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"I liked your paper because your research failed": Autoethnographic Reflections on Researching Critical Thinking in PME

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This paper reflects on a research project that aimed at generating a better understanding of critical thinking in Professional Military Education at the Royal Military Academy Sandhurst. With an increasing amount of research focusing on how to enhance critical thinking in PME, the project sought to explore the link between experiential learning and critical thinking, using Sandhurst as a case study. However, as this paper shows, the research outcomes painted an unexpected picture of officer cadets' understanding of critical thinking, which changed the course of the project, and resulted in important lessons, interesting insights, and new research avenues. The article raises awareness for the importance of positionality in PME, where the proximity between the researcher and the subject of analysis might affect the research design and outcomes, and applies an autoethnographic method to draw lessons from the reflection.

"I liked your paper because your research failed". This was the feedback I received after presenting my research at the Professional Military Education (PME) conference at Maynooth University in January 2025. The person delivering this feedback was right. I had been very honest about some of the assumptions that functioned as the starting point for my research, which had affected my research design and outcome in a way I did not foresee. Although not executed according to plan, the research project nevertheless resulted in some interesting findings. It caused me to reflect not only on why the research had "failed", but also on why I had designed it like this in the first place, and what we can learn from this in the context of PME.

This article reflects on positionality when conducting research in PME. It concerns a research project assessing critical thinking skills in officer cadets at the Royal Military Academy Sandhurst (hereafter RMAS or Sandhurst). The initial aim of the research was to develop an understanding of whether – from the point of view of officer cadets – pedagogical tools broadly categorised as 'experiential learning' contribute to enhancing critical thinking skills. In short, the purpose was to establish whether there is a link between experiential learning and critical thinking in PME, using RMAS as a case study. As this paper shows, however, the research design did not anticipate the different perceptions on critical thinking held by officer cadets and consequently led to unexpected outcomes, which affected the research project. However, it nevertheless resulted in important lessons, interesting insights, and new research avenues, which are discussed in this article.

Applying an autoethnographic approach, I reflect on my own positionality as a Senior Lecturer at Sandhurst, and the impact this positionality had on the research design. Autoethnography in education offers a unique lens through which both lecturers and students can reflect on personal experiences in specific educational institutions. It establishes a link between teaching, learning and institutional culture through a reflective process (Aloro, 2024). For this article, it helped me reflect on my own pedagogical philosophy and enhanced my understanding of the specific institutional context I am part of at Sandhurst.

The article first contextualises the project by discussing the research design, my positionality as an educator engaged in PME at RMAS, and the unforeseen outcomes of the research. It then explains the autoethnographic method applied, before analysing and reflecting on three milestone moments. These include the moment when the data and unexpected outcomes first became available to me, the moment I presented this research at the PME conference in Maynooth, and my subsequent educational engagement at RMAS following the feedback received at the conference. The article concludes by reflecting on the outcomes and suggesting new avenues for further research in PME.

Research Context and Design

Recent years have seen a growing interest in PME at the Royal Military Academy Sandhurst. The challenges presented by the rapidly changing international security environment have increasingly engaged the Academy in an ongoing reflection on how to best prepare a new generation of junior officers for their future role. This has generated an agenda for change in PME at RMAS, both within the academic Faculty for the Study of Leadership, Security and Warfare (LSW), and in the wider RMAS programme (Jacobs, 2025). It has resulted in a growing debate on PME, what it entails, and how to improve it, supported by staff and student surveys. One of the student surveys is the subject of this article.

The objective of the survey was to conduct research on the value of experiential learning to enhance critical thinking skills of officer cadets at RMAS. The reason for a research project that focuses on critical thinking stems from different developments. First, ‘Project Adair’, the recent change project of the Sandhurst programme implemented in 2024, considered ‘reflection time’ for the officer cadets to be a crucial element to improve learning outcomes. The RMAS programme is challenging and intense, with long days and historically little time for reflection. Project Adair has increased student reflection time to allow officer cadets to gain a deeper understanding of their learning (Jacobs, 2025).

Critical thinking and reflection are deeply intertwined. Already in 1910, John Dewey highlighted the importance of reflection in critical thinking, as reflection on any ‘supposed form of knowledge’ transforms mere information into meaningful understanding (p. 6). Scholars have further developed this understanding of critical thinking with reflection at the heart of it. Prominent examples are Scriven and Paul (1987), who state that critical thinking involves “evaluating information gathered from, or generated by observation, experience, reflection, reasoning or communication” and Diane F Halpern (1997), emphasising again that critical thinking “includes evaluating the thinking process – an element of reflection” (p. 7). Gerras (2008) also includes the word reflective, referring to critical thinking as “the purposeful, reflective, and careful evaluation of information as a way to improve one’s judgment” (p. 3).

Reflection is key to critical thinking because it helps individuals understand biases, refine their understanding of complex topics and develop more holistically informed perspectives (Brookfield, 2012). Guillot (2004) sums it up well for the PME context: "Critical thinking is the kind of mental attitude required for success in the strategic environment. In essence, critical thinking is about learning how to think and how to judge and improve the quality of thinking—yours and others" (p. 13).

Secondly, a staff survey conducted in the Sandhurst academic faculty in 2024 demonstrated that the vast majority of academic personnel considers developing critical thinking skills to be at the heart of delivering PME at RMAS. So, if critical thinking and reflection as an inherent part of it, are highly valued qualities in young officers and therefore crucial aspects of PME, this begs the question how we enhance critical thinking (and therefore reflection) in the Sandhurst academic programme, and which pedagogical tools are best suited to do this. While existing research has already established a positive correlation between critical thinking and experiential learning as a pedagogical tool (e.g. Arthur & Achenbach, 2002; Pongračić & Marinac, 2021), the research project sought to explore this link in a PME context such as RMAS.

The research aimed to engage with senior-term officer cadets who are close to completing their time at RMAS and are only a few weeks away from commissioning into the British Army. To this effect, 74 officer cadets on the Postgraduate Course for Leadership and Strategic Studies were asked to complete a survey at the end of their academic classes, answering the following three questions: 1. What is critical thinking, 2. Can an officer think critically and what are the limitations, if any, 3. Which pedagogical tools have enhanced your critical thinking skills while at RMAS. I designed the questions and discussed them with a former colleague with whom I share an interest in PME. We were both in agreement that these questions would serve the purpose of the research project.

Positionality as an Educator at Sandhurst

At this point it is important for me to acknowledge my own positionality in this research project. Positionality encompasses a researcher's social location, generally including aspects like gender, race, class, background, and personal experiences. It is a term that academics link to their approach to research, by reflecting on their multiple identities (such as roles, group memberships, social values, etc.) and to consider how "lived experiences and perceptions may influence […] research questions, methods and the way you interpret research findings" (Harrington, 2022).

The most important elements of my identity informing the choices for this research, is that I am a civilian academic at RMAS. As a Senior Lecturer in the Department for Defence and International Affairs, I have a longstanding interest in PME in general and officer cadet learning more specifically. This interest developed over many years at RMAS and further intensified with the recent changes to the programme. My role at RMAS, my academic background, and my longstanding interest in PME have several implications for the research project on critical thinking I embarked on.

Firstly, I am an intrinsic part of the subject I study in that I deliver PME at Sandhurst, and I am also close to the respondents to the survey – I teach officer cadets, engage with them, and aim to encourage their critical thinking. The outcomes of an officer cadet survey on critical thinking might therefore reflect on my own pedagogical ideas on teaching and learning. Secondly, having previously undertaken PME-related research, I have engaged with the subject of critical thinking before, and I have developed my own understanding of what it means, and how I integrate the development of critical thinking skills in my teaching and pedagogical methods.

In addition, my positionality caused me to (incorrectly) anticipate some of the findings, not only in terms of what critical thinking entails but also the limitations it might face in PME and military environments more generally. As a civilian working for the Army, I considered institutional and operational characteristics such as hierarchy, the need to follow orders, linear military thinking, and the time pressure on decision-making, as potential hindrances to develop critical thinking with officer cadets. I also anticipated which 'pedagogical tools' the officer cadets would indicate as having enhanced their critical thinking skills while at RMAS. Having conducted pedagogical research before, and aware of existing research linking critical thinking to experiential learning in traditional higher education environments, I was keen to establish a link between the two in the context of PME.

Acknowledging positionality is particularly important in PME-related research, as those conducting research on PME are often also involved in delivering it. This means that the proximity between the researcher and the subject of analysis might affect the research design and outcomes, not just in the context of this paper, but in research on PME more generally.

(Unforeseen) Research Outcomes

Starting the survey with the question "what do you understand critical thinking to mean" was in a way a blessing. Although the answers to this question did not reflect my expectations – and therefore affected the answers to second and third question of the survey – it caused me to reflect on my own assumptions and understanding in comparison to the understanding of the officer cadets. My understanding of critical thinking is rooted in John Dewey's pioneering work (1910), emphasising the importance of reflection in critical thinking. In his publication "How We Think", he argues that reflection cultivates independent thought and develops the ability to apply learning in practical contexts. It was my assumption that students would perhaps not have the exact same definition, but that reflection would at least somehow feature in most of the responses, as we see in the definitions of many other scholars (Gerras, 2008; Halpern, 1997; Scriven & Paul, 1987).

Instead, the results of the survey conducted with 74 senior officer cadets showed that the vast majority focussed not on reflection when defining critical thinking but on characteristics such as objectivity and impartiality, as the following quotes demonstrate. Officer cadet number 52 (responses are numbered for anonymisation purposes), for example, states that critical thinking is a "process of analysing, evaluating and making decisions based on evidence", while officer cadet 3 defines it as "the ability to objectively consume information […] to reach an objective conclusion free from emotion and subjective opinion." Similarly, officer cadet 61 says critical thinking is "evaluating a given circumstance, data or environment

rationally, from multiple angles. Bias-free independent analysis" (Critical Thinking Survey, 2024).

While most definitions provided by officer cadets reflected this focus on objectivity, impartiality and non-biased decision-making, a small number of responses focused on critical thinking as a way to understand complexity, such as officer cadet 44: "critical thinking […] requires moving past initial ideas […] to comprehend the true complexity of the subject". Only one officer cadet (62) included reflection in their definition of critical thinking, defining it as "thinking with the chance for reflection, analysing your own thought pattern and understanding how you have come to that conclusion" (Critical Thinking Survey, 2024).

The results of the survey show that for most officer cadets, critical thinking means analysing things objectively, approaching a problem from a non-biased, impartial, and evidence-based angle. It does not include an element of reflection, which is at the heart of the definition I used as a starting point of the research. Objectivity and critical thinking do not necessarily oppose or contradict each other. They can be complementary aspects in the process of developing critical thinking skills. However, reflective thinking does involve a subjective element - it not only requires evidence-based reasoning, but also an understanding of personal experiences, emotions, and values, and how they influence the thought process. As such the definitions are not necessarily opposed, but they are focusing on different elements.

The unexpected responses to the first question of the survey then affected the data from the second and third question, which built upon the answers to question one. This impacted the information I was able to draw from the survey, and it meant I received answers to the limitations of *objectivity* – rather than reflection – in the Army (question two) and the best pedagogical tools to achieve *objectivity* in PME (question three). While this paper does not set out to analyse the findings as such, it is still important to briefly reflect on these findings. While equating criticality with objectivity might be explained by the hierarchical institutional structures at RMAS and the Army more broadly, it might also mean that the term 'critical thinking' is used and understood differently in military circles, and reflection is not considered part of it. This does not mean reflection on officer cadets' thought processes does not take place, it just indicates it is not labelled as or considered part of critical thinking.

Autoethnography as a method in PME research

Adams, Ellis and Jones (2015) define autoethnography as a method of research that seeks to "describe and analyse personal experiences in order to understand cultural experiences" (p. 1). In other words, it uses the researcher's own lived experience to help understand broader cultural meanings, through systematic and reflective analysis. Autoethnography has been applied increasingly as a research method in pedagogical contexts generally and higher education specifically, as it offers a unique lens for educators and students to reflect on their institutional culture. Exploring the complex relationship between the learning experience and the educational institution, it has provided a useful method to help navigate different academic cultures (Tullis, 2022). This is particularly interesting for PME research, given that the researcher's positionality often reflects a proximity to the subject.

This article uses a combination of external data derived from a survey as well as self-reflective data, drawn from a journal containing reflections on my experience at specific chronological milestone moments in the process. Chronologically listing milestones in relation to the research project can help generate not only a better understanding of the experience, but also a journey of professional self-reflection (Chang, 2008). When engaging with memories, autoethnography considers them not as objective reality, but as an indication of what holds meaning and a reflection of cultural values (Bochner & Ellis, 2016).

While autoethnographic data can be approached through different types of analysis, this article will apply a combination of identifying key events, crystallization (recording personal snapshots over time), and triangulation (triangulating survey data with self-reflective journal data) to benefit from comparison. Bringing together multiple analytical approaches into one analysis aims to generate a deeper understanding of the research findings (Emerson, Fretz, & Shaw, 2011; Fetterman, 2020).

The self-reflective data will be considered following a chronological approach of three different milestone moments. The first moment is a reflection on my initial thoughts and response to receiving the results of the student survey and reading their understanding of what critical thinking entails. The second moment considers my presentation at the PME conference at Maynooth University, including the reflection after receiving feedback on my project and discussing my research with various attendees at the conference. The third and final moment is less specific and concerns the months following the PME conference, when I returned to my role as a Senior Lecturer at RMAS and reflected on how the findings of the survey and the feedback from the conference could inspire me as an educator.

Autoethnographic Analysis

The first milestone moment I engage with from an autoethnographic perspective is when the responses to the survey first became available to me, and I came to realise that the understanding of critical thinking among this group of officer cadets focusses on objectivity and impartiality rather than reflection. Reading through the responses, my first reaction was to 'blame' the officer cadets (for not thinking it through before answering the question) and the Army, for hierarchical structures where perhaps there was little time for reflection. My next reaction was to reflect on the fact that a large number of officer cadets clearly shared a specific understanding of critical thinking, and question where this definition came from. Finally, I considered my own pedagogical philosophy and whether I sufficiently introduce reflexivity in the curriculum at Sandhurst.

However, reflecting further on this made me realise that the concept might simply be understood differently because officer cadets have been exposed to the terminology in a different manner. It is not because learning approaches are not explicitly labelled as tools to enhance critical thinking that this is not implicitly present in the methods used at RMAS. It also caused me to consider whether perhaps the reflection element of critical thinking is simply called reflection, and whether we should be more explicit about pedagogical methods in this sense.

In short, receiving the responses to the survey helped me reflect not only on the wider institutional environment I work in at RMAS, but also on my own pedagogical approach and philosophy. It gave me a drive to dig further into the different definitions of critical thinking, encourage conversations between academic staff and military colleagues, and somehow aim to provide clarity for the Sandhurst programme and PME in the British Army more generally. Nevertheless, it is fair to say that my initial reaction was one of disappointment, both in the officer cadets' understanding of critical thinking, as well as the impact their responses would have on the research project. Things were not necessarily going according to plan, and I was about to present these findings at the PME conference at Maynooth University not long after receiving them. Rather than hiding how my own assumptions had influenced my research design, which had resulted in the unexpected responses, I decided to discuss this openly at the conference, where I would be surrounded by likeminded people with a keen interest in PME, and how to improve it. Although slightly apprehensive about presenting the research in its current state, I was looking forward to hearing the thoughts of my peers.

The second milestone moment involves my reflection on the feedback I received at the conference following my presentation. My honesty about the project and its initial findings had started an interesting debate and many attendees came up to me to discuss it further after the panel. Some provided me with ideas to improve my research design by for example engaging with focus groups, to better understand officer cadets' perspectives before designing survey questions. It was one person in particular that struck a chord, as they said, "I really liked your paper, because your research failed". They explained that although the outcomes were not as expected, and although my own assumptions had influenced the research design in a certain way, the findings were nevertheless interesting and valuable, if not more valuable than if it had worked out according to plan. It was this conversation that triggered me to write this paper.

The engagement with other professionals working in PME made me embrace the findings in a way I had not been able to do before. It opened my mind and allowed me to engage with possibilities and opportunities rather than problems. It also gave me the drive to write this paper, as I realised that it is important not only to capture these moments of reflection and how they generate increased understanding, but also to encourage others to learn from my 'mistake' for future PME research projects.

The third point of reflection in this autoethnographic analysis is not so much a specific moment in time, but a period following the PME conference, when I returned to my role at RMAS. The conversations I had at the conference continued to linger in my head and I discussed the issue with colleagues and took it into my classroom. The results of the survey had made me more aware of how I teach, and how I attempt to integrate critical thinking (including reflective thinking) into my pedagogical approaches. The experience caused me to review my pedagogical philosophy and be more explicit in seminars about why we say and think what we do. I started asking officer cadets increasingly why they made certain comments, responded in a certain way, or drew certain conclusions – ask them to think through their own thinking. I also engaged more deeply in collectively understanding why we have different ideas and opinions on certain things, and where ideas originate from, as well as how they develop over time.

I introduced five minutes at the end of every seminar about how the subjects covered in class were relevant to their future career and operational environment, how developments might affect them, and why they consider this to be the case. Introducing a reflective element in each class helps reflexivity to become a more deep-rooted aspect in officer cadet thinking. Gradually, I came to realise that trying to enhance reflexivity in an educational environment like Sandhurst, where the programme is very demanding and intense, is a challenge. Officer cadets are very tired, have demanding schedules, and are often thinking of the next thing on the programme during academic classes. However, by integrating and mainstreaming critical thinking into pedagogical perspectives and approaches, it can become second nature.

The journey of my 'failed research' had brought me insights I did not expect, and it generated a curiosity to explore new research avenues. Firstly, it increased my understanding of how Sandhurst officer cadets understand critical thinking, and how different this is from my own understanding. This has produced interesting broader questions on critical thinking in PME and encourages research into how critical thinking is understood and delivered. Secondly, it demonstrated how unexpected research outcomes can generate important debates in the PME community. The unexpected findings were interesting and valuable, and the subsequent debate and reflection on my positionality persuaded me of the possibilities rather than the problems of the project. I could improve my research design by using focus groups for example but also engage with new research avenues. Thirdly, as a Senior Lecturer at RMAS, my positionality has allowed me to learn from reflections and rethink my pedagogical approaches to reflective learning, realising that mainstreaming critical thinking into the programme will help normalise reflection.

Conclusion: Reflection and New Avenues

This is not the paper I originally intended to write. My plan was to demonstrate that in PME, there is a link between critical thinking (as I understood it) and experiential learning. A link that has been discussed extensively in research concerning traditional higher education institutions but is less covered in PME research. I assumed that by exploring the experience of officer cadet learning at Sandhurst, I would be able to demonstrate the value of experiential learning for critical thinking in PME. Instead, I came to understand that critical thinking from the perspective of officer cadets focuses more on impartiality and objectivity than on reflection. Receiving these unexpected research outcomes encouraged me to share them at the PME conference in Maynooth and ultimately write this paper. By applying autoethnographic research on milestone moments related to the research project, I made three interrelated observations relevant not only to the project, but also for PME more broadly.

Firstly, as research on PME is often conducted by those directly involved in delivering it, positionality is key. Academic and military thinking on the subjects researched in PME (such as critical thinking) might be very different, and therefore enhanced awareness of our positionality as researchers will help improve research designs. For this project, putting officer cadets at the centre of the survey before designing it (though focus groups for example) would have helped improve the research design. This principle also applies to other PME research projects, where PME researchers would benefit from creating distance between their own experiences and the subject that is being researched.

Secondly, and related to the first point, as the researcher's positionality is often close to the subject in PME research, there is a risk that research designs set out to confirm the expected, rather than explore the unexpected. The project assumed to find a positive correlation between experiential learning and enhanced critical thinking skills in PME. Instead, it generated a reflection on the meaning of critical thinking from the perspective of officer cadets, and on the positionality of the researcher. Ironically, it can therefore be argued that this research has encouraged me to reflect on my own thought processes and subsequently enhanced my critical thinking. It also made me consider how to integrate reflection more consistently in my pedagogical approaches. In short, maintaining an open attitude to 'faulty' research findings can help generate valuable, though unexpected, insights.

Third, the project has demonstrated the value of autoethnographic research in PME. Analysing the three milestone moments showed a trend of slowly considering possibilities and opportunities of the research rather than merely focusing on its design flaws and related unexpected outcomes. Autoethnography also helps us reflect on our institutional environment and understand it better, something particularly relevant in PME where military and academic cultures co-exist and integrate. Autoethnographic methods can therefore help generate debate across institutional cultures to help improve (research on) PME.

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