

Action Research

ACTION RESEARCH: REFLECTIVE PRACTICE AND PROFESSIONAL DEVELOPMENT'



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2009

Can 'skills' be a subject?

**An investigation into the transferable
skills promised by Critical Thinking
qualifications**

Paul Britton

INTRODUCTION

Critical Thinking - national and local background:

Critical Thinking has existed as an advanced level qualification since 1999. The A/S level was part of the 'Curriculum 2000' reforms with the full advanced level qualification being introduced for first examination in 2005/6. The course was specifically recommended in the Dearing Report (1996) as a course that could 'encourage rigorous thinking, widen student's understanding of other disciplines, and provide an opportunity to bring together gifted students, pursuing different disciplines, for common study and debate.' By the time of the pilot stage of the course in 1999 it was claimed that 'the A/S itself is useful but it's students' general skills that will benefit most, adding considerable power and "value" to their work and results throughout' (Cooper, A/S level Critical Thinking course: An introduction for Senior Tutors and Interviewers, 1998). Furthermore, 'an equal if not greater attraction of Critical Thinking than its qualifications and skills *per se*, is its potential impact on value added to any course, in terms of better analysis, study and output skills across virtually all disciplines.' (Cooper, A/S level Critical Thinking Pilot Course, 1998-99: Course Introductory Summary, 1998) These advantages are stated even more explicitly in the QCA guidance on using AS Critical Thinking. Their website states 'Critical Thinking should be mutually beneficial with other subjects. Students' skills in evaluating argument in critical thinking should transfer to their ability to understand arguments in other subjects.' After a decade of teaching, it is my intention to test whether these claims for the potential benefits of the course can be supported by evidence from our experience with the subject at Farnborough. I will test the claims that critical thinking skills can be transferred to other subjects, that this will add value and improve students' results in other subjects and that students will be aware of these benefits.

The Sixth Form College, Farnborough, has been delivering Critical Thinking since its inception. The course is part of the Philosophy, Religious Studies and Critical Thinking curriculum area. The course is predominantly taught by teachers with a Philosophy or Classical Civilisation background although other teachers from across the Humanities faculty have also been involved in delivery. Perhaps the most important thing to realise about Critical Thinking at Farnborough is the variety of students that the course accommodates. It is most helpful to understand this in relation to the different groups that we run:

Group	Description
a groups	Students in a groups are typically second year students who need to pick up a course to ensure that they are on a four element programme. A groups students have a GCSE grade average of below 6. They have one lesson a week of teaching throughout the year and sit exams in January and May.
b groups	Students in b groups are typically first year students who are looking to take up a fifth subject. We especially recommend Critical Thinking to students who expect to apply for Law, Medicine, Veterinary Science or for Oxbridge places as Critical Thinking specifically practices some of the skills required by entrance examinations for these courses. B groups students have a GCSE grade average of above 6. They have one lesson a week of teaching throughout the year and sit exams in January and May.
CT + EP	New for 2008/9 we have joined Critical Thinking with the Extended Project Qualification. Critical Thinking provides students with the skills they require to effectively carry out their project. This course is available to all students although in this first year it has been a perfect microcosm of the sorts of students who take Critical Thinking, both extremely able first years looking for a fifth subject and second years who are trying to maintain a full programme. They have three lessons a week, sit their

Critical Thinking exams in January with an opportunity to resit in May and complete their extended projects for either May or November.

January CT January CT is an opportunity for those students who have withdrawn from other courses during the autumn term to remain on a four element programme. This often makes Critical Thinking an essential part of their remaining at college. They receive two lessons a week from January until May. All their exams are taken in May.

A2 CT Given the varied nature of AS Critical Thinking cohort and the fact that many of those students are second years, there is only limited demand for A2 Critical Thinking. The groups are made up of a combination of students taking the qualification as a fourth (or fifth) A level, normally b group students from the first year, and those January group students who have had their options limited through withdrawals in their first year and need to complete three A levels for university entrance. One lesson a week.

Literature review:

In the literature there is vigorous debate about the coherence of the concept of 'transferable critical thinking skills'. If this concept is flawed then this seriously undermines the rationale for the existence of Critical Thinking as an independent subject. There are two main arguments:

The first critical point is that the term 'skill' is being misused when referring to academic study (Barrow, 1987). 'Skill', according to Barrow, refers to a type of ability that is predominantly physical, minimally involved with understanding and can be perfected by practice out of context. Good examples of such a definition are the skills of a footballer or wood carver. The problem for discussing critical thinking skills is that this seems to suggest that success at academic subjects is also just something that can be perfected through practice out of context. The footballer can become more effective in a game if they spend large amounts of time practicing their dribbling and ball control skills on the training ground. However, you do not become an outstanding practitioner of creative writing or philosophy just by deploying behaviours that have been trained. Excellence in these subjects seems to be much more related to depth of understanding or insight. The key problem is that if we refer to thinking skills in the same way as physical skills then we may be misled into believing that the same things that will improve physical skills will also improve thought.

The second related point, raised by authors such as Barrow (1987) and Wolf (1991), picks up on the issue of context; critical thinking has to be about *something*. Given that the material that you are thinking about in different subject areas is different this means that the critical thinking required in each of these subject areas is different. This leads to the conclusion that it is impossible to teach good critical thinking divorced from the actual content to be thought about. For example, a historian needs to be able to weigh up different sorts of evidence and so does a scientist. This might lead us to think that we could teach the skill of weighing up evidence independently of either subject area leading to better results in both. However, the point is that to be able to weigh up evidence in history you need to understand what makes an important piece of historical evidence. This understanding is specific to history so no amount of practice of 'weighing up' in a general sort of way will lead to good historical practice.

So, referring to critical thinking as a skill is misleading and, even if it is legitimate, teaching critical thinking out of context will not deliver the transferable results desired. Both of these criticisms have serious implications for Critical Thinking A level, as this is a subject that expressly aims to develop 'skills' through practice and repetition out of context from the areas in which these skills will be

applied. Possible responses to these points are offered by authors such as Smith (1987) and Bridges (Mar93).

Smith agrees that we must not allow a focus on skills to lead us to a position where we just see students as machines to be programmed. By ignoring the individual and only considering the activity, we avoid making normative judgements about character but through doing so may avoid the key issues. However, he strongly argues that skills are not 'lowly, mechanical and beneath educational notice', rather that they offer the chance for people to become truly involved with the world around them through the practice of 'craft skills'. However, such a claim does little to support Critical Thinking as a separate subject; Smith seems to be more concerned with defending vocational education as equally if not more important than academic study.

Bridges offers a more robust defence of the notion of transferable skills in critical thinking. He accepts that critical thinking has to be exercised in context but rejects that this defeats the point of developing a core element of approaches that are applicable in different contexts. Even if practicing critical thinking skills out of context is not sufficient for a student to be able to apply these skills successfully in a different subject area, it may still contribute to improved success, and so be a valid activity. He points out that a key problem with the liberal tradition in education, one that aims to deliver knowledge of a wide variety of subject areas, is that this succeeds at showing individuals what their choices are and that it enables them to make choices but it fails to give them the ability to actually enact these choices in the world. As a response, a focus on skills is a healthy way to put the knowledge learnt through education into practice. Intriguingly, Bridges raises the distinction between transferable skills and transferring skills, the first refers to one skill (e.g. analysis of argument) that can be applied in lots of different areas, the second being the ability to recognise and select which skill will be most useful in solving a particular problem. Bridges' replies raise several issues for Critical Thinking teaching. Firstly, he seems to offer some defence of teaching Critical Thinking as a separate subject for, even if it does not teach skills that students can directly apply in different contexts it still can improve their ability to develop the context specific skills through understanding of the 'core element'. Secondly, if transferable skills are possible then the issue of students' awareness of when to apply these skills becomes paramount. If they do not have the *transferring* skills that he refers to then they will never be aware of when to apply the *transferable* skills that they possess.

In conclusion, the literature on the subject presents a strong case for a negative result to my research. If Barrow and Wolf are right, and the concept of 'transferable skills' is a mistaken one, then I may well find that Critical Thinking does not, in fact, add value or improve student's results in other areas. However, if Bridges is right and there is a core element that can aid in different contexts then this should be detectable. Also, it may well be that the level of students 'transferring' skills has an effect on whether they successfully transfer the skills taught in Critical Thinking.

METHODS USED and FINDINGS:

I have three main claims to test:

- 1) Critical thinking skills can be transferred from Critical Thinking to other subjects,
- 2) This will add value and improve student's results in other subjects,
- 3) Students will be aware of these benefits.

My main motivation for investigating this area arose from my taking on the implementation of the new Extended Project Qualification at Farnborough. Here was another course, along with Critical Thinking, whose primary objective was to improve student's general academic skills rather than teach them a set body of content. In my marketing for the courses I emphasised the notion of transferable skills that would help students in their other subjects. I began to feel that I needed some evidence to substantiate my claims and so I submitted a proposal for action research into the area. To explain the claims:

- 1) *'Critical thinking skills can be transferred from Critical Thinking to other subjects.'* - This really was the key claim. If I could show evidence of students using the skills they had learnt in Critical Thinking in other subjects this would provide support for the notion that Critical Thinking develops transferable skills.
- 2) *'This will add value and improve student's results in other subjects.'* - This claim should follow from the first in those subjects in which critical thinking skills are part of the assessment criteria. (see below)
- 3) *'Students will be aware of these benefits.'* - There are two motivations for investigating student's perceptions. Firstly, students will be able to give qualitative data to support the trends shown through the quantitative methods. Secondly, awareness of use of skills may lend support to the transference / transferring skills debate raised by Bridges.

I used three methods to test these claims:

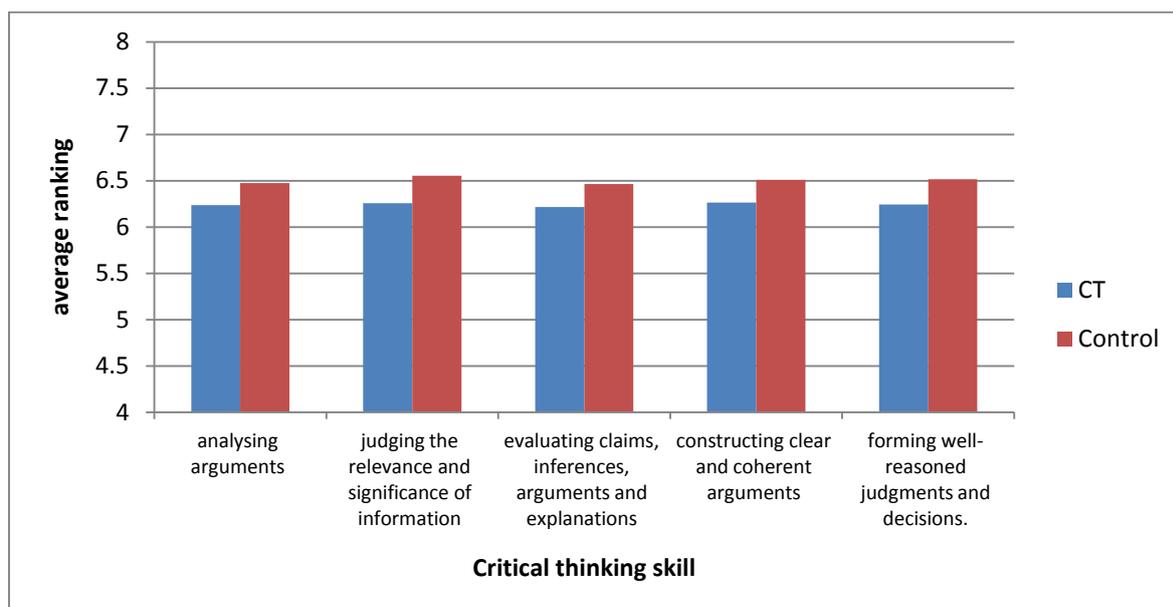
- I. **Staff questionnaire concerning critical thinking skills** (see appendix).

For each student taking Critical Thinking I found a matched pair (by GCSE average) for each of their other lessons. Their other subject lecturers were asked to rank both the student taking Critical Thinking and the matched pair in terms of five critical thinking skills, taken from the OCR Critical Thinking specification (OCR), without being told the purpose of the rankings or how the students had been selected thus hoping to reduce any bias. Rankings ranged between 10- excellent and 1-very weak. The skills referred to were:

- analysing arguments
- judging the relevance and significance of information
- evaluating claims, inferences, arguments and explanations
- constructing clear and coherent arguments
- forming well-reasoned judgments and decisions.

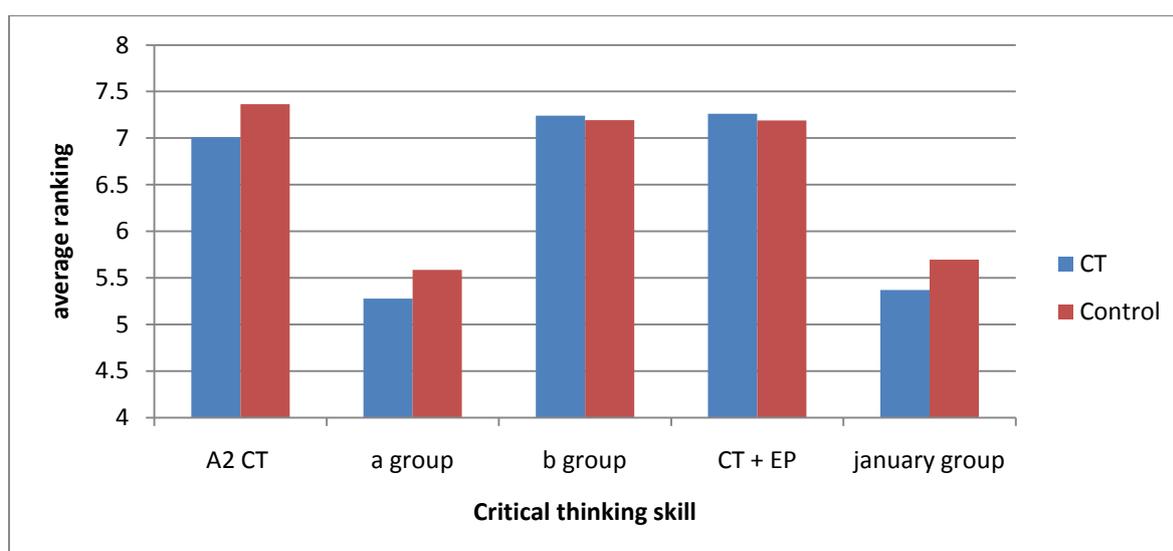
The questionnaire was paper based and conducted between 20/5/09 –5/6/09. The overall results for all students studying Critical Thinking are shown in figure 1.

Figure 1 - Overall comparison including all students and subjects.



Given the responses of many staff to the student CT skill survey that their subjects did not specifically test CT skills, I decided to narrow the analysis to area that specifically include CT skills. This is further supported by the comments in the report on the pilot that '(Critical Thinking) would be most useful for students ... taking subjects in the broad area of arts and Humanities, and/or essay-based'. (Cooper, A/S level Critical Thinking course: An introduction for Senior Tutors and Interviewers, 1998) The subjects I included in this definition were: Business studies, Classical Civilisations, Drama and Theatre studies, Economics, English Language, English Language and Literature, English Literature, Film Studies, Geography, Government and Politics, Health and Social Care, History, Law, Media Studies, Philosophy, Psychology, Sociology, Social Science (Citizenship). Figure 2 shows the results broken down into the different form of Critical Thinking course taken and only including results from these subject areas. A mean of the individual skill scores has been used.

Figure 2 - Comparison broken down into different types of CT course (using an average of the individual skill scores)



II. 2008 results analysis.

Students who sat Critical Thinking examinations in 2008 were identified. Their results in their other subjects, either AS or A2, were then compared to matched pairs. For each of their other subjects a comparison student was found who took the same subject, didn't study Critical Thinking and had the closest matched GCSE grade average. Their final grades in these subjects were converted into numbers A=5 B=4 C=3 D=2 E=1 U=0. This then allowed averages to be compared.

For the initial comparison I just took all students enrolled on the course and their matched pairs. Given that students who failed to complete the course or who failed the course cannot be considered to have gained the skills that the course aims to deliver and so consequently would not be expected to derive any transferable benefits, I produced a separate analysis excluding these students. The results are in figure 3. To analyse these results further I split the data according to which form of CT the students had studied. Figure 4 shows the average achievement of students, excluding those failing to complete or achieving a U grade. Figure 5 shows the overall comparison of students achievements with only the 'essay based' subjects included. Figure 6 shows the comparison of students achievements broken down into the variant of CT studied.

Figure 3 – overall comparison

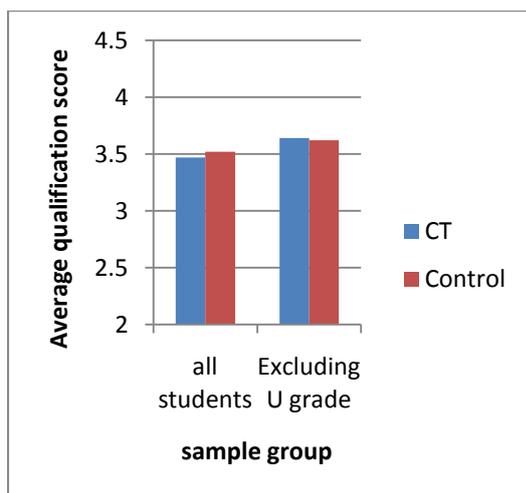


Figure 4 - CT groups

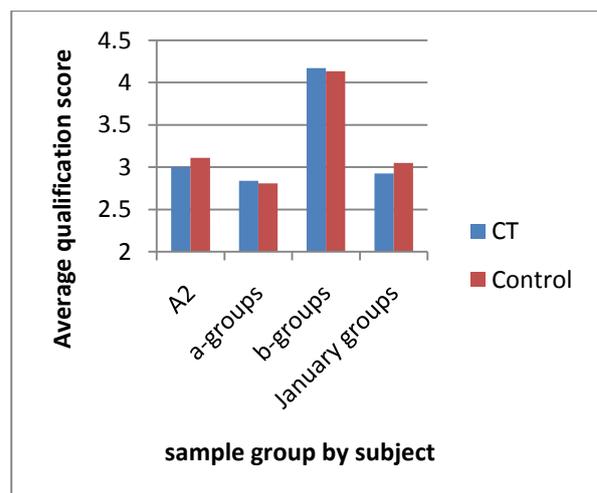


Figure 5 – essay based only

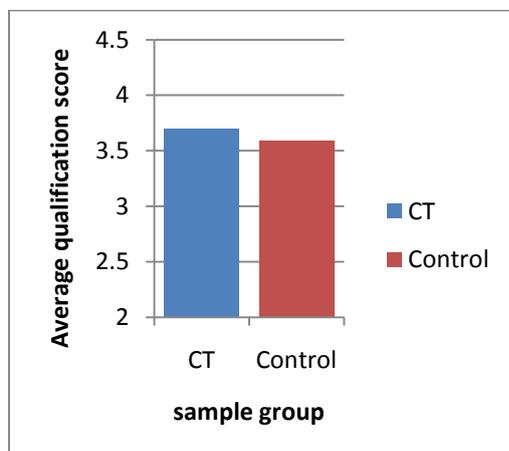
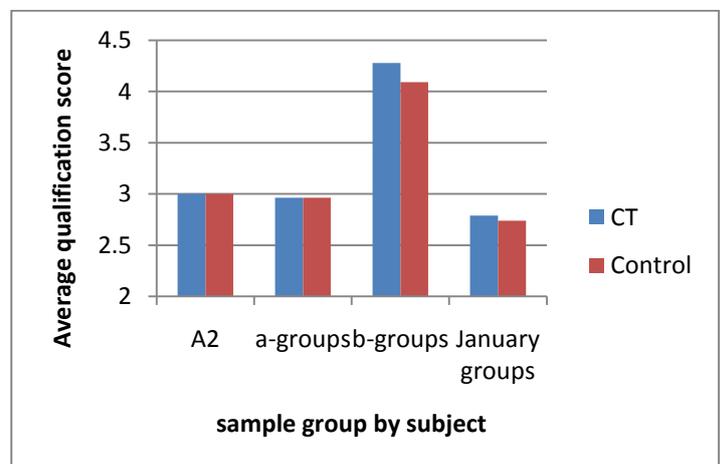


Figure 6 – essay based only split into CT groups



III. Focus groups with Critical Thinking teaching groups.

Focus groups were held during one of the final lessons in Critical Thinking for the group. A semi-formal setting was established using alternative table layouts and refreshments. Students were given a prompt questionnaire then a recorded discussion was held lead by me. CT + EP and A2 CT focus group discussions were completed. AS CT to be completed in A2 start up.

Skill	Subject area and comment
Analysis of argument	<p><u>Philosophy</u> - "(Mill in 'On Liberty') has big old pages. (Critical Thinking) has helped with outlining what his main idea is and the different reasons in there." (CT+EP)</p> <p><u>Psychology</u> - "Now I have more of an idea about why and what are the reasons – especially concerning the flaws. I remember thinking after reading an article (in Psychology) that there was a slippery slope or a straw man." (CT+EP)</p> <p><u>History</u> – "Working with sources, try to understand what their argument is, it's easier than if you hadn't done the course" (A2CT)</p> <p><u>History</u> - "In the last exam in History you have to write a large argument using sources, you have to analyse the source looking at context." (CT+EP)</p> <p><u>All examined subjects</u> - "Helps with all exams, just when you're sitting in the exam room. Thinking critically helps you not get bogged down with things that aren't the most important. And with dealing with large chunks of text" (A2 CT)</p>
Evaluating argument	<p><u>Psychology</u> – "Evaluating studies and judging validity, I just felt a bit more prepared to judge the studies." "Helps you think beyond the standard criticisms in the text book and helps me discuss the issues in class" (A2 CT)</p> <p><u>Media Studies</u> - "I can now recognise flaws in my own work when I'm writing, such as in my media course." (A2 CT)</p>
Judging the relevance of information	<p><u>Media Studies</u> - "When looking at (media) articles we have to determine if they are biased or non-biased e.g. 'Despatches'. I can use the critical thinking skills to work that out. Doing CT has enabled me to do this in more detail." (CT+EP)</p>
Writing arguments	<p><u>Philosophy</u> - "(The synoptic paper is) really big, I planned the structure thinking about which were the different points that went into the intermediate conclusion and how they led to the main conclusion" (CT+EP)</p> <p><u>English Literature</u> – "I now know, or have ideas about, how to structure an English Literature essay. For example, in our coursework we had to compare two texts and previously I wouldn't have known where to start but now I know which points are more important and how I could use these to support a position." (A2 CT)</p> <p><u>History</u> - "Helped to structure a large amount of information for example, in History unit 4 you have to write a long essay in an hour. So you had to construct a clear argument and Critical Thinking helps you pick out the relevant points to answer the question." (A2 CT)</p>

Outside of study

100% of A2 students present agree that Critical Thinking has been helpful outside of the subject.

Interacting with news / politics

“maybe if you read the paper you think ‘oh, that’s a biased argument’” (CT+EP)

“It helps when reading the news. It really does help when you’ve learned how to keep a level head with regards to new information. If you are watching the news and everyone is throwing information at you and they’re all screaming at you to make you to agree with them. You can say ‘you don’t make sense’, ‘you’re biased’, ‘you’re screaming with no point’ and ‘you’re not bad’” (A2 CT)

8/14 students in the A2 CT group agreed that they have read the news and felt themselves being critical of the evidence used.

“Helps with the local election coming up – now we can vote, I want to think about what their arguments are for and what they are arguing about.” (A2 CT - 7/14 agreed with this claim.)

Raising confidence

“It makes you feel more smart” (CT+EP)

“If you’re putting forward an argument it makes you more confident that you’re not just making an arse of yourself, this has been helped by the debates in class.”

“Arguing with girlfriend, helps you to debate with her properly”

“Nice to have the slight sense of superiority that your argument was more rational”

Skills based nature

“Some things just jump out at you” “It’s not something you really focus on” (CT+EP)

“I won’t even know that I’m doing it, I’ll just be listening to something and think ‘that’s a slippery’ and not even realise that I’m doing it.” (A2 CT)

DISCUSSION

To analyse the results I will discuss them in reference to the three main claims that I have set out to assess.

1) Critical thinking skills can be transferred from Critical Thinking to other subjects,

The staff questionnaire results seem to suggest that this claim is not true. Figure 1 shows that for all of the skills that Critical Thinking is intended to promote, students studying Critical Thinking scored lower on average than their matched pairs in their other subjects. Given that teaching of critical thinking skills can not actually harm student's ability this needs to be accounted for. Figure 2 perhaps suggests an answer. There is a clear disparity of the comparative rating of the skills of students taking different critical thinking courses. The 'a groups' and 'January groups', which make up over half of those students included, show significantly lower averages than their matched pairs. The students on these courses typically, although not always, take the subject as a last resort, an option that allows them to stay at college. As the staff questionnaires ask for subjective judgements from class teachers, it may not be surprising to find that these students are not performing as well as they could be in their other subjects. If we confine our analysis to 'b-groups' and the 'CT+EP' group, both cohorts of students who have actively chosen to add Critical Thinking to their programme, then there does seem to be a very slight positive response. This would fit with the comments from the focus groups where the CT+EP students explained how their studies had helped them with History, Psychology, Philosophy and Media Studies. The most confusing results come from the A2 class. You might expect that two years of study and practice of the skills would have led to significant improvements in their skills in all subject areas, yet they seem to follow the same trend as the 'a groups' and 'January groups'. This also does not fit with the responses to the focus group as the A2 students gave a variety of specific situations in which they felt that their Critical Thinking Skills had helped them in other essay based subjects. One explanation for the results might be that around half of the students taking A2 Critical Thinking are drawn from those students who were compelled to take it on in their first year. But, even with these students excluded the results show the same pattern.

2) This will add value and improve student's results in other subjects,

Again, figures 3 and 5, giving the combined comparisons of results including all Critical Thinking students seems to suggest that taking Critical Thinking has no significant improvement on grades achieved in other subjects. However, when these results are broken down into the particular courses taken, and only results in other essay based courses are analysed, a similar pattern to that seen in the staff questionnaires arises. For most versions of Critical Thinking there seems to be no significant effect, but for 'b group' students there does appear to be a discernable improvement. As there was no CT + EP course last year we cannot check to see if that pattern is also replicated. Clearly, more than one year's data is required to claim that teaching Critical Thinking to 'b groups' improves performance in other subjects.

3) Students will be aware of these benefits.

Both of the focus groups showed clear and detailed examples of where students felt that they were applying skills learnt or recognised in Critical Thinking in other subject areas. The examples they gave seemed to particularly focus on essay based subjects such as History, Psychology, Philosophy and English Literature. The comments showed awareness of being able to apply the whole range of skills promised by the Critical Thinking course. 100% of students in the A2 focus group (14 of the 15 students enrolled on the course) agreed that Critical Thinking had helped them in their other subject areas. Both focus groups also highlighted that Critical Thinking had had an effect on the way in which they approached argumentation and evidence outside of College. This particularly seemed to apply to issues surrounding current affairs and the news. This would seem to support the claim that Critical Thinking has an intrinsic value in terms of forming a civil society over and above any transferable benefits.

Improvements to the research process:

Through conducting the research I realised two issues that require improvement for any future investigation:

- I. Conduct a repeated survey of staff to try to pick up on improvement in critical thinking skills for individual students. This wasn't possible as it took a long time to finalise the logistics for the staff questionnaire. Methods considered included a quia online questionnaire, asking staff to directly input into a spreadsheet and a paper based version. I choose the paper based version in the end as I felt it would prompt a greater response and was less open to misinterpretation. Quia didn't have the flexibility I needed to ask about specific students and the spreadsheet would have been complicated to operate. However, the manual approach did mean a lot of work in terms of copy/pasting and inputting data. Although this does seem to have paid off in terms of staff response (85%).
- II. Exclude Critical Thinking students from the matched pairs for the staff questionnaire. It became apparent that our algorithm for identifying matched pairs was slightly flawed as some students were matched to other students who had also studied Critical Thinking. For these cases this invalidated any attempt to discover improvements resulting from Critical Thinking teaching. Any such results were excluded from the final analysis. The flaw was rectified when generating the exam results data.

CONCLUSION

The data generated through the investigation do allow me to draw some conclusions, although these are not always consistent. Firstly, there does appear to be a correlation between the type of Critical Thinking course studied and the outcomes in terms of transferable skills. This may reflect some of the concerns expressed in the literature. To take up the point of 'transferring skills' referred to by Bridges, it may well be that the extremely academically able students enrolled on 'b groups' (average GCSE score = 6.77) already have highly developed transferring skills so they can recognise the situations in which it would be appropriate for them to apply the skills they have gained in Critical Thinking in their other subjects. The CT+EP course would also fit with this analysis. In this case, the students are given a clear demonstration of how to apply their Critical Thinking skills through the application to their extended project. Perhaps this enables them to more successfully apply the skills in other subjects as well. I would suggest that this is a strategy that should be trialled more extensively to see if the combination delivers significant improvements, both in terms of transferable skills and final grades, for lower grade students taking Critical Thinking courses.

An alternative conclusion that may be drawn is that the Dearing report was right to recommend Critical Thinking as especially suitable to those with 'exceptional ability'. The findings do show most benefits for students with a high grade average. However, personal experience and the focus group results do not fully accord with this conclusion. Through teaching the CT + EP course this year I have seen large gains for less able students in terms of their research, reading, note making, essay writing and presenting skills. Such observations are supported by the comments made by these students about how the course has helped them with their other subjects. Such considerations would suggest that the Critical Thinking team should consider ways to further integrate the application of the skills into all teaching of the subjects. This seems to be especially important for those students who come to the subject due to struggles with their other studies. It may be that more time devoted to application of the skills is required for 'a groups' and 'January groups'. If this were to be successful this may be reflected in other teachers judgements of their critical thinking ability but also aid them to improve their overall performance. Such a conclusion may also apply to A2 students. In the focus group they expressed the conflict between only having one lesson a week and really having the time to develop the skills that they were learning. My research seems to agree with the disappointing conclusion that Critical Thinking may not be aiding these students as much as it can.

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Appendix 1 – Staff Questionnaire sheet

Action Research - Student's Critical Thinking skills

Dear

I am currently conducting research into the critical thinking skills of students at college. I have identified some students that you have taught this year and I would be very grateful if you could rank them in terms of their skills in five areas. To make the judgement, consider how well they have demonstrated these skills in your subject particularly focusing on their ability by the end of the course.

Ranking between 1-10 with 10- excellent and 1-very weak

If the student has not had any opportunity to demonstrate one of the skills in your subject area then it is fine to write N/A. If there are repeats please just repeat your judgements.

Please put your replies in my pigeon hole. If you could do this by the end of the week (Friday 22nd) that would be extremely helpful.

Paul Britton

Student	Skills	Ranking	Student	Skills	Ranking
	analysing arguments			analysing arguments	
	judging the relevance and significance of information			judging the relevance and significance of information	
	evaluating claims, inferences, arguments and explanations			evaluating claims, inferences, arguments and explanations	
	constructing clear and coherent arguments			constructing clear and coherent arguments	
	forming well-reasoned judgments and decisions.			forming well-reasoned judgments and decisions.	
Student	Skills	Ranking	Student	Skills	Ranking
	analysing arguments			analysing arguments	
	judging the relevance and significance of information			judging the relevance and significance of information	
	evaluating claims, inferences, arguments and explanations			evaluating claims, inferences, arguments and explanations	
	constructing clear and coherent arguments			constructing clear and coherent arguments	
	forming well-reasoned judgments and decisions.			forming well-reasoned judgments and decisions.	
Student	Skills	Ranking	Student	Skills	Ranking
	analysing arguments			analysing arguments	
	judging the relevance and significance of information			judging the relevance and significance of information	
	evaluating claims, inferences, arguments and explanations			evaluating claims, inferences, arguments and explanations	
	constructing clear and coherent arguments			constructing clear and coherent arguments	
	forming well-reasoned judgments and decisions.			forming well-reasoned judgments and decisions.	
Student	Skills	Ranking	Student	Skills	Ranking
	analysing arguments			analysing arguments	
	judging the relevance and significance of information			judging the relevance and significance of information	
	evaluating claims, inferences, arguments and explanations			evaluating claims, inferences, arguments and explanations	
	constructing clear and coherent arguments			constructing clear and coherent arguments	
	forming well-reasoned judgments and decisions.			forming well-reasoned judgments and decisions.	

Appendix 2 – Focus Group agenda

Focus group agenda

Thinking about the EPQ and AS Critical Thinking:

- 1) What did you enjoy / not enjoy about the course?
- 2) How do you think the course could be made better?
- 3) Do you think that completing the CT course by January was a good thing or not?

Thinking about AS Critical Thinking in particular:

Critical Thinking aims to develop skills that will be useful in other subjects and also in your life in general. Think about the following skills and note down if they have been useful. Please give examples if you can.

- 4) Understanding the structure of arguments e.g. being able to recognise the elements used in arguments and describe how an argument is put together:

Other subjects:

Outside of study:

- 5) Judging the relevance and significance of information e.g. assessing the quality of evidence, credibility

Other subjects:

Outside of study:

- 6) Evaluating the structure of arguments e.g. do reasons support the conclusion, flaws etc.

Other subjects:

Outside of study:

- 7) Constructing clear and coherent arguments

Other subjects:

Outside of study:

- 8) Forming well reasoned judgements

Other subjects:

Outside of study:

Action Research

www.farnboroughsfc2.ac.uk/research/arp.aspx

