being strategic and relevant in one’s research rather than randomly filling sketchbooks and study journals with everything looked at in an attempt to prove that research is happening.
5. **Understanding the professional context in which artists work** - being able to relate and identify with or “inhabit” the title “artist”.
6. **Being able to differentiate symbolism from metaphor** - once a student grasps this difference, they are often more able to take advantage of the more subtle ways in which metaphor might be employed, rather than through the more heavy handed and closed use of symbols.
7. **The private to the personal** - to recognise that it is possible to explore all kinds of private concerns in work which is intentionally layered and therefore able to be interpreted in a number of ways which protect the more private aspects of the work and therefore the individual.
8. **Creation as an ideological process** - the realisation that all creative practice is in some way ideological in content and effect.
9. **Accepting authorship for unintended or intuitive successes** - learning to accept – and even to cultivate – serendipitous or intuitive outcomes is a threshold which demands a new and more expansive conception of creativity as a process of inviting, perceiving and accepting the unexpected, chance and discovery, etc.

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⁶ Wells, Liz (ed.) *The Photography Reader* p.3  
⁷ Meyer, Jan and Land, Ray *Threshold Concepts and Troublesome Knowledge: Linkages to Ways of Thinking and Practising within the Disciplines*, 2005  
⁸ [http://www.ee.ucl.ac.uk/~mflanaga/popup3liminality.html](http://www.ee.ucl.ac.uk/~mflanaga/popup3liminality.html)  
¹⁰ [http://thoughtsonartandteaching.blogspot.co.uk/2011/12/ten-threshold-concepts-in-fine-art.html](http://thoughtsonartandteaching.blogspot.co.uk/2011/12/ten-threshold-concepts-in-fine-art.html)
Discoveries as opposed to messages - accepting that the process has the potential to reveal things which never could have been imagined beforehand.

The current specification\(^\text{11}\) for the AQA A level photography course identifies the following areas of knowledge and understanding:

AS and A Level courses should require candidates to develop practical and theoretical knowledge and understanding of:

- relevant materials, processes, technologies and resources
- how ideas, feelings and meanings can be conveyed and interpreted in images and artefacts
- how images and artefacts relate to the time and place in which they were made and to their social and cultural contexts
- continuity and change in different genres, styles and traditions
- a working vocabulary and specialist terminology.

Interestingly, the new specification\(^\text{12}\) (for first teaching in 2015) presents these areas of knowledge and understanding slightly differently, placing greater emphasis on the relationship between historical and contemporary approaches and the environmental and ethical contexts in which photographs are made:

Students must show knowledge and understanding of:

- relevant materials, processes, technologies and resources
- how ideas, feelings and meanings can be conveyed and interpreted in images and artefacts created in their chosen area(s) of photography
- historical and contemporary developments and different styles and genres
- how images and artefacts relate to social, environmental, cultural and/or ethical contexts, and to the time and place in which they were created
- continuity and change in different styles, genres and traditions relevant to photography
- a working vocabulary and specialist terminology that is relevant to their chosen area(s) of photography.

I began to construct a list of threshold concepts\(^\text{13}\), collaborating with colleagues in the department at Tallis and sharing thoughts with others using social media. The following is what we devised:

1. **Photography has many genres**, some of which are inherited from painting (e.g. still life, portraiture, landscape). Some genres are unique to photography (e.g. photojournalism). Artists/photographers often play with genre conventions for creative purposes, disrupting our expectations.

2. **All photography is the capturing of light** (radiant energy) and includes images that are made without a camera or film. The digital revolution has instigated a renewed interest in the materiality of photography. This materiality includes a consideration of both the photographic object and the way it is presented to the viewer.

3. **Photography is multi-disciplinary both in theory and practice.** It is a hybrid form of art informed by science, social science and the humanities. Photography is also the most diverse and democratic of the visual arts. It has multiple functions, contexts and meanings within and beyond the art world. These sometimes overlap in interesting ways. Art photography accounts for a very small percentage of the photographs that exist in the world.

4. **Photography is unlike other visual arts** in that it begins with a world full of things rather than with a blank slate. Photography is more an art of selection and translation rather than of invention. However, photography is also an art of production, not just reflection. It does things to the subjects it represents.

5. **Cameras 'see' the world differently to the way we see the world with our eyes.** The physical object (whether this is a printed image or pixels on a screen) can sometimes ‘disappear’ because photography is able to generate an almost perfect illusion of reality. We tend to see only the subject depicted rather than the photograph itself. However, all photographs are, to some extent, abstractions. Most photographs are monocular. The flatness of photographs creates relationships between objects that may not have existed in reality. All photographic images have been shaped by the technology the photographer chooses and by a process of selection, editing and manipulation. Each and every photographic image is therefore made or constructed, rather than being a window onto the world.

6. **Photographs consist of formal and visual elements and have their own 'grammar'.** These formal and visual elements (such as line, shape, repetition, rhythm, balance etc.) are shared with other works of art. But photographs also have a specific grammar - flatness, frame, time, focus - that give structure to a photographer’s perceptions of the world. ‘Mistakes’ in photography are often associated with (breaking) the ‘rules’ and expectations of this grammar e.g. out of focus, subject cropped, blur etc. Some photographers reject formalist concerns in order to establish an aesthetic that represents their critical position and does not rely on conventional notions of beauty.

7. **Chance plays a very significant role in photography.** You can fight chance, tolerate it or embrace it. To some extent, all photographs are the result of chance processes.

8. **The meanings of photographs are never fixed,** are not contained solely within the photographs themselves and rely on a combination of the viewer's sensitivity, knowledge and understanding and the specific context in which the image is seen.

9. **Photographs are never ideologically neutral.** Their ability to make things look attractive can make them particularly susceptible to the abuse of power. Therefore, students of photography must be very suspicious of making superficially beautiful images or seeing beauty as either desirable or neutral.

10. **Photographs warp our sense of time.** All photographs present us with a simultaneous then and now. Photographs remind us of people and things that have been. Photographs record what has been lost, what no longer exists, or what still exists but will be lost at some point in the future.

Following the collaborative completion of the the Threshold Concepts, my colleague Chris Francis from St. Peter’s School in Bournemouth, wrote a blog post\(^\text{14}\) about the way his students were engaging with these big ideas. He presents examples of his students’ work in relation to each concept which he describes as a “brew” of “facts, concepts, wider contexts - personal beliefs even - all amalgamated to form a valuable resource.” I am very grateful to Chris.

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\(^{12}\) [http://filestore.aqa.org.uk/resources/art-and-design/specifications/AQA-ART-SP-2015-V1-0.PDF](http://filestore.aqa.org.uk/resources/art-and-design/specifications/AQA-ART-SP-2015-V1-0.PDF)

\(^{13}\) [http://spo.aj/2/5vCR](http://spo.aj/2/5vCR)

for his advice during the creation of the concepts and for his ongoing encouragement about their usefulness within the photography curriculum. We are now collaborating on a new resource for photography teachers across the country, more of which later.

I resolved to find a way to integrate more explicit reflection about these concepts in my own lessons (opening them up to critique and adaptation) during the Spring Term as students completed their Unit 1 coursework portfolios and began to prepare for the Unit 2 Externally Set Assignment.

Section 4: Action

My research question was therefore:

If I explore key threshold concepts more explicitly with my Year 12 photography students will they develop a stronger sense of themselves as artists, able to reflect critically on their own and others’ work?

I was conscious of the diversity of my Year 12 class in terms of academic ability, socioeconomic status and cultural capital. I wanted to find a way to encourage reflection about the big issues in photography that supported Stretch and Challenge for all students and that was engaging and inclusive. As much as was possible, I wanted these reflections to form part of an everyday dialogue with students rather than being bolted on or given specific learning time. I speculated that each student would respond to the concepts differently. I devised the following set of strategies:

1. I would undertake an attitudinal survey at the beginning and end of the intervention period in order to establish the extent to which the students felt they had made progress in developing specific habits of mind, particularly the ability to be persistent and reflect critically.
2. The students and I would create a classroom gallery space entitled ‘What is photography?’ We would nominate works for inclusion in the gallery at the start of each lesson (up to a maximum of 20 images). The criteria for inclusion would be a description by the nominator of the particular reason why the image helped to explicate the title of the exhibition ‘What is photography?’ Once we reached 20 images, any new image added to the gallery would have to replace an existing picture. The nominator would propose a rationale for replacement and the class would debate the relative merits of both images before deciding which one to include. These discussions would attempt to draw out some of the threshold concepts so that they could be debated and interrogated by the group. I was open to the idea that the students might want to either challenge and adapt the concepts devised by colleagues or devise new concepts. I would initiate this process by setting the students a home learning assignment over the Christmas holiday which required them to curate an exhibition entitled ‘What is photography?’
3. In one-to-one tutorials I would attempt to engage students in reflecting on the threshold concepts as they related to their own practice. I was particularly interested in supporting students who were seemingly stuck or struggling with a particular concept, what researchers have called a state of liminality. As Glynis Cousin has noted, “Threshold concept research is sited in this space, establishing a dialogue with the students about their struggles to comprehend.” I planned to record examples of these discussions with a representative sample of students.
4. I would use a sequence of short video extracts over a number of lessons featuring artist photographers exploring their practice.
5. I would conduct structured interviews with a small group of representative students at the beginning, middle and end of the intervention period. These interviews would attempt to explore issues related to affective (feeling differently), axiological (changed values) and ontological (differently orientated) learning.
6. I would organise a trip to an art gallery in collaboration with artist Anna Lucas in order to encourage the students to work alongside a contemporary artist, perhaps understanding certain aspects of her practice in relation to light and lens based media.

Section 5: Findings.

I decided to keep a diary of each lesson attempting to record my intentions and observations, my choice of resources and method of sharing the Threshold Concepts with students. The completed diary was a useful tool for reflection and analysis of my pedagogy, reminding me of details and the questions I had about each lesson. For example, the first lesson was designed to begin the process of creating the classroom gallery entitled ‘What is photography?’

I had created a gallery of my own online and asked the students to think about which images from the history of photography they would choose for their own exhibition. The only criteria I stipulated was that the images both individually and collectively would help to answer the question ‘What is photography?’

Students had chosen an installation, in which the primary artwork was not a photograph. I decided to point this out to them and ask them to re-consider their choice by reflecting again on the task.
There were several opportunities to initiate discussion about some of the Threshold Concepts (previously identified). One discussion hinged on the way that photographs are difficult to separate from their referent (Barthes). Others were about the idea of photographs as historical documents (Vietnam war, moon landings, 9/11). The discussion with X was also concerned with the propaganda role of photographs and their influence on the course of history. A discussion with Y was concerned with the relationship between photography and conceptual art (Bruce Nauman). We discussed notions of skill and the role of photography as a document of performance. Other discussions were about privacy and the law (Philip Lorca diCorcia’s ‘Head’), appropriation (Joachim Schmid), the origins of photography (Niepce) and personal taste.

This lesson confirmed two important issues for me:
1. Year 12 students consume and create large quantities of photography but some of them have a very limited understanding of its historical, cultural or theoretical significance
2. Using the Threshold Concepts in discussion yielded engaged and thought-provoking dialogue

Consequently, I decided to publish the final version of the Threshold Concepts on my example A level photography website19 and create a set of physical cards to give to students.

My second lesson with the group also coincided with a formal observation by the Deputy Head responsible for Teaching and Learning and the Head of Media Arts. I received positive feedback which included comments about students’ progress (“knowledge is ‘powerful’ in that students are being forced to think for themselves”), learning habits (“Most students are imaginative, although one group struggled more than the others – teacher spotted this – Students are confident and used to being empowered. Good collaboration and pushed to be inquisitive”), pedagogy (“Students are clearly forced to think rather than given answers”) and AfL (“Excellent searching and probing questions with plenty of opportunities for peer discussion and debate. Students are definitely given opportunities to criticise and reflect”). One of the activities involved students reflecting on the ‘big questions’ in photography. The responses were illuminating:

“Exposure to the unseen”
“Convey a segment of reality”
“Photography is a tool with the ability to evoke the truth but also deceive the viewer. The composition, shutter speed and other elements are all instrumental to a photograph achieving its purpose”
“Photographs may seem like they are reality. However, photographs are not 3D and also you can only look at a photograph from one angle unlike being in the room you can view things from different angles”
“Technically photography is the art of processing images. However, together we have come to create an exhibition of the real meaning of photography. Photography is showing the ways in which a camera can create something more than an image. Anybody can take an image but not everyone can take a photograph. It’s literature captured on film”
“Photography is really good at:
● freezing a moment in time that last forever
● questioning reality - fake/real - it is never a full story
All photos are abstract - life has no edges - not still”

http://tallisalevelphoto.weebly.com/threshold-concepts.html
I was pleased to see that most students were beginning to engage with the Threshold Concepts, exploring complex ideas and moving beyond a superficial reading of photographic images. It seemed to me that they were entering a liminal zone where their previous understanding of photography had been unsettled. This was very encouraging. In my lesson feedback the Deputy Head made a comment about the pace of the learning. This was also reflected in the notes he had made:

Timing of tasks - maintaining pace with all groups. Is there scope for some groups to move quicker than others? Could there have been prompts about genre / chronology etc?

It was certainly the case that the groups responded differently to the challenge of selecting and discussing images for the gallery. One group, in particular, needed quite a lot of encouragement and prompting to remain engaged. We discussed the issue of pace and the expectation that students should be making visible progress in the lesson. Whilst I recognised that some students were clearly struggling to make progress I was interested in the idea that this might be a productive struggle. I think there are serious problems with the notion of observable progress in lessons\(^2\) and the need to see certain kinds of learning behaviour. Why should learning appear to be happening quickly, for example? Why is a pacy lesson preferable to a slow one? Whilst it might not be very productive for students to find themselves stuck for long periods, is being stuck (and therefore a perceived loss of lesson pace) a bad thing? Could the experience of being stuck reflect the students’ liminality, their encounter with a learning threshold?

The idea that learners enter into a liminal state in their attempts to grasp certain concepts in their subjects presents a powerful way of remembering that learning is both affective and cognitive and that it involves identity shifts which can entail troublesome, unsafe journeys.\(^3\)

Given that we want our students to be better able to tolerate uncertainty and stick with difficulty should we be designing more opportunities for them to practice these habits of mind?

In this lesson I also asked the group to complete an attitudinal questionnaire\(^2\). The first section dealt with the students’ levels of confidence in terms of their Habits of Mind. The two sub habits that students felt least confident about were tolerating uncertainty and reflecting critically. This seemed to confirm my hunch about them having entered a threshold state in photography.

Some of the students’ comments also reflected a lack of confidence in these areas:

I picked this because sometimes I cannot see past the image, I cannot look at the image and ask myself questions and really dig in deep about the picture, I just see what I see.

I feel as if I am unable to critically assess my work sometimes and instead require others to give their opinions in order to form my own conclusion of what I could improve.

In response to questions related to their photography studies, two areas seemed to suggest a relative lack of confidence:

Again, this seemed to suggest that there should be a greater emphasis in lessons on historical, cultural and theoretical understanding of photography combined with activities which developed students’ skills in critical analysis and their tolerance of uncertainty.

\(^{20}\) [http://www.learningspy.co.uk/education/progress-vs-learning/](http://www.learningspy.co.uk/education/progress-vs-learning/)


\(^{22}\) [https://docs.google.com/forms/d/1JzKn8ElkuMrNolDUI5/1oXqgPBX7PjE86NDjopkksCtoViewform](https://docs.google.com/forms/d/1JzKn8ElkuMrNolDUI5/1oXqgPBX7PjE86NDjopkksCtoViewform)
At this point I took the opportunity to review students’ documentation of the ‘What is photography?’ activity. I photographed three examples as an indication of the various ways students chose to represent their thinking:

**Student #1**

This example reveals a relatively basic attempt to select a range of images representing the student’s interests and concerns, arranging them simply on the pages of the sketchbook with descriptive annotations.

On closer inspection the annotations appear to refer to some of the Threshold Concepts but a clear rationale for choosing the images or an explanation of the link between the images and the concepts is missing.

**Student #2**

Here, the student has made more extensive notes prior to the selection of various images. The notes refer to several big ideas and include quotations. The images have then been displayed on a map of the world on her bedroom wall. The note at the side identifies the images as “favourites” and the choice of exhibition location is explained by the student’s desire to see the images when she wakes up and goes to sleep.
Student #3

This example is the most developed and conceptually coherent of the three. The student has clear criteria for the selection of the images, choosing those that she felt were particularly “interesting or inventive” as well as those with historical significance. She acknowledges the personal nature of the exhibition and the need to maintain a sense of flux in the way the display would continue to evolve. She provides very detailed annotations for each chosen image and a further list of qualifying terms: GENRE, SUBJECT, THEME, TECHNOLOGY and FORM. The twelve images are displayed on a tree in a garden, a gesture symbolising “the growth of photography over time”. Finally, she provides a diagrammatic indication of her understanding about the contrasts between photography and other works of art. This is an impressively detailed and thoughtful response indicating a high level of understanding and intellectual engagement.

The following lesson was focused on encouraging students to reflect on the way artists think and work and to promote critical understanding of their own and others’ photography. I began with a video from the TV series ‘What do artists do all day?’ featuring Cornelia Parker. Her sculptural practice is wide ranging, conceptual in nature and includes the use of photography. In the film she is seen engaging in lots of different activities from eating her lunch to stitching a sampler with wire spun from bullets. I asked the students to create a list of all the verbs they observed during the film. I wanted them to see an artist at work, using photography to document a variety of visual phenomena (old signs, cracks in the pavement, marks on prison walls etc.) in the process of thinking about art. Whilst students then continued to develop their own work I began the process of interviewing individuals. I asked each person the same three questions:

a. What have you learned so far in photography?

b. What have you found most challenging so far in photography?

c. What do you still hope to learn in photography?

I interviewed four members of the class in this lesson. Their responses to Question a. were largely about new techniques, processes, genres and styles of photography. One student felt that she had become better at making more “creative” photographs: “Before the course I used to just walk around the streets but now I’m always looking out for things. I’ve definitely become more observant.” Another student explained that she felt a lot more confident in her own judgement compared with the beginning of the course. Responses to Question b. included the challenges of generating ideas, documenting work in sketchbooks and working more independently. In terms of the future (Question c.) students spoke about wanting to learn more creative editing techniques, learning about more artists and the history of photography, how to be more creative and, in the words of one student “how to feel more confident in my ideas and how to develop them further.”

These responses caused me to reflect on the students’ views of the course and its affordances compared with my own sense of what was needed in order to extend and deepen their learning. Whereas I was interested in the historical and theoretical aspects of photography, as expressed in the Threshold Concepts, the students I interviewed seemed more interested in learning about other artists and developing their own ability to generate strong ideas. Perhaps I needed to find a way to present the Threshold Concepts through particular artists’ practice rather than as abstract ideas. If I did this, might the students then be able to make a deeper connection between practice and theory?

23 [https://www.youtube.com/watch?v=cuAF55BN-Ak&safe=active](https://www.youtube.com/watch?v=cuAF55BN-Ak&safe=active)
An opportunity to work with a practising contemporary artist emerged when assistant curators at Tate invited me to bring a group to the Tate Britain to help investigate the role that affects plays in encountering works of art. This was a new idea for me but the chance to work again with artist Anna Lucas and take my Year 12 class to see some works of art had seemed too good an opportunity to miss. I suggested bringing my photography class and, once this was agreed, we set about planning the visit. Following introductory emails, in which Nick introduced us to a paper he was writing for Tate about affect theory in art²⁴, we all met to discuss our various interests. Anna then created a workshop outline²⁵ which was circulated for comment. I created a contextual blog post²⁶ for the students the week prior to the visit, setting the scene, introducing Anna and Nick and identifying some of the works of photography, film and video that would be on display at Tate Britain during our visit scheduled for the 9th February. This seemed like a fantastic opportunity to connect artist research, idea generation and the Threshold Concepts, working alongside a practising artist and academic.

One particular passage in Nick’s (unfinished) essay struck me most forcefully:

[...] interest and pleasure are the key to inclusion - are the key to education generally - they are if you like the first step to an ethical pedagogy, one that does not pay homage to those external motivations, such as passing exams, which can lead to shame should they not be realised (this is not to say that exams should not be passed, but fearing to pass an exam is not the means to pass it), but to the intrinsic motivation of curiosity and satisfaction.

If I was to be successful in my attempt to deepen the students’ understanding of key ideas in photography, it seemed essential that I do this by attempting to engage their interest and pleasure.

The workshop at Tate Britain

14 students attended the workshop at Tate Britain on Monday 9th February 2015. As instructed, they arrived at school having already begun photographing their morning with their own cameras and camera phones. Anna refers to this process as “Getting your eye in”.

Before leaving the house
Photograph something that catches your eye
And then photograph something that connects to the first image you took (might just be colour, or texture, or narrative, or you may not know why)
And then use the second photo, match something to that. Like a Chinese whisper, so each image responds to the last in some way.
Keep that going until you reach Tate.

 Aim for at least 25 thoughtful, considered photos.

I continued to encourage them to photograph the journey to Tate and we arrived at the Clore Studio having already created a number of images. I had also been taking images and felt it important that the students see me engaging in the same activity as them. One student commented on the walk down Vauxhall Bridge Road, “You’re in your element, aren’t you Sir?” Anna (artist), Leanne and Alice (assistant curators) and Nick (researcher) were already at work in the Clore Studio when we arrived. Anna’s film, ‘Opi 21, Oopsy Daisy, Tiger Lily’²⁷ was projected on the end wall and she was busy preparing for the students the week prior to the visit, setting the scene, introducing Anna and Nick and identifying some of the works of photography, film and video that would be on display at Tate Britain during our visit scheduled for the 9th February. This seemed like a fantastic opportunity to connect artist research, idea generation and the Threshold Concepts, working alongside a practising artist and academic.

The students were given 30 minutes to explore the art on display before returning to the Clore Studio to share their work. Two favourite images were collected from each student’s camera. These were loaded into iMovie and displayed side by side in a random order. The resulting slideshow was displayed on the Studio wall on a loop. Anna also collected short statements from each student describing an image they had taken, changing the display on the Studio wall on a loop. Anna also collected short statements from each student describing an image they had taken, changing the display on the Studio wall on a loop. Anna also collected short statements from each student describing an image they had taken, changing the display on the Studio wall on a loop. Anna also collected short statements from each student describing an image they had taken, changing the display on the Studio wall on a loop.

Go and look at some art, stop with whatever you are most drawn to.
Don’t think about it too much.
Use your camera to explore the artwork.

The students were given 30 minutes to explore the art on display before returning to the Clore Studio to share their work. Two favourite images were collected from each student’s camera. These were loaded into iMovie and displayed side by side in a random order. The resulting slideshow was displayed on the Studio wall on a loop. Anna also collected short statements from each student describing an image they had taken, changing the display on the Studio wall on a loop.

Blind Carbon Drawing
Use the carbon paper and draw what you see. Don’t peek underneath, don’t worry about the outcome. It will not be a representative drawing. Allow your hand to follow the movement of your eyes.

Light Drawing
Use white or silver crayon on white paper. Draw the light IN an image, not the dark. Don’t worry about the outcome, just look at where the light is falling in the image.

They then had a short lunch break before returning to the galleries and Studio to continue creating a variety of responses. Whilst the students were out exploring, the adults remained in the Clore Studio, attempting to work out how to make the best use of the various projection technologies available.

One part particularly intriguing by both the film and by Anna and Nick’s explanations. Anna then issued the first gallery based challenge:

[...]

http://annalucas.co.uk/work/opi-21-oppsy-daisy-tiger-lily
http://vimeo.com/11914183
https://docs.google.com/document/d/1brfuMjR8EZPAn2guNWWFL62Vypb7Loon5RsD3_wM/edit?usp=sharing
https://drive.google.com/file/d/0B6Q7E_nFLXm_Q0laWhZtVQozoOk/view?usp=sharing

²⁴ https://docs.google.com/document/d/1brfuMjR8EZPAn2guNWWFL62Vypb7Loon5RsD3_wM/edit?usp=sharing
²⁶ http://annalucas.co.uk/work/opi-21-oppsy-daisy-tiger-lily
²⁷ https://vimeo.com/11914183
²⁸ https://drive.google.com/file/d/0B6Q7E_nFLXm_Q0laWhZtVQozoOk/view?usp=sharing
The day was enjoyable and stimulating. From my perspective there were many positive outcomes:

- The students (some of whom were visiting Tate Britain for the first time) saw lots of important works of art at first hand, including a diversity of light and lens based media.
- Anna’s explanation of her practice and how this manifested itself in the film provided us with evidence of the application of the Tallis Habits29. She was inquisitive about the location specified in the brief. She collaborated with another artist, seeking iterative feedback. She interviewed shop owners and sought a sense of community. She was persistent in various ways, particularly tolerating uncertainty and sticking with difficulty. In the absence of a technician to support the filmmaking process she needed to be disciplined in learning how to operate the camera on a track whilst simultaneously manipulating the images. Finally, she was able to make a number of imaginative connections, trusting her intuition and playing with possibilities.
- The students spent a whole day making photographs and thinking about ways of seeing. They were totally free to explore the galleries and photograph whatever they wished.
- We were introduced to the idea of affect and the powerful, instinctive energies that pass between people and between people and (art) objects.

Several of the Threshold Concepts were addressed either directly or indirectly. Several students recognised this and even consulted the cards I had made on the way home.

Nick’s subsequent analysis30 of the day’s affordances acknowledges a variety of benefits associated with Tate’s particular approach to gallery based education:

Within the educational plan for the gallery visit, the invitation to drift was designed to encourage students to view the gallery not only as a repository for art but as a space in which people come to encounter art, a social space of interaction in which visitors, warders, curators, caterers, educationalists and so on, meet and do stuff. What might this stuff be? What affective exchanges occur? What draws them? What draws others? How do people act? How can the intensities of the experiences be observed and recorded?

Working with digital photography outside school presents some challenges. Selecting images for viewing can be a laborious and time-consuming process and it can sometimes feel as if the technology gets in the way. We abandoned our original intention to print images (linked to Anna’s practice of negotiating with the materiality of the image) due to concerns about technology and time. There never seems to be enough time during a visit like this to reflect on what has been learned. The end of the workshop felt a little rushed and the live soundtrack activity (a last minute, spontaneous addition to the list of suggested activities) made the students a little self-conscious. I would have enjoyed seeing the photographs they had made, spending more time discussing their ideas and observations one-to-one, rather than grappling with the temperamental mini projectors! It was interesting to note how many students responded positively to the drawing activities. Many of them have chosen A level photography (rather than art) because they feel themselves to be relatively unskilled in drawing and painting. Anna placed the emphasis on drawing as a way to look harder at something (rather than to make a conventionally beautiful or accurate image). The students were intrigued by drawing through carbon paper onto black card and with white pencils on white paper. I will certainly use both of these approaches in school in future lessons as a way to encourage students to think about how they look and to notice the patterns of light in particular photographs.

Nick’s interest in observing how the students dealt with affect in the gallery (the original impetus for the visit) provided us with a way to think about our engagement with art objects, with the things we choose to photograph and, ultimately, with the photographs we make. I was interested in pursuing this notion back at school and to see how the students chose to present their images of the day’s activities.

The day at Tate Britain presented the students with the opportunity to learn an enormous amount. Whilst I could see that they were polite and attentive, it wasn’t clear to me what they were learning. This is often the case in the arts. It might be argued that learning is always invisible in the sense that it happens inside the heads of individual students. The question then becomes what strategies might we use as educators to discover ways of negotiating with the materiality of the image? Due to concerns about technology and time, the students were intrigued by drawing through carbon paper onto black card and with white pencils on white paper. I will certainly use both of these approaches in school in future lessons as a way to encourage students to think about how they look and to notice the patterns of light in particular photographs.

- The Shift: This is a sharp disruption. Something happens either deliberately or serendipitously and the person learns something – the aha moment. Or perhaps an art work causes a shift, or doing/making something causes a shift. Probably pretty rare!
- The Smudge: Also a disruption. But something discernible. I started at this point not too long ago and now I am here (the term smudge from Elizabeth Ellsworth). I didn’t recognize how things were changing, but I did have a sense of something happening. This might be a morning’s activity, going to visit a particular exhibition, building...
- The Morph: Like the smudge, but over a longer period of time. May (probably?) take repetition for the learning to become embedded and embodied.
- The Line: This is probably more common in art museum learning programmes; it is where something has been started off but not finished (the line an idea from both Ingold and Deleuze/Guattari). The line of learning might be:
  - broken and not followed on

30 http://www.thomastallissschool.com/tallis-habits.html
31 https://drive.google.com/file/d/0B6Q7E_mFLXm-UGVnzdJZZUxYUVk/view?usp=sharing
32 https://docs.google.com/document/d/1K_oDz7BLsX9SuX9sRFGe6YPs148LHM72v-eRsJLg/edlit?usp=sharing
Schools generally don’t discriminate between these.

Where might I look for evidence of their learning? To what extent was their behaviour on the day the result of experiencing a state of liminality?

Several students created interesting responses to the visit. These gave me some evidence of the quality of their learning. For example, one student created a film displaying the photographs she took on the day of the visit at four frames per second. This revealed an engagement with Anna’s preoccupation with the relationship between still and moving images in her film. The student also had to teach herself a new technique in order to produce the film reel look she sought. Another student created an animated GIF slideshow for her website and added the following description:

I used the same method as Anna, which was to place the images in a sort of chronological order, however as the film/gif goes round and round it is hard to identify where the piece actually begins and ends, adding a mystery to my journey.

Preparations for the Unit 2 Externally Assessed Task began officially on 1st February. I was aware that I needed to combine an ongoing exploration of the Threshold Concepts with time for students to explore their chosen themes. The lesson following the trip to Tate Britain was focused on applying the concepts to some specific image analysis. I arranged the students in groups reflecting their choice of exam theme (Evidence, The Weather, Creative Use of Light and Photomontage) and gave them an image to annotate and discuss. Together we reviewed our knowledge of the Formal Elements and I was able to point to various Threshold Concepts in relation to specific issues emerging from the discussions. I was encouraged by the students’ interest in and willingness to connect specific observations about particular images with wider contextual and conceptual understanding. In the next lesson I decided to introduce a theoretical idea in order to provide another lens with which to think about the functions and meanings of photographs. I chose John Szarkowski’s famous conception of Mirrors and Windows.33

I asked the students to draw the above diagram on a piece of paper. I introduced them briefly to Szarkowski’s notion that photographs can be considered as either mirrors that reveal something about the sensibility of the photographer or windows that purport to show us something about the observable world. Photographs might therefore fall somewhere on this spectrum between the mirror-like and window-like. I then showed them a series of images on the board, asking them each time to indicate where on the spectrum they would want to place each one. In each case I asked individuals to justify their decisions with reference to Szarkowski’s theory. I introduced a light-hearted quiz style element into the process by displaying the images on an audiovisual spinner using an application on the Triptico website34. The images appeared randomly accompanied by a number of amusing motion sounds. This may have made a significant contribution to the success of the activity!

The students quickly grasped the idea of the spectrum and some of the key indicators that might determine whether or not a particular image was more or less a window or a mirror. For example, they were easily able to differentiate between images that were ‘manipulated’ (mirror) or ‘straight’ (window). This allowed us to discuss why the manipulation of photographic imagery using a variety of techniques or processes might suggest a more subjective or personal response than a documentary photograph. Thus, images by Robert Rauschenberg and Robert Heinecken were considered to be mirror-like, whereas photographs by Eugene Atget and Bernd and Hilla Becher were placed at the window end of the spectrum. Certain images (see below) provoked some intense debate.

33 http://thehighlights.org/wp/reframing-mirrors-and-windows
34 https://www.tripticoplus.com/
Was William Eggleston’s photograph of the inside of a freezer compartment a mirror or a window? And what about Bill Brandt’s Sussex nude? Likewise, Nan Golden’s famous image of herself lying in bed next to her lover Brian who is smoking a cigarette caused students to reflect on the curious hybrid genre of the documentary self-portrait. Did Brian know he was being photographed? Was he posing? How complicit was he in the creation of the image? Where had Nan Golden hidden the remote shutter release? How had she ensured that the image was in focus? How staged was the entire composition?

I realised that this simple device of the spectrum had enabled the students to make judgements by applying a particular theory about photographic images. I began to wonder if other such spectra could be employed to assist them in thinking about their Unit 2 explorations (and, by inference, the Threshold Concepts).

For example, in one discussion with a student following this exercise I suggested that she think about the theme of Evidence in terms of various spectra. Evidence could be considered in terms of the small scale (mundane, personal, local, tiny) and the large scale (significant, public, world, huge). Humour (amusing to serious), Reliability (trustworthy to untrustworthy), Representation (abstract to naturalistic) could all provide useful ways to think about the theme as visual phenomena. The student produced this mind map to illustrate her thinking about this:

The remaining three lesson before the March half term were largely focused on supporting individual students with the development of their Unit 2 responses through individual tutorials. However, I did remind the class to make use of the Bloom’s Taxonomy for Photography resource on the department website. I was keen to reinforce the need to demonstrate critical understanding in their writing about their own and others’ work. I was also able to conduct a few more interviews using the same questions as before. Interestingly, these interviews revealed very similar concerns and interests across the class and ability range. For example:

**Question 1:** ‘What have you learned so far in photography?’

Responses tended to acknowledge the link between teaching and learning, including the relationship between the analysis of photographs and the effect this has had on students’ own photography and ways of looking. Additionally, students spoke about learning through trial and error (in the darkroom) and acquiring a range of new techniques and processes. Students also felt that they understood more about the history of photography.

**Question 2:** ‘What have you found most challenging in photography?’

Students identified a range of similar issues related to the production of “good ideas”. They were sometimes reluctant to start a new topic and concerned that their ideas were not going to be of a sufficiently high standard.

**Question 3:** What are you still looking forward to learning in photography?

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38 http://tallisphotography.weebly.com/blooms-taxonomy.html
Students spoke about wanting to further expand their repertoire of skills, techniques and processes. They expressed a desire to become more expert as photographers with the various tools and technologies available. Some students wanted to learn more about the work of other artists and the history of the subject. However, they were keen to point out that one of the reasons they liked photography was because they were allowed plenty of personal choice in their learning and that, if we did approach the subject from a more academic angle, that this should be woven into the fabric of lessons as needed rather than in the form of lectures.

My final attempt to encourage the class to explore some of the big ideas in photography was through the medium of pin badges. Originally intended to facilitate rewards for students at Key Stage 3, the newly acquired badge making machine provided me with a way to share famous quotations about photography with my Year 12 students, asking them to do a bit of research about the quotes and their authors in the final lesson before the holiday.

I randomly assigned a badge to each student in the class and a week to do some basic research. The idea was for them to come back to class the following week prepared to be interviewed by a classmate about the quotation. I was particularly interested in encouraging them to reflect on the connection between the idea contained in the quotation on their badges and their own practice as artist/photographers. I created a proforma interview sheet for the following lesson which each student used to ask a classmate three questions:

1. Who was X and what contribution did s/he make to our understanding of photography?
2. Explain what s/he meant when s/he said/wrote (above quotation)...
3. What connection can you make between the ideas of X and your own practice?

The interviewer then made notes based on the responses of the interviewee which functioned as a record of the discussion. My notes from this lesson include the following observations:

- Found myself asking lots of open questions in order to challenge students in their thinking about the quotations - tendency for some interviewers to accept insubstantial answers/responses in order to complete the task, regardless of quality.
- Perhaps I ought to have modelled this interview process in some way? May try to find an interview with a photographer which demonstrates an interrogative approach. May not be time to use this after Easter (exams) but could come back to it or use it next year as a resource.
- A growing sense that the link between theory and practice was becoming more tangible for some students

Following the exam period (during which my action research took something of a back seat) I undertook a second questionnaire with the students. The questions were identical to the first questionnaire and I was interested to see if the responses had shifted in any way. In the first questionnaire, in terms of the Habits, the students felt least confident with persistence (tolerating uncertainty) and being disciplined (reflecting critically). In this survey, persistence (tolerating uncertainty) was still a major concern as was being disciplined, but the focus had shifted to crafting and improving rather than reflecting critically. Another concern appeared to be the ability to make connections (Imaginative).
When asked which of the Habits students felt they needed to develop most, responses were split almost equally between these three.

**Which of the Tallis Habits do you think you need to develop most?**

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<thead>
<tr>
<th>Habit</th>
<th>0%</th>
<th>4%</th>
<th>30.8%</th>
<th>38.5%</th>
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<tbody>
<tr>
<td>Inquisitive</td>
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<td>Collaborative</td>
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<td>Persistent</td>
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<tr>
<td>Disciplined</td>
<td>3</td>
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<tr>
<td>Imaginative</td>
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The written responses are honest and revealing:

I think I need to develop this the most as I feel I don't stick to something as much if I find it difficult. Also I have a tendency to think of an outcome before I have experimented with other things first. I think I need to stick with something even if I find it difficult and challenging.

I chose this because I'm not very disciplined with my work. I don't really improve my work because I feel that when I get too into it I just can't make it right as it will never be how I want it. For example when editing an image on Photoshop there might be one small thing that only you can see but no one else can because it's tiny.

I don't use my own intuition. I must have someone's opinion to go through with something, and always ask someone what I should do before I do it.

Before I started the photography course in year 12, I didn't think about the significance of the stories and concepts behind pictures. Photography isn't just about taking a pretty/visually pleasing photograph. The set concepts we are introduced to have allowed me to expand my creativity, having to think about how I can relate to and create something interesting linking to our given theme.

Clearly, an increased awareness of the habits does not mean that students develop total confidence in their application. In fact, the opposite is sometimes the case. The more one is aware of the need to be persistent, for example, the more one is likely to be sensitive to the need to develop this particular habit. In response to questions related to their photography studies, the first survey suggested that their knowledge of the history of photography and understanding of the big ideas were weakest. In this survey, these same issues appear still to be of most concern to the students. However, the responses reveal a slight increase in the levels of confidence overall.

### Conclusion:

The aim of this research was to discover whether making explicit reference to Threshold Concepts in photography would help my Year 12 students develop a stronger sense of themselves as artists, able to reflect critically on their own and others' work? It is impossible to know definitively whether this has happened. My sense is that the majority of students have learned some valuable lessons about themselves as 'becoming artists'. They have a better grasp of the attributes (habits of mind) that are needed for success in the subject and also in order to behave like a photographer/artist. The Threshold Concepts have given us a set of ideas to play with, to debate, to measure our thinking against. These have, in my opinion, helped most students to grapple with the more theoretical or conceptual aspects of photographic practice. In particular, most students have developed a more sophisticated understanding of the ways in which photographs accrue meanings and how these are unstable and open to interpretation, even changing over time. I think they are also more sensitive to the formal properties of photographic images and able to think about unfamiliar images with little or no contextual information in a way that would have found difficult at the start of the course. I will certainly recommend that the Threshold Concepts are used more coherently next year with both Year 12 and 13. In fact, our new planning process across the school now incorporates the notion of Threshold Concepts so that in photography, for example, our curriculum plan for Years 9 to 13 builds towards students' understanding of the Concepts developed this year. We should also commit to reviewing the content of the Concepts, developing and refining where necessary as we use them in the classroom. We will certainly need to give careful consideration to the ways in which we introduce these ideas to younger students.

The notion of the Threshold as a liminal space has also been useful to me in thinking about how students cope with new ideas. Some will grasp ideas quickly and soon exhibit confidence in manipulating their knowledge and experience creatively, whereas others will need more time as they negotiate their way through the experience of liminality. The AS exams are, in some ways, an unwelcome interruption in this maturation process and I am pleased that from September 2015 photography will become a linear A level. Many students come to the subject without much prior knowledge of either art or photography. They need time to acclimatise to the demands of a new discipline. In our case, the majority of photography students come to us in Year 12 from other local schools. They also need time to make friends, become accustomed to new ways of working and a new learning culture. At the time of writing it is not yet clear whether or not the school will retain AS exams for all courses in its scheme of assessment for both linear and non-linear A levels.

One student attempted to reflect on her growing understanding of both the visual and conceptual aspects of photography and her own developing identity as a photographer in the final evaluation for her Unit 1 work:

I feel that this work as a whole reflects my interests as a photographer in the way that I believe a meaning or an idea behind a photo gives the image a story which can be told visually and not through words, yet in the same way a photo which was taken simply at the right place at the right time can
also be just as effective visually and allows the audience to create their own story or meaning for the image. Bringing both these beliefs together has resulted in my final piece which I feel reflects both the visual and conceptual side to photography. I feel a camera can be used for a spontaneous moment or for a carefully thought out process, and until you take the photo or have the idea, you never know yourself which way it will go.

This writing suggests a student fully immersed in the liminal spaces of several Threshold Concepts. One can almost see her reaching towards the door that, in due course, will open to enable her to move confidently towards a more sophisticated and interlinked understanding of the theory and practice of photography. The Threshold Concepts attempt to communicate the same idea that she articulates here. Photography is both a practical (physical, sensory, aesthetic) art form and also an intellectual (theoretical, conceptual, philosophical) activity. Looking, thinking and making are equally important processes. Head, heart and hand. Photographs are conglomerations of ideas as well as products of material culture. I am hopeful that the students in this Year 12 class will have begun to tackle these notions, better equipped to begin their personal investigations in Year 13.

The research has raised as many questions as it has answered. I am still curious about the right balance between instruction and facilitation, especially for Year 13 students. I wonder whether flipping the classroom\(^\text{37}\), so that instructional material is available on the Internet at the beginning of the course of study, thus creating more space for individual conversations and guidance in the lesson, is a better way to organise learning. With that in mind, and aware of the need to refresh my own practice, I decided during the project to begin a new initiative in collaboration with a colleague from a school in Bournemouth. We have created a new website (www.photopedagogy.com) which aims to support a national network of photography teachers. The site showcases lesson plans, blog posts, articles, advice and examples of students’ work in an attempt to share good practice and lend a hand to those colleagues setting up new courses and refreshing existing ones. The notion of a photopedagogy was inspired by this action research project.

\[\text{http://en.wikipedia.org/wiki/Flipped_classroom}\]
Bibliography

Books
Adams, Robert ‘Why People Photograph’ Aperture, 1994
Cotton, Charlotte ‘The Photograph as Contemporary Art’ Thames & Hudson, 2004
Bate, David ‘Photography - The Key Concepts’ Bloomsbury, 2009
Bull, Stephen ‘Photography’, Routledge, 2010
Durden, Mark (Ed.) ‘Fifty Key Writers on Photography’ Routledge, 2013
Fisher, Elizabeth and Fortnum, Rebecca ‘On Not Knowing - How Artists Think’, 2013
Sontag, Susan ‘On Photography’ Penguin, 1979
Trachtenberg, Alan ‘Classic Essays on Photography’ Leete’s Island Books, 1980

Web
Academy of Art University Identifying threshold concepts
Cousin, Glynis An introduction to Threshold Concepts, 2006
David Didau website
Hamlyn, Jim 10 Threshold Concepts in Art, 2013
Anna Lucas website
Meyer, Jan and Land, Ray Threshold Concepts and Troublesome Knowledge: Linkages to Ways of Thinking and Practising within the Disciplines 2003
Ray Land discussing Liminality and Threshold Capital
International Centre of Photography Focus on Photography: A Curriculum Guide
Do you think like an artist?
Threshold Concepts: Liminality
No Going Back: Threshold Concepts in Photography