



Generation Z and Joint Professional Military Education

Final Synthesis Report

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Executive Summary

Every generation is shaped by different events, factors and trends, which can lead to different worldviews, values, opinions, attitudes and behaviours. Understood to include people born between 1996 and 2012, Generation Z is often considered to be different from the previous generations (e.g. the Millennials, Generation X or Baby Boomers) because it has grown up surrounded by technology, shaping how its members utilise information, communicate and interact with one another. Alongside other factors, some authors suggest this has resulted in differences in what motivates Generation Z's career choices, their expectations about what education or employment must deliver, and how they relate to authority. As of 1 April 2021, 26 per cent of the United Kingdom (UK) Armed Forces and 10.9 per cent of the UK Reserve Forces were under 25 years old and thus referable to as 'Generation Z'.¹

Overview of the study and findings

This short study reviews evidence on Generation Z to identify potential implications for the Defence Academy of the United Kingdom (Defence Academy) and delivery of Joint Professional Military Education (JPME)

Jointly undertaken by RAND Europe and King's College London, this study's core purpose is to provide a robust evidence base to enhance Defence Academy educators' knowledge and understanding of the characteristics and likely educational needs of the next generation of military professionals. In particular, this study focuses on understanding how characteristics of the so-called 'Generation Z' may manifest in a military education context. Ultimately, the analysis in this report aims to support the Defence Academy in continuing to provide education that translates into a real-world military advantage. The study relies on a mixed-methods approach. Methods include (i) a detailed review of 72 academic publications (out of a longlist of 694), (ii) six interviews with international experts in JPME, (iii) five focus groups with Royal Air Force (RAF) Division Intermediate Officer Development 1 (IOD1) students at the Defence Academy² and (iv) a workshop with the Curriculum Design and Development Group (CDDG) held at the Defence Academy on 1 September 2022.

¹ UK Ministry of Defence (2021a).

² The RAF IOD1 was the only junior course underway at the Defence Academy when we conducted this project. Had they been running at the time, we may have gained new or different perspectives by conducting discussions with officers in Army and/or Royal Navy junior courses.

The student body is likely to display generational characteristics and military-specific characteristics, both of which will shape education needs and expectations

As with any generation, military professionals represent a relatively small subset of the general cohort. Though influenced by the same macro trends shaping their whole generation, they will also display some unique characteristics. Such characteristics may make them feel more closely connected to the inter-generational body of military professionals than to members of their generation who are not in the Armed Forces.

This report compiles extensive peer-reviewed evidence showing that Generation Z are, on the one hand, technologically competent, extensively engaged with social media and the internet, and willing to speak up and challenge existing norms. On the other hand, it shows they are more likely to be withdrawn and describe their mental health as 'poor'. It indicates that Generation Z focuses more on job satisfaction and work-life balance than previous generations and is more concerned with career-oriented and practical skills. In terms of joining the military, Generation Z tends to be less fit and less keen to join the Armed Forces than previous generations. Its members may also challenge military hierarchy more than previous generations and are much less likely to see their military career as a life-long commitment. Alongside others detailed in this report, such characteristics shape what Generation-Z military professionals are likely to expect from JPME. Resonating with academic evidence, RAF IOD1 focus-group participants strongly preferred education to have practical, on-the-job application and help them develop critical thinking and analytical skills. Similarly, the focus group participants expressed significant preferences for interactive course content and delivery, learning environments that effectively use modern technology, and experienced, motivated, respectful and approachable educators.

Although this study only surveyed a small sample of military professionals at an early career stage (n=53), inter-generational differences in teaching and learning preferences were minimal. Such similarities suggest that it could be useful to understand the areas where being part of the military profession is more salient than being part of a particular generation.

Implications for the Defence Academy

The research conducted over the course of this project has several implications for how the Defence Academy can adapt to future generations' needs to continue meeting its primary objective: providing education that translates into a real-world military advantage.

The Defence Academy must consider the needs of an inter-generational student body when designing courses to ensure it pursues a holistic approach to education

While providing a complete inter-generational comparative analysis was outside this study's scope, we note that overemphasising inter-generational differences can undermine efforts to implement change that benefits the whole student body – which often spans several generations in the context of JPME. Therefore, the Defence Academy should consider the possible benefits of any potential changes to *all* generations: older and future generations as well as Generation Z. For example, some Generation-Z-specific aspects, e.g. greater or more openly acknowledged mental-health concerns, may merit focused attention when considering student welfare policies and practices, potentially benefitting all student cohort members. The

Defence Academy may also wish to consider different sub-groups' cross-generational needs and demands when designing different course-delivery modes, e.g. enabling online participation for those with caring responsibilities or unable to feasibly attend long-term residential courses. Considering options and choices that will broadly benefit the whole student body is thus likely to make JPME provision more future-oriented, resilient and inclusive.

Any JPME adaptations will inevitably be shaped by the Ministry of Defence's needs and should seek to harness the JPME student body's unique capabilities

Fundamentally, JPME focuses on educating defence personnel to deliver the UK's Defence requirements. The Defence Academy will therefore need to view any generational characteristics and preferences through a practical lens, i.e. how they might use these characteristics to improve or support the Ministry of Defence (MOD) in achieving Defence's priorities and goals. To do so will require careful balancing of the MOD's educational outcome/output requirements and opportunities to introduce greater flexibility, e.g. combining face-to-face and online learning, adopting modular approaches and flexible schedules, or other approaches. Changes to the course design, teaching style and learning environment should proactively consider how to harness generational characteristics of potential benefit to Defence and mitigate those that could present challenges for education delivery.

The Defence Academy should continue embedding practical and current content and technology-enabled learning to educate the new generations

This study discusses the range of preferences Generation Z military professionals expressed regarding teaching methods, styles and tools. While the Defence Academy has already integrated many of these approaches into its education delivery, their practical implementation is complex and evolving. We recommend that the Defence Academy leverages its partnership with King's College London, RAND Europe and Cranfield University under the Command and Staff Academic Provision (CSAP) contract to identify and develop current good practices and opportunities for change, particularly in embedding technology-enabled learning, enhancing the content's currency and harnessing interactive-learning benefits.

The Defence academy could further explore what is unique about Generation Z in the UK military, how to implement blended learning, and JPME's role in recruitment

We conducted this study when the full impact of the education-delivery changes introduced during the COVID-19 pandemic – often in an 'emergency response' manner – had not yet been fully evaluated and understood. The Defence Academy has an opportunity to lead the way in identifying how best to capitalise on learnings from the pandemic and specifically adapt the delivery of military education in ways that draw on emerging good practice. An example is technology-enabled learning and the appropriate use of face-to-face and virtual engagement (blended learning).

The evidence from the literature review shows that Generation Z does not advocate a wholesale implementation of online education. Our focus group and survey evidence indicate that Generation Z students show an even lower preference for online courses in a military setting. While we must interpret our findings with caution due to our limited sample size, they suggest that learners generally prefer face-to-face interactions. Some degree of flexibility in combining online and face-to-face provision was welcomed, particularly by participants from older generations. Going forward, therefore, the Defence Academy should

consider designing a blended learning system that caters for some students' need for flexible online learning while maintaining the teacher-student and student-student interactions shown to be vital to knowledge assimilation and learning. To achieve this, they will need to undertake more research and experimentation and consider student priorities and preferences.

Much of the literature reviewed for this study did not consider the UK-specific context, and none of the peer-reviewed articles examined Generation Z within the UK military. There are undoubtedly similarities between Generation Z members across Western countries (where most of the literature evidence originates). However, understanding the unique characteristics of the UK's Generation Z – specifically its UK military professionals – could challenge or validate this study's overarching findings and help the Defence Academy develop more informed tailored approaches. Once completed, the ongoing Haythornthwaite Review of Armed Forces Incentivisation will also offer important insights into the future UK military. However, the Defence Academy will likely have to identify its specific implications for providing JPME.

Finally, there is clear evidence that Generation Z military professionals may not perceive their military career as a life-long choice but as one of several different careers in their lifetime. To acknowledge this trend, defence academies and other professional military education institutions may need to articulate and communicate the purpose, aims and benefits of JPME more attractively to future generations – particularly those interested in military service but keen to gain transferrable skills and experiences. Doing so may improve student engagement and recruitment. In addition, the Defence Academy should consider emerging insights from the ongoing Haythornthwaite Review of Armed Forces Incentivisation to better understand what attracts different generations to the Armed Forces, what motivates and encourages them to commit to a military career, and what role JPME can play in Armed Forces incentivisation.

Preface

This report is the final synthesis report of a short study delivered in September 2022 by King's College London and RAND Europe as part of the Command and Staff Academic Provision contract (CSAP) supporting the Defence Academy in the design and delivery of Joint Professional Military Education (JPME) in the UK.

The core purpose of this study is to provide a robust evidence base to enhance Defence Academy educators' knowledge and understanding of the characteristics and likely educational needs/demands of the next generation of military professionals. In particular, the study focuses on understanding the characteristics of the so-called 'Generation Z' and how these may manifest in a military-education context. Ultimately, this report's analysis aims to support the Defence Academy in continuing to provide education that translates into a real-world military advantage.

The analysis contained in this report has been informed by interviews with experts in JPME and several focus groups with the Royal Air Force Division Intermediate Officer Development 1 (IOD1) students at the Defence Academy. Therefore, the RAND Europe project team would like to take this opportunity to express their gratitude to the various stakeholders who participated in the interviews (Chaitra Hardison, Lt Col Lionel Mayade, Wg Cdr Jacqui Carswell, Lisa Harrington, Paul Mayberry and Stephen Dalzell) and the RAF IOD1 students who agreed to share their opinions and experiences in the five focus groups we ran on 29 June 2022.

Similarly, the team wishes to thank the RAND Europe Quality Assurance reviewers, Ruth Harris, Ben Caves and Elena Rosa Brown, for their invaluable feedback on the draft report.

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Abbreviations

CDDG	Curriculum Design and Development Group
CSAP	Command and Staff Academic Provision
Defence Academy	Defence Academy of the United Kingdom
DS	Directing Staff
ERIC	Education Resources Information Center
GDP	Gross Domestic Product
IOD	Intermediate Officer Development
JSCSC	Joint Services Command and Staff College
JPME	Joint Professional Military Education
NCO	Non-Commissioned Officer
PLA	People's Liberation Army
Q&A	Questions and Answers
RAF	Royal Air Force
UK	United Kingdom
US	United States

1. Introduction

1.1. Context

Generation Z is widely understood to include people born between 1996 and 2012.³ As such, its youngest members are now entering the tertiary education system and the workforce in greater numbers, leading to questions about the best ways to recruit, educate, train, motivate and retain them. These questions have extended to the military and the military education system in various countries worldwide. As of 1 April 2021, 26 per cent of the United Kingdom (UK) Armed Forces and 10.9 per cent of the UK Reserve Forces were under 25 years old.⁴

Different events, factors and trends shape each generation, leading to different worldviews, values, opinions, attitudes and behaviours. Many hold that Generation Z differs from previous generations (e.g. the Millennials, Generation X or the Baby Boomers) because it has grown up with technology shaping how its members utilise information, communicate and interact.⁵ Many authors suggest that, alongside other factors, this has resulted in differences in what motivates Generation Z's career choices, their expectations regarding education or employment, and how they relate to authority.⁶

In the context of military education, these differences can manifest themselves in several areas. These include (i) how Generation Z assimilate information and learns and (ii) their preferences regarding teachers, teaching content, methods and environments. The challenge for tertiary education in general – and military education in particular – lies in understanding whether future generations' unique characteristics (and resulting preferences) necessitate changes to education provision and, if so, what kind.

Within this context, the Defence Academy needs to understand future generations' specific characteristics and preferences and how these (i) differ from those of previous generations, (ii) manifest in a military setting, and (iii) impact how students learn and what motivates them.⁷ Although anecdotal evidence suggests that Generation Z may require different teaching methods and learning environments, no systematic review of the evidence exists. Moreover, there is no systematic analysis of how these may manifest in a military

³ Army & Navy Academy (2022).

⁴ UK Ministry of Defence (2021a).

⁵ Army & Navy Academy (2022); Wortzel (2021); Veteran.com (2022).

⁶ Army & Navy Academy (2022); Wortzel (2021). Note that there is no consensus in literature on whether inter-generational differences are the most important factors shaping generations, with many authors claiming that the biggest differences lie between the younger and older people within any generation rather than between specific generations themselves.

⁷ Moore (2019); Hanks (2022).

education setting and how military education might adapt to better meet future generations of military professionals' needs. This short study seeks to provide an initial contribution toward addressing this evidence gap.

1.2. Research scope and objectives

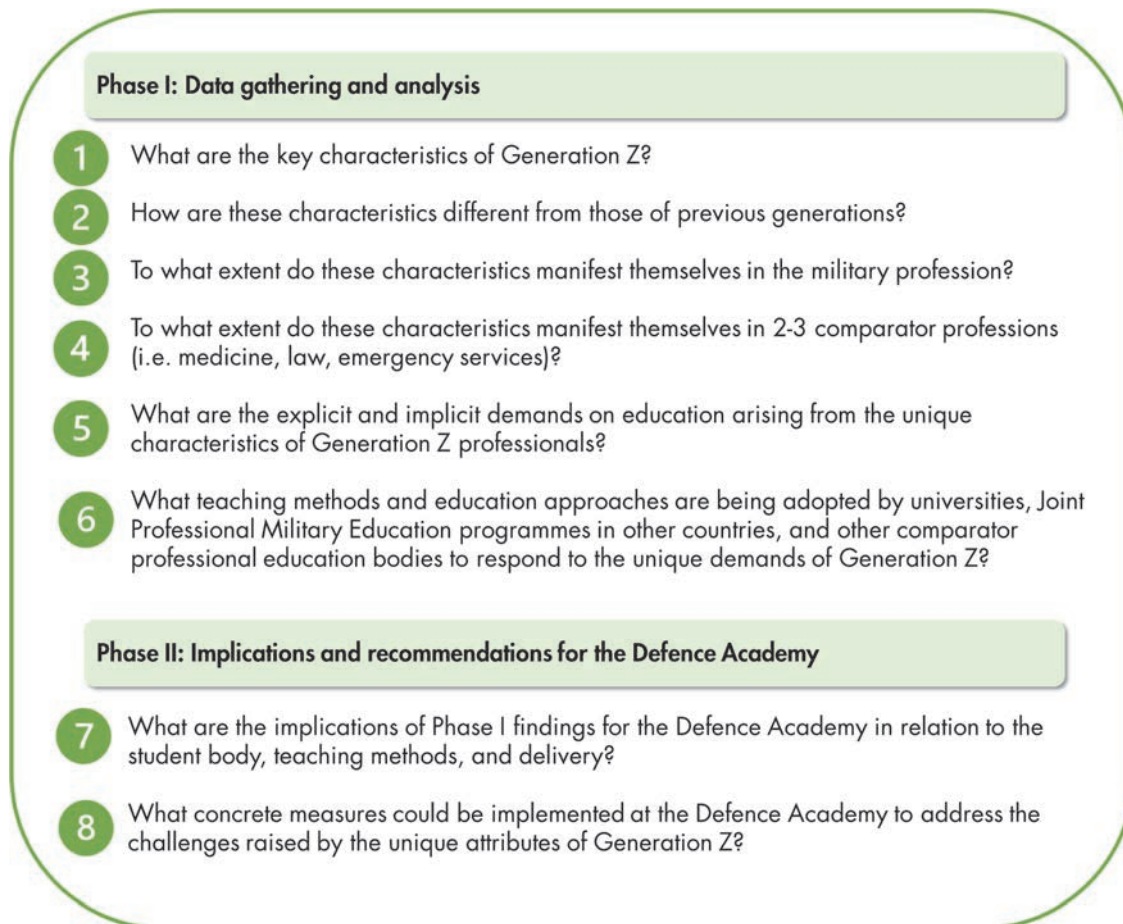
Against the background outlined above, this project aims to provide an overview of published evidence about Generation Z characteristics, how they manifest in a military and military education setting, and the implications for Joint Professional Military Education (JPME) at the Defence Academy. The project had two phases:

- **Phase 1** established the published research evidence base on Generation Z's reported, how they differ from previous generations, and how they manifest in military and military-education settings and a limited number of 'comparator' professions (medical, emergency services and law enforcement).⁸
- **Phase 2** focused on identifying concrete implications and recommendations for the Defence Academy, drawing on the published research evidence base gathered in Phase 1 and a workshop with the senior members of the Curriculum Design and Development Group (CDDG) at the Defence Academy on 1 September 2022.

Figure 1.1 provides a summary overview of the research questions explored in each study phase.

⁸ We chose these three professions (medical, emergency services and law enforcement) to reflect a commensurate commitment of time, resources and motivation compared to joining the Armed Forces.

Figure 1.1 Overview of the research questions driving this project



Source: RAND Europe.

1.3. Methodology

To answer the research questions presented above, the RAND-King’s study team employed a combination of research methods over five weeks in June and July 2022:

- **Literature review:** The research team reviewed publicly available open-source academic and grey literature (e.g. policy reports and news media) on Generation Z characteristics, learning behaviours and military education, dating from 2000 to the present. RAND’s Knowledge Services – a RAND internal professional library service – produced an initial longlist of 694 sources based on Title-Abstract Keyword searches across Academic Search Complete, Education Resources Information Center (ERIC), Military & Government Collection, Scopus, Web of Science and 20 additional grey-literature sources. The research team narrowed down the longlist based on relevance, accessibility and reliability. The research team then extracted a total of 72 sources through a standard data-extraction template, subsequently using them as part of the core evidence base for analysis. Annex A presents additional detail on our literature-review approach.
- **Interviews:** RAND Europe conducted several expert interviews to gain insight into Generation Z’s characteristics and learning styles and any challenges faced by their educators, particularly in the

military context. We conducted seven interviews with senior military personnel, education specialists and learning experts (see Annex A for an overview of interview participants). Interviews were semi-structured around the core research questions.

- **Focus groups:** The RAND-King's research team conducted five focus groups with a small sample of Royal Air Force (RAF) Division Intermediate Officer Development 1 (IOD1) students. The focus groups aimed to investigate how Generation Z military professionals perceive their generation's unique characteristics.⁹ The sessions ran for 60 minutes, bringing together Generation Z participants and those from previous generations. A total of 53 participants took part in the focus groups. Since participation in focus groups was on the condition of anonymity, we did not collect any personally identifiable data.
- **Mini survey:** We asked focus group participants to complete a brief survey of ten questions to capture their perspectives and priorities on education, learning and development. Of the 53 participants involved, 12 were from Generation Z, with the remainder from older generations.
- **Workshop with the Curriculum Design and Development Groups (CDDG) at the Defence Academy:** To complete the evidence base for Phase 2, the research team ran a two-hour workshop with the CDDG on 1 September to discuss the key findings' implications for the Defence Academy. The workshop's key observations and findings form the core of Chapter 4.

1.4. Caveats and limitations

Given this study's 'quick look' nature, several caveats and limitations should be considered when reflecting on the findings presented in the subsequent chapters. These include:

- As with any analysis of entire generations or cohorts, identifying common characteristics and trends involves a high degree of generalisation. Having reviewed a substantial volume of evidence (see Annex A), the research team sought to distinguish areas of disagreement between sources or inconclusive evidence. However, it was beyond this study's scope to independently and comprehensively validate the observations and findings gathered in our evidence review.
- This study focused explicitly on Generation Z, not aiming for an in-depth analysis of the key characteristics of other generations who are also often members of the student body in professional military education establishments. Therefore, some of the characteristics attributed to Generation Z in this report may also apply to older generations, particularly those who have chosen to join the military. Where possible, the project team has pointed out these cases. However, it was beyond the scope of this study to provide a complete comparative analysis of Generation Z and previous generations.
- The evidence base consists primarily of English-speaking sources, a limited number of interviews with senior experts from the US, Australia and France, and focus group discussions with RAF

⁹ The RAF IOD1 was the only junior course underway at the Defence Academy when this project was conducted. Had they been running at the time, discussions with officers in Army and/or Royal Navy courses may have offered new or different perspectives.

IOD1 students within the Defence Academy. Unless stated otherwise, the findings of this study thus primarily relate to Generation Z members living in relatively wealthy Western countries with stable economies and political systems. Therefore, it would not be appropriate to extrapolate this study's findings to the entire global Generation Z population, which was beyond our scope.

- Many studies on Generation Z learners included in the literature review engaged university participants. Therefore, some findings may not necessarily apply to the broader Generation Z population, some of whom might not have attended university or received any other higher education.
- Many studies on Generation Z included in the literature review were not conducted in the UK or with UK participants. Thus, although most studies relate to a Western context, the literature contains limited information on UK-specific dynamics.
- The interviews and focus group activities RAND-King's study team conducted engaged experts who are not necessarily Generation Z; it is, therefore, possible that bias or misperceptions influenced their understanding of Generation Z characteristics.
- The survey and focus groups involved a relatively small sample size (n=53). Rather than exploring broader societal differences between Generation Z and older generations, the survey focused on a small subgroup of military personnel and their experiences to highlight similarities/differences between Generation Z as a whole and the subset who decide to join the military. It is also worth remembering that the IOD1 courses represent junior rank officers' early encounters with the Defence Academy's course provision, thus a relatively limited experience to reflect upon when it comes to education provision at the Defence Academy specifically. In addition, this project only engaged with officers from the RAF, not the Army and/or Royal Navy, which may have yielded different perspectives. Thus, the information gained from our survey and focus groups may not be generalisable to the other courses the Defence Academy offers.
- There is as yet limited evidence in the public domain to comprehensively evaluate the impact and implications of the COVID-19 pandemic on higher education, particularly JPME. As such, this report cannot draw conclusive connections between any reported trends and the pandemic.

1.5. Report structure

This document features three chapters beyond this introductory one:

- **Chapter 2** identifies Generation Z's reported characteristics, analysing their behaviours and expectations in the military and other professions, such as emergency services and medicine.
- **Chapter 3** discusses Generation Z's reported preferences in military education, highlighting their preferences regarding course content, organisation, teachers, teaching styles and learning environments.
- **Chapter 4** summarises considerations for the Defence Academy, identifying areas for continuity and change.

This report is accompanied by a full bibliography and an Annex providing more methodological detail.


2. Generation Z: Characteristics

This chapter draws out Generation Z's reported characteristics, analysing its members' behaviours and expectations in the military and other professions, e.g. emergency services and medicine.

2.1. General characteristics

The literature review, interviews, focus groups and survey shed light on Generation Z's various characteristics, as summarised in Figure 2.1 below.

Figure 2.1 Overview of Generation Z's characteristics

- 
- Generation Z members are digital natives, demonstrating high degrees of technological competence.
 - Generation Z is generally characterised as open-minded, exposed to diverse ways of thinking, and environmentally conscious.
 - Generation Z challenges norms and institutional thinking.
 - Generation Z is generally risk averse and socially withdrawn, facing significant social media pressure.
 - Mental health is a key concern among Generation Z, which suffers from a high rate of anxiety and depression.
 - Generation Z is anxious about the future of the economy.
 - Generation Z tends to focus on local/national rather than global identity.
 - Generation Z is highly practical, particularly when it comes to education and employment.
 - Generation Z sees work as a means to generate a living, with many young people prepared to leave employment if their needs are unmet.
 - Generation Z members are likely to face challenges entering the workforce due to their resistance to authority and underdeveloped teamwork abilities.
 - Generation Z has similar broad motivations to 'younger generations'.

Source: RAND Europe analysis of data from the literature review, IOD1 focus groups and IOD1 survey.

Generation Z members are digital natives, demonstrating high degrees of technological competence

In addition to being tech-savvy, this generation also engages heavily with social media and the internet.¹⁰ Generation Z members are generally more digitally literate than Millennials (born circa 1981–1996), displaying greater comfort with technology and social media,¹¹ and flooded with more ‘material, technological and formal educational stimuli than previous generations.’¹² Generation Z’s technologically savvy nature considerably impacts everything from their relationships to how they learn and problem-solve.¹³ Generation Z members are also highly visual learners, frequently communicating through images, memes and emojis.¹⁴ Moreover, they expect things tailored and on-demand, from Netflix and YouTube to their food.¹⁵ Though they possess an unparalleled ability to exploit and harness the internet, many lack the critical analysis to understand it fully.¹⁶

Generally, Generation Z’s use of social media differs from Millennials’, with increased ambivalence towards the established press and traditional media forms.¹⁷ One interviewee noted that because they have instant access to information combined with distrust towards authority, Generation Z will likely face challenges in identifying authoritative information and distinguishing it from false narratives and deepfakes.¹⁸

Generation Z is generally characterised as open-minded, exposed to diverse ways of thinking and environmentally conscious

In Western countries, Generation Z prioritises leadership and dedication to a cause more than other generations.¹⁹ Compared to other generations surveyed at the same age, one study found that Generation Z’s primary concern is not access to jobs but the environment,²⁰ followed by social inequalities, gender equality, terrorism and COVID.²¹ Generation Z is less likely to oppose immigration than other generations.²² Millennials and Generation Z are also far more tolerant of differences in race, sexual orientation and gender than older generations.²³ In particular, Generation Z’s more expansive definition of ‘family’ affords them greater empathy with people from other backgrounds.²⁴ Generation Z thus values

¹⁰ Reisenwitz (2021); Lev (2021); Autin (2020); Latkovikj & Popovska (2020); RAND Europe Interview with Colonel Lionel Mayade (13 July 2022); Hashisho & Mamaghani (2020); Workforce Institute (2019); Hsieh (2018).

¹¹ Reisenwitz (2021).

¹² Lev (2021).

¹³ Cilliers (2021).

¹⁴ Cretu et al. (2020).

¹⁵ Hashisho & Mamaghani (2020); Reid (2018); Zhuhra et al. (2022).

¹⁶ Autin (2020); Ford (2020); Buzzetto-Hollywood & Alade (2018); Rozmus & Kurek-Ochmańska (2018).

¹⁷ Rospigliosi (2019).

¹⁸ RAND Europe Interview (13 July 2022).

¹⁹ Holzer et al. (2022).

²⁰ Muxel (2021).

²¹ Muxel (2021).

²² Muxel (2021).

²³ McMahon & Bernard (2019).

²⁴ Work (2019).

diversity and advocates for social justice.²⁵ They place a high value on concepts including ‘freedom, success, respect, justice, happiness, love, and inner peace’²⁶ – which transfer to education and employment. Generation Z values employers who provide equal opportunities and pay. Important employer characteristics for Generation Z include treating people with respect, ethical behaviour, fair avenues for promotion and open communication.²⁷

Generation Z challenges norms and institutional thinking

The media often accuses Generation Z of being easily offended or a ‘snowflake generation’.²⁸ However, Generation Z has been shaped by economic volatility, public violence and social justice movements.²⁹ Its members grew up in the aftermath of 9/11 amid war in the Middle East, terrorism, climate change and now six years of racial and urban violence and conflict in the United States – all of which may prompt genuine concern about the future and how to respond to these events responsibly.³⁰ As a result, Generation Z is pessimistic and distrustful, rejecting the ‘corporate narrative’ and preferring to follow the advice and experiences of the ‘average person’ with whom they identify.³¹ One US interviewee felt that Generation Z’s views are often anti-institutional and pro-social justice – though this manifested primarily in the civilian context through participation in movements such as ‘Black Lives Matter’ or the ‘Me Too’ movement.³²

Generation Z is generally risk-averse and socially withdrawn, facing significant social-media pressures

Some evidence shows that Generation Z members are likely to be more cautious than their parents.³³ This trend is also evident in the lower rate of alcohol and drug abuse, teen pregnancy and high school dropout rates compared to Millennials.³⁴ Generation Z members are also more likely to be withdrawn and limit most social interactions to online contexts than Millennials and other generations.³⁵ Two focus groups perceived that Generation Z might be more superficial than previous generations, not ‘growing up in playgrounds and neighbourhoods’ but ‘living on social media and TikTok’.³⁶ Some authors claim that

²⁵ Rogers & Cohen (2020).

²⁶ Demirbilek & Keser (2022).

²⁷ Schwieger & Ladwig (2018).

²⁸ RAND Europe RAF IOD1 focus group 1 (29 June 2022).

²⁹ Moore (2019).

³⁰ McMahan & Bernard (2019); RAND Europe Interview with Stephen Dalzell (12 July 2022); Lerchenfeldt et al. (2021).

³¹ Autin (2020).

³² RAND Europe Interview (12 July 2022).

³³ Reisenwitz (2021).

³⁴ Hashisho & Mamaghani (2020).

³⁵ Hsieh (2018).

³⁶ RAND Europe RAF IOD1 focus group 1 (29 June 2022); RAND Europe RAF IOD1 focus group 3 (29 June 2022).

Generation Z has a fixed idea of self-worth, influenced by the self-esteem movement on social media. As such, Generation Z has been linked with narcissistic tendencies and social anxiety.³⁷

Three focus groups noted that today's young people are more likely to suffer from body issues.³⁸ Generally, their social-media use indicates that Generation Z cares more about their peers' opinions than other generations.³⁹ In turn, young people are often critical of their peers and require guidance in providing constructive peer-direct feedback.⁴⁰ They have a persistent fear of missing out, with learners often maintaining a constant online presence.⁴¹

Mental health is a key concern among Generation Z, which suffers from a high rate of anxiety and depression

One interviewee felt that Generation Z generally exhibits greater acceptance of mental health issues than previous generations.⁴² However, the literature suggests that, as a whole, Generation Z are more likely than other generations to categorise their mental health as 'poor'⁴³ and Generation Z students' mental health is a recurring concern that is likely to continue. Rates of depression among young adults have increased dramatically over the past few decades: one study found that rates of psychological distress and suicidal thoughts increased by 71 and 49 per cent, respectively, between 2005 and 2017.⁴⁴ Furthermore, the amount of time Generation Z spends online negatively affects its members' mental health, literacy levels and classroom interactions.⁴⁵ Generation Z members are also concerned that their anxiety presents a barrier to success.⁴⁶

Generation Z is anxious about the future of the economy

Generation Z fears the consequences of the economic crisis, concerned that it may have lasting effects on their quality of life.⁴⁷ They believe things 'used to be better' in previous years/decades, with other generations getting a 'better deal in life'. According to one focus group, this accompanies an increasing awareness that previously sustained Gross Domestic Product (GDP) growth is ending.⁴⁸ Generation Z has never lived through an economic boom. Moreover, its members experienced the economic crisis's effects on their families and friends during the financial crash of 2008–2009. Consequently, they are concerned about the financial impacts of their decisions, especially student loan debt.⁴⁹ A 2014 survey found that 60 per cent of

³⁷ Ang et al. (2021).

³⁸ RAND Europe RAF IOD1 focus group 4 (29 June 2022); RAND Europe RAF IOD1 focus group 1 (29 June 2022); RAND Europe RAF IOD1 focus group 3 (29 June 2022).

³⁹ Pak et al. (2017).

⁴⁰ Ford (2020).

⁴¹ Ford (2020).

⁴² RAND Europe Interview (13 July 2022).

⁴³ Army & Navy Academy (2022).

⁴⁴ Beck & Wright (2019).

⁴⁵ Lerchenfeldt et al. (2021).

⁴⁶ Workforce Institute (2019).

⁴⁷ Muxel (2021).

⁴⁸ RAND Europe RAF IOD1 focus group 2 (29 June 2022).

⁴⁹ Pefanis Schlee et al. (2020).

16–19-year-olds were worried about not having enough money⁵⁰ and are more likely to be frugal and conservative with it.⁵¹

Generation Z tends to focus on local/national rather than global identity

Generation Z feels most strongly identified at local rather than national, regional or global levels.⁵² They also tend to alter their identity to fit the environment and people around them (called ‘situational identities’).⁵³ However, unlike many Western peers, Chinese Generation-Z members are highly nationalistic and patriotic, perhaps largely due to Chinese schools’ defence and security education programmes.⁵⁴ A 2021 French study revealed that those most interested in politics have the strongest sense of national identity.⁵⁵ In the UK, Generation Z generally prefers nationalism to globalism in public policy, with 57 per cent of UK participants surveyed preferring a national approach compared to 27 per cent prioritising a collaborative approach.⁵⁶

Generation Z is highly practical, particularly when it comes to education and employment

Along with the Millennial generation, Generation Z is more adept at multitasking and independent learning than previous generations.⁵⁷ However, Generation Z is more practical and financially driven than Millennials, with some studies describing Generation Z students as more career-oriented and entrepreneurial,⁵⁸ typically focusing more on career-oriented and practical skills than their Millennial counterparts.⁵⁹ Evidence from our focus groups suggests that, though they represent a smaller portion of the workforce, generation Z members are still likely to prioritise a ‘career’ over a ‘job’.⁶⁰ However, Generation Z is less likely to follow an inherited family career (such as a manual trade) as jobs are increasingly tech-based and many previous generations’ jobs no longer exist (e.g. coal miners and factory workers).⁶¹ Only half of Generation Z consider college or high school adequate preparation for joining the working world⁶²; since they are more interested in outcomes, they may not always complete higher education degrees. Instead, they aim to learn skills that lead to employment.⁶³ Many in Generation Z pursue

⁵⁰ Moore et al. (2017).

⁵¹ Moore et al. (2017).

⁵² Muxel (2021).

⁵³ Hashisho & Mamaghani (2020).

⁵⁴ Wortzel (2021).

⁵⁵ Muxel (2021).

⁵⁶ IFAC (2018); Sanalan & Taşlıbeyaz (2020).

⁵⁷ Lev (2021).

⁵⁸ Seemiller & Mills (2019); Schwieger & Ladwig (2018).

⁵⁹ Hashisho & Mamaghani (2020).

⁶⁰ RAND Europe RAF IOD1 focus group 5 (29 June 2022).

⁶¹ RAND Europe RAF IOD1 focus group 2 (29 June 2022).

⁶² Workforce Institute (2019).

⁶³ Trevino (2018).

business, graphic design, video production and app-development skills from an early age.⁶⁴ A French study found that Generation Z members feel they can only rely on themselves, particularly in navigating environments with high unemployment.⁶⁵

Generation Z sees work as a means to generate a living, with many young people prepared to leave employment if their needs are unmet

Generation Z views work as a way to live comfortably, but this is balanced against its members' desire for freedom and wariness of hierarchies.⁶⁶ Younger people generally enter the workforce later in life than previous generations,⁶⁷ and Generation Z is more likely than older generations to pursue meaningful activity instead of social prestige.⁶⁸ They are also less likely to view their career as a source of identity, prioritising work-life balance instead.⁶⁹ Younger people are sceptical and dislike being taken advantage of by senior management.⁷⁰ They also resist age-based hierarchies, prioritising the ideas and contributions individuals bring to the table.⁷¹ Generation Z does not hesitate to leave employment if their expectations are unmet, seeking environments that cater to their needs.⁷²

Generation Z members are likely to face challenges entering the workforce due to their resistance to authority and underdeveloped teamwork abilities

Many Generation Z members are unprepared for the realities of the workplace compared to previous generations.⁷³ A general breakdown in the psychological contract between employer and employees has created a cycle; as organisations are no longer 'able to promise stable, long-term employment, employees are distancing themselves from their organization.'⁷⁴ In turn, older generations often perceive Generation Z as entitled and lazy.⁷⁵ Generation Z's opinionated and entrepreneurial approach may lead to conflicts with older managers and organisations.⁷⁶ A 2017–2018 study also showed that Generation Z was more anxious about group projects than previous cohorts, concerned about group members' contribution to work activities and less likely to enjoy the collaborative nature of teamwork.⁷⁷

⁶⁴ Nayar & Koul (2020); Buzzetto-Hollywood & Alade (2018).

⁶⁵ Muxel (2021).

⁶⁶ Scroble (2021); Muxel (2021); Wilson (2020).

⁶⁷ Muxel (2021).

⁶⁸ Holzer et al. (2022).

⁶⁹ Mahesh et al. (2022); Muxel (2021); RAND Europe Interview (12 July 2022).

⁷⁰ Wortzel (2021).

⁷¹ Scroble (2021); RAND Europe Interview (13 July 2022).

⁷² McMahon & Bernard (2019); Scroble (2021); RAND Europe Interview (12 July 2022).

⁷³ Smaliukiene & Bekesiene (2020).

⁷⁴ Tucker et al. (2005), cited in Dries (2013).

⁷⁵ RAND Europe RAF IOD1 focus group 4 (29 June 2022); RAND Europe RAF IOD1 focus group 5 (29 June 2022); Cickovska (2020).

⁷⁶ Lev (2021).

⁷⁷ Pefanis Schlee et al. (2020).

Generation Z has similar broad motivations to ‘younger generations’

Younger generations’ increasing diversity necessitates a re-examination of the ‘traditional notions of what makes workers thrive in work contexts’.⁷⁸ Generation Z primarily views wellbeing at work as linked to relationships with colleagues and managers, only secondarily associated with job performance and appraisal.⁷⁹ At the same time, however, Generation Z wants managers to provide frequent feedback on specific points.⁸⁰ This aligns with RAND Europe’s more comprehensive review of motivations as part of the Haythornthwaite Review of Armed Forces Incentivisation, which found that⁸¹:

- Key factors associated positively with higher attraction and retention included ‘having interesting and exciting work, the opportunities for training, gaining qualifications and new skills, opportunities for progression, a sense of purpose, receiving feedback, working for socially responsible companies, job security and a high salary’.
- Evidence suggests that a person’s career stage plays a more significant role in explaining age-based differences in motivations than their generation. The literature shows that workers early in their careers tend to be motivated by interesting work and growing responsibility, while those at later stages value autonomy, flexibility, workload management and retirement benefits.
- A systematic review of the literature on inter-generational differences concluded that ‘there tended to be more similarities than differences between generations with regard to workplace values and preferences.’⁸² Some of the key similarities in values were work-life balance, gaining satisfaction from work tasks, ethics and morality, desire for respect, trust (in the company, co-workers and managers), interesting work, desire to learn and develop, resistance to change, and having leaders who encourage, are credible, future focussed and provide feedback.⁸³
- Generation Z’s work ethos and workplace preferences were found to be ‘practical and driven’, and described as ‘expecting diversity in the workplace’, ‘demanding companies to be ethical and transparent’, ‘entrepreneurial and innovative’, ‘seeking autonomy and project ownership’, ‘questioning the conventional way of doing things’, ‘expressed need to balance professional and personal lives’, ‘wanting to work and learn at a time that suits them’, ‘seeing no difference in working from home than in the office’.⁸⁴

⁷⁸ Latkovikj & Popovska (2020).

⁷⁹ Smaliukiene & Bekesiene (2020).

⁸⁰ Wortzel (2021).

⁸¹ Welsh et al. (2022).

⁸² Martin and Otteman (2016); Alhmoud & Rjoub (2020).

⁸³ Welsh et al. (2022). Citing Martin and Otteman (2016), cited in Alhmoud & Rjoub (2020).

⁸⁴ Welsh et al. (2022).

2.2. Generation Z in the military profession

This section examines Generation Z's behaviours, expectations and priorities in the military profession, as summarised in Figure 2.2 below.

Figure 2.2 Overview of Generation Z in the military profession

- Generation Z members are less willing to go into the military and may not stay once they have joined.
- Generation Z members interested in joining the military are more likely to be male, engaged in politics and identify as right wing.
- Generation Z prioritises good salaries and job security while also expecting more flexibility in careers; they are less likely to commit to lifetime service in the military.
- Generation Z is less prepared for intensive physical training.
- Generation Z can become frustrated by rigid military hierarchical structures, seeking to challenge established ways of doing things and infuse new ideas and diversity.
- Generation Z is more withdrawn and less likely to participate in social activities in the Armed Forces.
- The military can capitalise on similarities and unique differences between Generation Z and past generations, particularly concerning digital skills.

Source: RAND Europe analysis of data from the literature review, IOD1 focus groups, and IOD1 survey.

Generation Z members are less willing to go into the military and may not stay once they have joined

One focus group perceived Generation Z to have less pride in the military, with a few participants suggesting this might be because Britain has only engaged in discretionary operations in the last 40 years (since the Falklands) and because of strong public views on the Iraq war.⁸⁵ In the United States (US), only 1 per cent of Generation Z is 'eligible and inclined to have a conversation' with the military about possible service.⁸⁶ The problem does not end with recruitment. A study of Generation Z members entering the US Air Force revealed that all those interviewed felt lost when starting and did not know whether this was their true calling.⁸⁷ Similarly, China's President Xi Jinping noted in 2013 that many young people struggle with military life.⁸⁸ The same focus group that reported the declining pride in the UK military also discussed how Generation Z might have less awareness of history and less pride in the Armed Force's ceremonial

⁸⁵ RAND Europe RAF IOD1 focus group 2 (29 June 2022).

⁸⁶ McMahon & Bernard (2019).

⁸⁷ Wilson (2020).

⁸⁸ Wortzel (2021).

aspects.⁸⁹ Another focus group noted that Generation Z is generally more connected to the ‘outside’ world beyond the military.⁹⁰

Generation Z members interested in joining the military are more likely to be male, be engaged in politics and identify as right-wing

A French study specifically focused on understanding Generation Z’s relationship with the military noted that those interested in the military tend to be less concerned by the environment and more concerned by terrorism than their peers.⁹¹ The same study showed that the least likely Generation Z members to join the military include those who are women, highly educated, strongly left-wing, non-religious, motivated by freedom over order, opposed to strong national leadership and disinclined to see work as creating meaning in their lives.⁹²

Generation Z prioritises good salaries and job security while also expecting more flexibility in careers; they are less likely to commit to lifetime service in the military

The French study on Generation Z’s relationship to the military shows that the decision to join or remain is strongly determined by salary, job security and the ability to support a family.⁹³ According to data from one of the focus groups, Generation Z prioritises a healthy work-life balance, family, job security and stable pay, though they are less likely to afford the life of previous generations and cannot afford homes.⁹⁴ This is a major factor influencing their decision to stay in the military or pursue employment elsewhere.⁹⁵ Free education and avoiding student debt may also be key motivators among young people joining the military.⁹⁶ Focus group participants also noted they were more likely to pursue multiple careers in and out of service, generally expecting more choice.⁹⁷ This was further corroborated by the insights from French military education, which noted that Generation Z members are more likely to join the military for a short five-year stint than commit for a lifetime.⁹⁸ Conscious that military service may not be a Generation Z members’ only career, the same interviewee (embedded in the French PME) noted the strong desire among Generation Z members to develop skills valuable in civilian employment.⁹⁹

⁸⁹ RAND Europe RAF IOD1 focus group 2 (29 June 2022).

⁹⁰ RAND Europe RAF IOD1 focus group 5 (29 June 2022).

⁹¹ Muxel (2021).

⁹² Muxel (2021).

⁹³ Muxel (2021).

⁹⁴ RAND Europe RAF IOD1 focus group 5 (29 June 2022).

⁹⁵ RAND Europe RAF IOD1 focus group 5 (29 June 2022).

⁹⁶ RAND Europe Interview (14 July 2022).

⁹⁷ RAND Europe RAF IOD1 focus group 2 (29 June 2022).

⁹⁸ RAND Europe Interview (13 July 2022); RAND Europe RAF IOD1 focus group 2 (29 June 2022).

⁹⁹ RAND Europe Interview (13 July 2022).

Generation Z is less prepared for intensive physical training

Generation Z considers military jobs too risky or challenging, though they generally respect those working in the military.¹⁰⁰ Young recruits come from a far more sedentary lifestyle than previous generations, which makes them more prone to injuries as they are not used to the basic training's intensive activity.¹⁰¹ Therefore, they require more training to reach the same standard as other generations.¹⁰² The People's Liberation Army and US Armed Forces have noted that many new young recruits are not physically fit for military service.¹⁰³

Generation Z can become frustrated by rigid military hierarchical structures, seeking to challenge established ways of doing things and infuse new ideas and diversity

One focus group discussed how Generation Z members demonstrate impatience in the military and want to jump from 'adventure to adventure'. They observed that Generation Z might be less interested in long posts, instead pursuing challenges and seeking continuous opportunities for growth, impatient for progression.¹⁰⁴ Data from one focus group suggests that Generation Z also expects constant innovation but comes up against the military's inertia, which can cause frustration.¹⁰⁵ Generation Z also prefers an interactive and collaborative learning process, which is not always replicable in the Armed Forces, where things are often repeated according to procedures.¹⁰⁶ The same focus group also noted that Generation Z is less likely to 'believe in' rank than previous generations.¹⁰⁷ They want to know the 'why' rather than simply follow orders.¹⁰⁸ Still, the same focus group noted that military Generation Z were somewhat frustrated that senior ranks are inherently occupied by older generations, underrepresenting younger people's ideas.¹⁰⁹ Generation Z participants in another focus group commented that their willingness to speak up is suppressed as they are not permitted to challenge authority, especially from the older generation.¹¹⁰ A third focus group noted that the military is changing and adapting to new generations, mentioning that the UK military is transitioning from recruiting air specialists to recruiting airmen. It is also more lenient on recruits' physical appearance, e.g. regarding beards and dreadlocks.¹¹¹ The US Space Force is similarly relaxing grooming standards, largely to attract talent from the cyber field.¹¹² As noted in section 2.1, Generation Z is more comfortable with diversity, resisting categorisation and valuing diverse thinking in a military context by overlaying identity aspects such as gender.¹¹³

¹⁰⁰ Ripiceanu (2019).

¹⁰¹ Sanchez-Bustamente (2022).

¹⁰² Sanchez-Bustamente (2022).

¹⁰³ Wortzel (2021).

¹⁰⁴ RAND Europe RAF IOD1 focus group 5 (29 June 2022).

¹⁰⁵ RAND Europe RAF IOD1 focus group 5 (29 June 2022).

¹⁰⁶ Wortzel (2021).

¹⁰⁷ RAND Europe RAF IOD1 focus group 5 (29 June 2022).

¹⁰⁸ Hinton (2020); RAND Europe RAF IOD1 focus group 5 (29 June 2022).

¹⁰⁹ RAND Europe RAF IOD1 focus group 5 (29 June 2022).

¹¹⁰ RAND Europe RAF IOD1 focus group 3 (29 June 2022).

¹¹¹ RAND Europe RAF IOD1 focus group 4 (29 June 2022).

¹¹² RAND Europe Interview (12 July 2022).

¹¹³ RAND Europe Interview (12 July 2022).

Generation Z is more withdrawn and less likely to participate in social activities in the Armed Forces

Compared to other cohorts in the military, Generation Z participants in one focus group considered themselves more anti-social and hesitant to voice their opinions than other military colleagues.¹¹⁴ They mentioned that many peers would isolate themselves in their rooms, spending time on their phones, while other generations appeared more social. They thought this might be a problem since the military has a recognised drinking culture; according to them, most forms of socialising occur at the bar.¹¹⁵ There is a need to anchor this generation in the ‘real world’ rather than just the digital sphere and emphasise that they are part of society and a team. One interviewee in professional military education expressed fear of ‘losing them [Generation Z]’ to social media.¹¹⁶ The COVID-19 pandemic may have exacerbated Generation Z’s withdrawal into social media, but since this study has not explicitly investigated the pandemic’s impact, it cannot establish causality.

The military can capitalise on similarities and unique differences between Generation Z and past generations, particularly concerning digital skills

Focus group participants noted that Generation Z shares similarities with other military cohorts, remarking that ‘you still need to have a certain mindset and way of thinking to join the military’, such as independence.¹¹⁷ They suggested that the main difference was not down to age or generational differences but differences between civilian and military mentalities.¹¹⁸ This was illustrated by our limited sample of 53 RAF IOD1 participants, whom we asked about their attitude to risk-taking. As noted in section 2.1, the reviewed sources (mainly focused on the civilian population) report that Generation Z is generally perceived as risk-averse. However, Generation Z and other generations of IOD1 participants surveyed for this study expressed a much greater openness to risk, with several explicitly recognising that risk management is inherent to being in the military (see Figure 2.3). Therefore, civilian and military Generation Z members may differ regarding risk-taking behaviour, a trend that may transcend generations.

¹¹⁴ RAND Europe RAF IOD1 focus group 4 (29 June 2022).

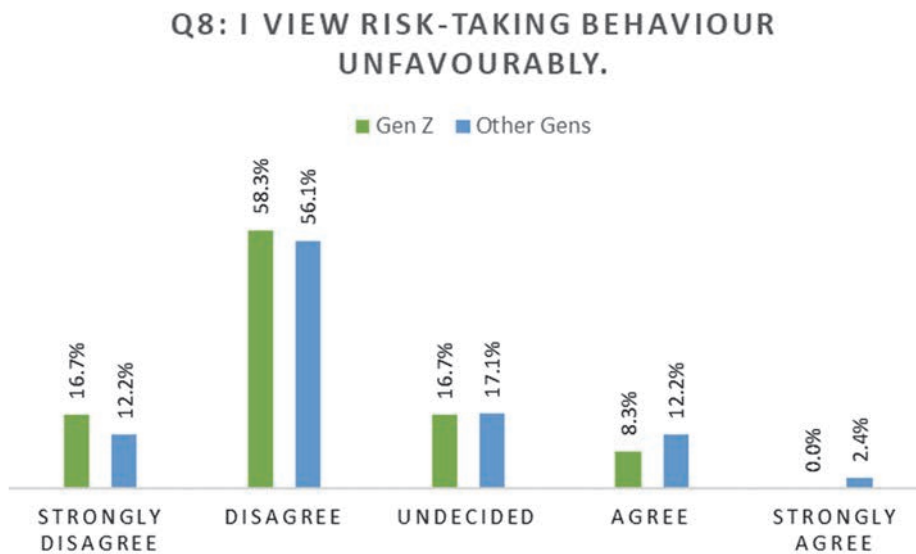
¹¹⁵ RAND Europe RAF IOD1 focus group 4 (29 June 2022).

¹¹⁶ RAND Europe Interview (13 July 2022).

¹¹⁷ RAND Europe RAF IOD1 focus group 4 (29 June 2022).

¹¹⁸ RAND Europe RAF IOD1 focus group 4 (29 June 2022); RAND Europe Interview (12 July 2022).

Figure 2.3 Attitude to risk-taking, RAF IOD1 cohort, Defence Academy



Source: RAND Europe analysis of RAF IOD1 survey responses.

While acknowledging the continued similarities between generations regarding the choice to join the military is important, it is also vital to recognise where Generation Z professionals' unique differences may offer particular advantages and complement other generations' strengths. For example, Generation Z's ability to think for themselves easily translates to some military concepts, such as the US Army's 'mission command' concept.¹¹⁹ As new lieutenants, Generation Z members have access to vast digital networks that provide context within the strategic environment,¹²⁰ complementing other generations' strengths. One study of US Army personnel showed commonalities among officers from the same generation. For example, Millennial officers tended to be most comfortable with change, while senior Generation X officers preferred empowering junior officers and non-commissioned officers (NCOs), and Baby Boomer officers strongly valued organisational loyalty.¹²¹

2.3. Generation Z in similar professions

This study's research activities revealed some of Generation Z's behaviours, expectations and priorities in similar professions, such as medicine, emergency services and law enforcement.¹²² However, it is worth noting that no relevant studies specifically focused on a UK-based study population.

Figure 2.4 summarises the key points below.

¹¹⁹ Wortzel (2021).

¹²⁰ Autin (2020).

¹²¹ Autin (2020).

¹²² We chose these three professions (medical, emergency services and law enforcement) to reflect a commensurate commitment of time, resources and motivation to joining the Armed Forces.

Figure 2.4 Overview of Generation Z in similar professions

- Generation Z members working in emergency services have high expectations regarding benefits and equipment while not necessarily holding senior colleagues in high esteem.
- Generation Z members demonstrate more altruism in the medical profession than other generations, though they face challenges interacting face-to-face and translating theory into practice.

Source: RAND Europe analysis of data from the literature review, IOD1 focus groups, and IOD1 survey.

Generation Z members working in emergency services have high expectations regarding benefits and equipment while not necessarily holding senior colleagues in high esteem

One study showed that Generation Z members working in emergency services are more likely to consider their sick leave and annual leave to be used as they see fit, regardless of the impacts on their co-workers or the organisation.¹²³ The same study found that young people working in law enforcement tended to demand the best uniforms and equipment.¹²⁴ It also found that Generation Z is likely to question why they do not have the newest and nicest items, and often fail to meet the standards of respect for seniority.¹²⁵

Generation Z members demonstrate more altruism in the medical profession than other generations, though they face challenges interacting face-to-face and translating theory into practice

A study of Generation Z members entering the medical profession showed that they prioritise altruistic motivations, attach high importance to ‘meaningful work’ and are performance and career-minded.¹²⁶ Generation Z members also score higher on altruism and seeking new experiences than older generations while scoring lower on extraprofessional concerns, such as starting a family or convenient working hours.¹²⁷ However, Generation Z relies more on technology-based patient care, with less emphasis on face-to-face interactions.¹²⁸ Moreover, one study showed that Generation Z medical students struggle to connect basic science to clinical applications.¹²⁹ One study’s suggested solution was to integrate a game structure, enabling medical students to test ideas and solutions while avoiding the negative real-world consequences of mistakes.¹³⁰

¹²³ Scroble (2021).

¹²⁴ Scroble (2021).

¹²⁵ Scroble (2021).

¹²⁶ Holzer et al. (2022).

¹²⁷ Holzer et al. (2022); Hashisho & Mamaghani (2020).

¹²⁸ Zhuhra et al. (2022).

¹²⁹ Zhuhra et al. (2022).

¹³⁰ Cretu et al. (2020).

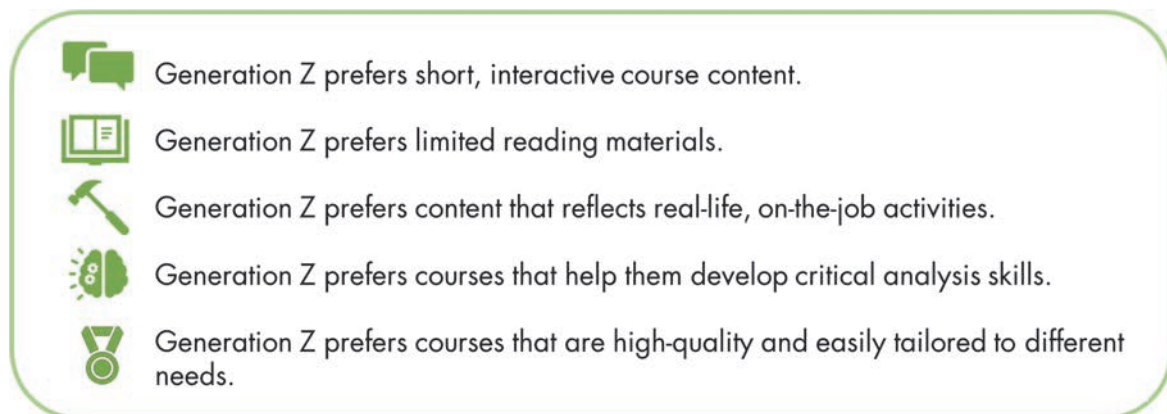
3. Generation Z: Military education

Having explored Generation Z's overarching characteristics in Chapter 2, Chapter 3 analyses how these characteristics manifest in an educational context generally and in military education in particular. More specifically, it discusses Generation Z's reported preferences about course content, organisation, teachers, teaching styles and learning environments. As Section 1.4 details, there is limited peer-reviewed evidence examining the COVID-19 pandemic's short and longer-term implications on higher education, learning and teaching preferences. As such, it is too early to predict which trends might persist post-pandemic and which are likely to change.

3.1. Preferences regarding course content and organisation

Based on the literature review and focus group discussions, it is evident that Generation Z articulated clear preferences regarding the course content and organisation of their educational experience. Figure 3.1 presents an overview of these preferences; each one is explored in detail in the sections below.

Figure 3.1 Overview of Generation Z preferences on course content and organisation



Source: RAND Europe analysis of data from the literature review, RAF IOD1 focus groups, and RAF IOD1 survey.

Generation Z prefers short, interactive course content

Evidence from the literature review and focus groups suggests that Generation Z prefers quick, interactive course content over more traditional lecturing styles that rely heavily on PowerPoint.¹³¹ This preference may link to Generation Z's reportedly shorter attention span.¹³²

When asked about their general preferences for teaching methods and modes, participants in one focus group spontaneously mentioned (and agreed) that 45-minute lectures are too long without regular Q&A sessions or other interactive discussion forms to break things up.¹³³ Another focus group acknowledged that PowerPoint is a useful tool but suggested it should be used as a prompt rather than to deliver significant amounts of information.¹³⁴ Instead, the literature indicates that Generation Z prioritises interactive tools and smart boards alongside learning environments that encourage and facilitate in-person interactions.¹³⁵ Corroborated by reflections from the focus group discussions and interviews, the literature also suggests sufficient interaction, engagement and thought-provoking conversations are the most beneficial features to consider when delivering course content to Generation Z.¹³⁶

Young focus-group participants reported seeing value in opportunities to meet, network and interact with students from different specialisations. Interview data support this finding, suggesting that course cohorts should mix Army, Navy, and Royal Air Force (RAF) personnel to help foster the camaraderie fundamental to military life.¹³⁷ In general, however, a mix of content and delivery methods can significantly improve the capture and maintenance of Generation Z's attention.¹³⁸ Gamification was particularly effective in this respect, substantially boosting Generation Z students' interest in learning.¹³⁹ Otherwise, courses risk being perceived as transactional, whereby the teacher provides information to the students over a set period without allowing them to review, process or discuss it. In two of the five focus groups, participants reflected on their strong preference for their Joint Services Command and Staff College (JSCSC)-delivered education over their previous educational experiences as officer cadets, which several found unrigorous or 'impossible to fail'.¹⁴⁰

Generation Z prefers limited reading materials

Generation Z students prefer short, interactive content and see less value in courses based heavily on reading materials. When presented at the CDDG workshop on 1 September 2022, the educators in the audience

¹³¹ RAND Europe RAF IOD1 focus group 4 (29 June 2022); RAND Europe RAF IOD1 focus group 3 (29 June 2022); Cickovska (2020).

¹³² Cickovska (2020).

¹³³ RAND Europe RAF IOD1 focus group 1 (29 June 2022).

¹³⁴ RAND Europe RAF IOD1 focus group 3 (29 June 2022).

¹³⁵ Cilliers (2021); RAND Europe RAF IOD1 focus group 4 (29 June 2022).

¹³⁶ Scoble (2021); RAND Europe RAF IOD1 focus group 1 (29 June 2022); RAND Europe Interview (13 July 2022).

¹³⁷ RAND Europe RAF IOD1 focus group 5 (29 June 2022); RAND Europe Interview (13 July 2022).

¹³⁸ Hashisho and Mamaghan (2020); RAND Europe Interview (12 July 2022); RAND Europe Interview (13 July 2022); RAND Europe Interview (14 July 2022); RAND Europe RAF IOD1 focus group 1 (29 June 2022).

¹³⁹ Hashisho & Mamaghan (2020).

¹⁴⁰ RAND Europe IOD focus groups 1 and 5.

found this entirely unsurprising. In the case of the RAF IOD1 students who participated in the focus groups, this preference may link to their desire for a dedicated pre-reading period during their training to fit it more easily around pre-existing commitments.¹⁴¹ Generation Z's brains are highly developed in visual ability, making students much more responsive to visual learning than reading.¹⁴² Furthermore, focus group participants noted that pre-reading devalued the training sometimes, reducing students' engagement during the course. Where pre-reading must be part of the course content, focus-group participants expressed a desire for guidance on which texts are essential so they could omit some if desired.¹⁴³ Participants in this focus group also felt that dedicated time should be set aside in the students' schedules for them to complete the necessary reading.¹⁴⁴ Generation Z's reduced interest in pre-reading could prompt considerations of alternative ways to prepare for courses and what type of reading materials students may require. For example, one interviewee suggested providing embedded links to essential sections of electronic documents to help students easily find relevant information. Such links would help avoid scenarios where students lose valuable context by only reading limited excerpts found via the Ctrl+F 'find' command.¹⁴⁵

Generation Z prefers course content that reflects real-life, on-the-job activities

As discussed in Section 2.1, Generation Z values employability and is more likely to choose educational routes and degrees with clear career paths.¹⁴⁶ While our small sample of 53 RAF IOD1 participants saw the intrinsic value of further education (see Figure 3.2), several clarified that they did not mean all jobs require a university education and that the link between education and employability is critical. As one participant noted, 'I think more than ever it's important to stay current and as highly qualified as you can be as staying in one career/job doesn't really happen these days'.

¹⁴¹ RAND Europe RAF IOD1 focus group 5 (29 June 2022); Shtepura (2018).

¹⁴² Moore (2019); Scroble (2021); Bilotserkovets et al. (2021); Lev (2021).

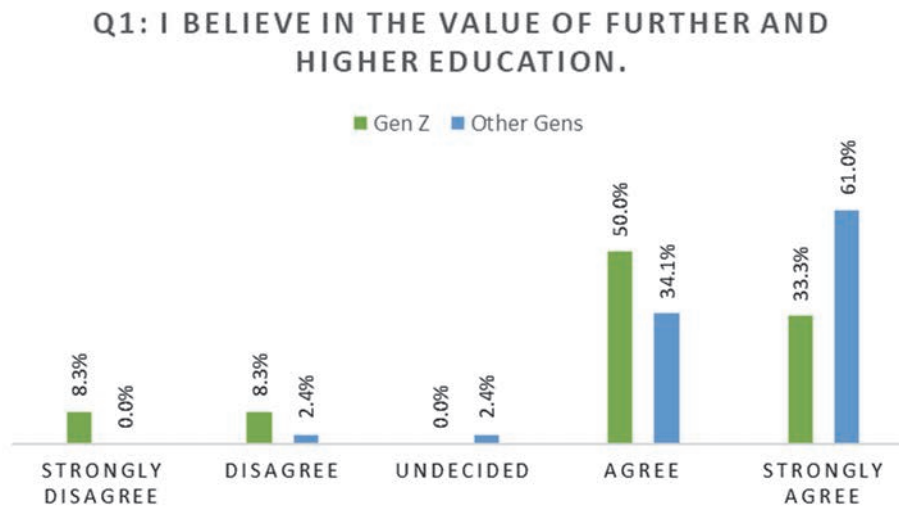
¹⁴³ RAND Europe RAF IOD1 focus group 4 (29 June 2022).

¹⁴⁴ RAND Europe RAF IOD1 focus group 4 (29 June 2022).

¹⁴⁵ RAND Europe Interview (12 July 2022).

¹⁴⁶ Beck & Wright (2019).

Figure 3.2 Belief in the value of further and higher education, RAF IOD1 cohort, Defence Academy



Source: RAND Europe analysis of RAF IOD1 survey responses.

Strongly associating education and career, it is important for Generation Z that course content is directly related to the reality of the future job for which they are training. Where possible, they also value receiving practical on-the-job training.¹⁴⁷ The RAF IOD1 cohort surveyed in this study expressed a strong desire for education with a real-world practical application (see Figure 3.3). It is worth noting that participants from all generations expressed this preference, suggesting that the demand for a practical military education may not be unique to Generation Z.

Figure 3.3 Learning with a real-world application, RAF IOD1 cohort, Defence Academy



Source: RAND Europe analysis of RAF IOD1 survey responses.

¹⁴⁷ RAND Europe RAF IOD1 focus group 2 (29 June 2022); RAND Europe RAF IOD1 focus group 3 (29 June 2022); RAND Europe Interview (12 July 2022); RAND Europe RAF IOD1 focus group 4 (29 June 2022).

Educators could enhance their course content's practicality by supplementing academic information with real-life perspectives and experiences. While focus group participants generally recognised the value of academic instructors, they felt that academic course content often had little practical application to military life.¹⁴⁸ As such, they thought it was important that academic instructors provide practical examples to complement the academic perspective or that students had access to instructors who could share real-life military experiences. Indeed, one group explicitly praised the complementarity of the King's (academic instructor) and Directing Staff (DS, military professional) teaching model at the Academy.¹⁴⁹ This perspective is in line with information gained from experts in military education, who noted the importance of blending academic and military instruction to give students broader context and practical knowledge.¹⁵⁰ In addition, the literature suggests that content delivery should be as non-theoretical as possible, such that virtual and physical demonstration using practical equipment is essential.¹⁵¹ For example, instead of reading procedures from a PowerPoint presentation, instructors can increase engagement and learning by demonstrating them to the students and then allowing them the time, space, and support to perform them themselves.¹⁵² Otherwise, teaching should integrate field visits and trips to facilities within time and financial constraints to help Generation Z students understand the job's real-life context and requirements.¹⁵³

Generation Z prefers courses that help them develop critical analysis skills

Aside from wanting education to have a practical, real-life application, Generation Z seeks to understand the full context of the information taught to them. More specifically, its members seek to understand what they are learning, why it is important, and why they must know it now.¹⁵⁴ One expert involved in delivering and researching PME in the US suggested that Generation Z military students may prefer focusing on information that is immediately necessary and useful, deprioritising information they can learn later.¹⁵⁵ In addition, this interviewee suggested that Generation Z students may require more freedom in interpreting, analysing and utilising course content. Generation Z expects that, instead of providing basic information already accessible from books or the internet, courses and instructors can help it develop 'higher' skills, including analysis, synthesis, critical thinking and integration.¹⁵⁶ This approach can better prepare students – particularly military students – for uncertainty, as noted by another senior educator involved in PME.¹⁵⁷

¹⁴⁸ RAND Europe RAF IOD1 focus group 1 (29 June 2022); RAND Europe RAF IOD1 focus group 3 (29 June 2022).

¹⁴⁹ RAND Europe RAF IOD1 focus group 4 (29 June 2022).

¹⁵⁰ RAND Europe Interview (12 July 2022); RAND Europe Interview (13 July 2022).

¹⁵¹ Hashisho & Mamaghani (2020); RAND Europe Interview (12 July 2022); Cilliers (2021); Mahesh et al. (2022); Cickovska (2020).

¹⁵² Scroble (2021).

¹⁵³ RAND Europe RAF IOD1 focus group 2 (29 June 2022).

¹⁵⁴ Moore (2019); Reid (2018); RAND Europe Interview (13 July 2022).

¹⁵⁵ RAND Europe Interview (13 July 2022).

¹⁵⁶ RAND Europe Interview (13 July 2022); RAND Europe Interview (14 July 2022); Austin (2020).

¹⁵⁷ RAND Europe Interview (14 July 2022).

In this sense, when it comes to historical information, Generation Z students prefer contemporary case studies they can more easily apply to present-day situations and integrate with existing knowledge.¹⁵⁸ For example, focus group participants noted that they value learning about current leadership and decision making more than learning about earlier, more traditional or more famous historical examples. This is because identifying with contemporary examples and better integrating current information into present-day or potential future scenarios helps them reflect on earlier historical information more critically and analytically.¹⁵⁹ In addition, Generation Z sees value in having difficult or controversial conversations, e.g. ethical discussions, which are often at the heart of military education. This observation is in line with evidence showing that Generation Z is more open-minded than previous generations and more willing to challenge existing norms and values, as described in more detail in Section 2.1. In this sense, the literature suggests the importance of establishing so-called ‘brave spaces’ within courses, where students are encouraged to explore perspectives outside their comfort zones.¹⁶⁰

Generation Z prefers courses that are high-quality and easily tailored to different needs
Just as they expect freedom in prioritising what is most pertinent to them in their learning journey, Generation Z also responds better to courses and programmes easily tailored to their needs and preferences.¹⁶¹ For example, focus group participants noted a preference for online courses that are released according to students’ learning speed rather than programme timelines¹⁶² and for flexible programmes catering to different abilities and requirements.¹⁶³ They also proposed an option to complete fast-track programmes, enabling some students to graduate within a shorter period if they want.¹⁶⁴ In particular, military education experts noted the importance of flexible course delivery (understood as allowing students to conduct courses at their own pace) when it comes to student veterans, who may have physical or psychological disabilities.¹⁶⁵

However, military Generation-Z students seem to understand that the demands of military life may not always allow complete educational flexibility (understood as allowing students to choose courses, conduct courses at their own pace and undertake at least some courses online). When asked to indicate their preferences for flexible learning (e.g. flexible schedules and instant access to online courses), there were substantial discrepancies between Generation Z participants among the 12 Generation Z RAF IOD1 students surveyed (illustrated in Figure 3.4). When asked to elaborate, most students suggested that a structured, face-to-face environment might work better in the context of military education, despite

¹⁵⁸ RAND Europe Interview (12 July 2022); RAND Europe RAF IOD1 focus group 5 (29 June 2022).

¹⁵⁹ RAND Europe RAF IOD1 focus group 5 (29 June 2022).

¹⁶⁰ RAND Europe RAF IOD1 focus group 5 (29 June 2022); Lerchenfeldt et al. (2021).

¹⁶¹ Rogers & Cohen (2020); RAND Europe RAF IOD1 focus group 4 (29 June 2022); RAND Europe RAF IOD1 focus group 3 (29 June 2022).

¹⁶² RAND Europe RAF IOD1 focus group 4 (29 June 2022); Cretu et al. (2020); Sanalan et al. (2020); Gajdacova Vesekla & Puschenreiterova (2020); Seemiller & Clayton (2019).

¹⁶³ Hinton (2020); RAND Europe RAF IOD1 focus group 4 (29 June 2022); RAND Europe RAF IOD1 focus group 3 (29 June 2022); RAND Europe Interview (12 July 2022).

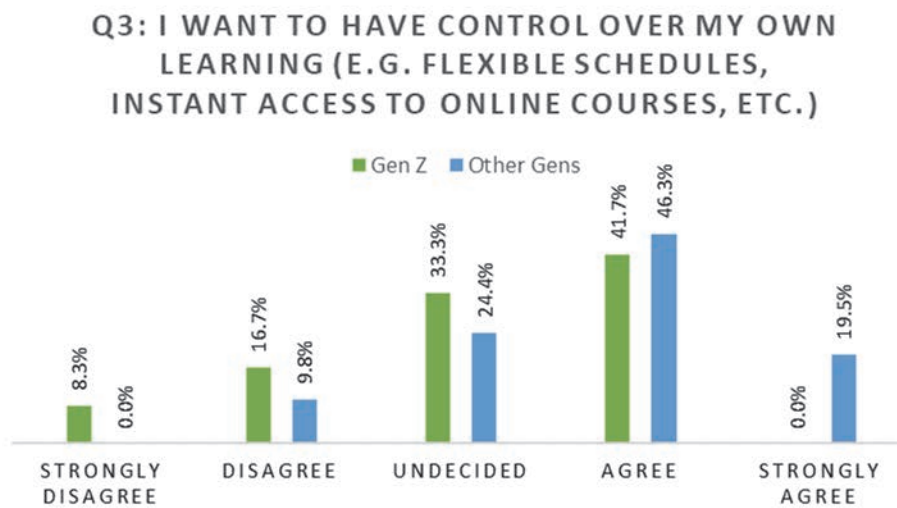
¹⁶⁴ RAND Europe Interview (13 July 2022).

¹⁶⁵ Pavel and Bernard (2021).

wanting more control in tailoring their learning to their interests and desired career path. Interestingly, the (larger) group of non-Generation Z RAF IOD1 participants showed a higher level of agreement in favour of greater flexibility. This tendency could be due to several reasons, including the increased likelihood of balancing family commitments with education and careers for older generations, perhaps prompting a stronger preference for more flexibility. Overall, while increasing flexibility in military education would be welcome, Generation Z students recognise the continued benefits of a structured, guided approach.

In addition to being flexible, Generation Z expects courses to provide high-quality content.¹⁶⁶ Regarding military education, in particular, one set of focus group participants noted that learning materials such as videos are updated too infrequently in military education.¹⁶⁷ Focusing specifically on engineering training, these participants reported not being taught basic, practical engineering skills. They mentioned that industry and the private sector are decades ahead of the military regarding instruction and innovation.¹⁶⁸

Figure 3.4 Preferences for flexibility in learning schedules, RAF IOD1 cohort, Defence Academy



Source: RAND Europe analysis of RAF IOD1 survey responses.

3.2. Preferences regarding teachers and teaching styles

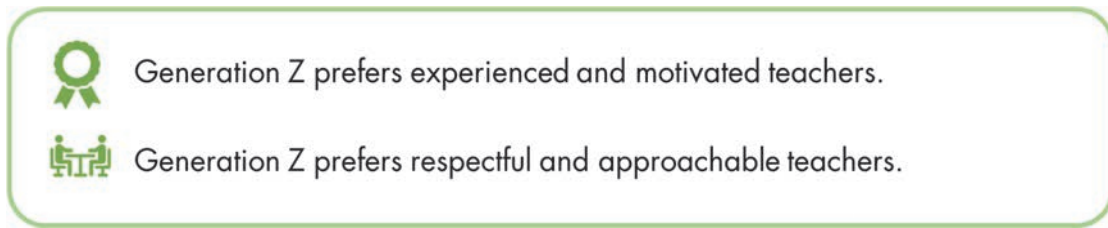
The second educational area of interest relates to teachers and teaching styles. Figure 3.5 presents an overview of Generation Z’s preferences in this area, explored in more detail in the sections below.

¹⁶⁶ Hashisho and Mamaghani (2020); RAND Europe Interview (12 July 2022); RAND Europe RAF IOD1 focus group 2 (29 June 2022).

¹⁶⁷ RAND Europe RAF IOD1 focus group 3 (29 June 2022).

¹⁶⁸ RAND Europe RAF IOD1 focus group 3 (29 June 2022).

Figure 3.5 Overview of Generation Z's preferences regarding teachers and teaching styles



Source: RAND Europe analysis of data from the literature review, RAF IOD1 focus groups, and RAF IOD1 survey.

Generation Z prefers experienced and motivated teachers

Consistent with their expectations of high-quality course content, Generation Z students also expect experienced and motivated teachers: the literature suggests that Generation Z prefers learning from experts.¹⁶⁹ At the same time, one focus group highlighted that Generation Z students are motivated by teachers who are themselves engaged in continuous learning and personal growth.¹⁷⁰ Participants noted that it is easy to recognise teachers who are unmotivated by their topic, thus failing to inspire their students.¹⁷¹ In addition to high motivation, teachers who are forthcoming and relatable (particularly those using humour) are more likely to inspire Generation Z students.¹⁷² At the same time, evidence from the literature suggests that Generation Z is more inclined to view teacher supervision and intervention as favourable to student development; a 2017 report found that 76 per cent of students agreed that closer monitoring by teachers would minimise dropout levels.¹⁷³

Generation Z prefers respectful and approachable teachers

Evidence from the literature and focus groups suggests that Generation Z students respond well to a student-teacher relationship based on mutual respect. A small survey of the RAF IOD1 focus-group participants confirmed their strong preference for instructors who are empathetic, interested in the students and respectful (see Figure 3.6). Indeed, the survey showed no difference between generations, suggesting that the need for mutual respect in the classroom is not unique to Generation Z and that military students of any generation prefer respectful and approachable instructors. However, one of the focus groups noted Generation Z's stronger inclination toward re-training or removing instructors who are offensive or use outdated language around gender or race, though this discussion was not linked to a specific PME setting.¹⁷⁴ One interviewee reflected that, while Generation Z students appreciate the importance of mentoring, they also see it as one way the status quo is perpetuated and thus resist older generations' mentorship.¹⁷⁵

¹⁶⁹ Reid (2018).

¹⁷⁰ RAND Europe RAF IOD1 focus group 2 (29 June 2022).

¹⁷¹ RAND Europe RAF IOD1 focus group 4 (29 June 2022); RAND Europe RAF IOD1 focus group 2 (29 June 2022).

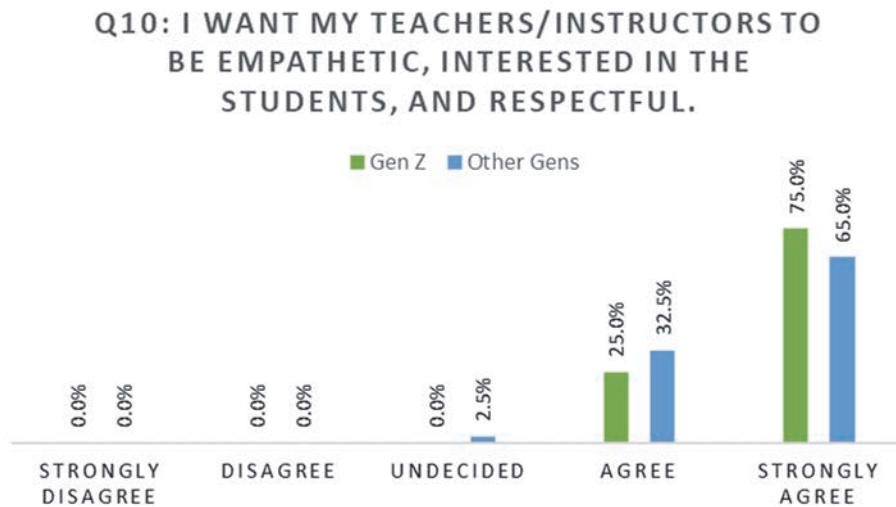
¹⁷² Ford (2020); RAND Europe RAF IOD1 focus group 2 (29 June 2022).

¹⁷³ Pefanis Schlee et al. (2020).

¹⁷⁴ RAND Europe RAF IOD1 focus group 2 (29 June 2022).

¹⁷⁵ RAND Europe Interview (12 July 2022).

Figure 3.6 Instructor preferences, RAF IOD1 cohort, Defence Academy





Source: RAND Europe analysis of RAF IOD1 survey responses.

3.3. Preferences regarding the learning environment

The third and final educational area explored in this study relates to the learning environment. Figure 3.7 presents an overview of the key preferences Generation Z may have in this area, explored in more detail in the sections below. Given this study’s ‘quick look’ nature, a detailed exploration of the various modes of technology-enabled learning, blended learning, residential learning and other means was impossible. Instead, the questions we explored through the literature review, focus groups and survey were designed to identify broad preferences about in-person vs virtual engagement.

Figure 3.7 Overview Generation Z preferences regarding the learning environment

- 
Generation Z military members prefer face-to-face interactions but may be developing a more nuanced understanding of where online learning adds value.
- 
Generation Z prefers a learning environment that makes use of modern technology.

Source: RAND Europe analysis of data from the literature review, RAF IOD1 focus groups, and RAF IOD1 survey.

Generation Z military members prefer face-to-face interactions but may be developing a more nuanced understanding of where online learning adds value

Evidence from the literature and focus groups suggests that most Generation Z students prefer a learning environment that combines online and face-to-face interactions with theoretical information and practical

exercises, likely due to having lived through the Covid-19 pandemic.¹⁷⁶ Generation Z students also benefit from teaching and learning methods that span virtual and physical spaces. In particular, focus group participants valued an approach that introduces students to a topic, allows them time to conduct independent research and deliberation, and then brings them together physically, encouraging briefings, presentations and discussions.¹⁷⁷ As such, some focus group participants claimed they saw little need to have daily face-to-face courses.¹⁷⁸

However, identifying the right mix of online and face-to-face education provision is still a work in progress — one that is likely to continue over the next few years as research sheds more light on its strength and weaknesses and educational institutions worldwide continue identifying and processing lessons from the pandemic. Although most educational institutes had to adopt digital technologies to continue teaching during the Covid-19 pandemic, the literature notes that the way students use and benefit from these methods is not yet well understood.¹⁷⁹

Some focus group participants felt that students have shorter attention spans when they engage with extensive online course content in the military compared to when taught in a classroom, where most distractions are removed.¹⁸⁰ Online courses with limited interaction were also seen as less engaging, with participants often aiming just to ‘tick the box’ by attending.¹⁸¹ One focus group observed that face-to-face interactions allow instructors to determine better if students understand the course content and, if not, to support them by adapting and applying different teaching methods. By contrast, online courses have, in their experience, often adopted a ‘one-size-fits-all’ approach.¹⁸²

Interviews with military education experts revealed that in-person military education is also seen to offer valuable opportunities for interacting and building relationships with classmates. This is key to building the camaraderie essential to military life and motivating Generation Z students, as discussed in Section 3.1.¹⁸³ Furthermore, the US experts we interviewed suggested a stigma associated with online or remote education in the US military, with preferential treatment often given to those who complete residential courses.¹⁸⁴ Furthermore, ten of the twelve Generation Z RAF IOD1 students we surveyed chose ‘strongly agree’ when indicating how much they agreed with the statement, ‘I value in-person interactions over and above

¹⁷⁶ Workforce Institute (2019); RAND Europe RAF IOD1 focus group 5 (29 June 2022); RAND Europe RAF IOD1 focus group 2 (29 June 2022); RAND Europe RAF IOD1 focus group 4 (29 June 2022); Lerchenfeldt et al. (2021); Bashir et al. (2021).

¹⁷⁷ RAND Europe RAF IOD1 focus group 3 (29 June 2022).

¹⁷⁸ RAND Europe RAF IOD1 focus group 4 (29 June 2022).

¹⁷⁹ Ang et al. (2021).

¹⁸⁰ RAND Europe RAF IOD1 focus group 1 (29 June 2022); RAND Europe RAF IOD1 focus group 4 (29 June 2022); RAND Europe RAF IOD1 focus group 3 (29 June 2022).

¹⁸¹ RAND Europe RAF IOD1 focus group 1 (29 June 2022).

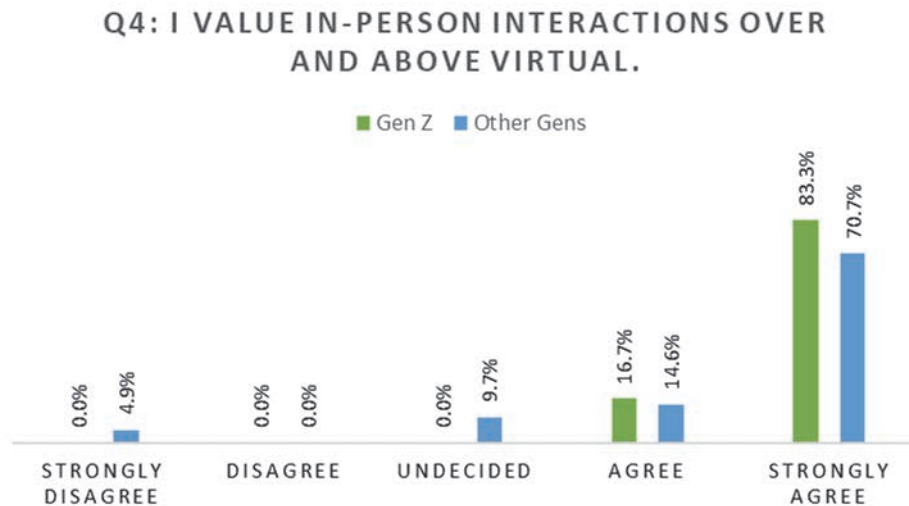
¹⁸² RAND Europe RAF IOD1 focus group 1 (29 June 2022).

¹⁸³ RAND Europe Interview (13 July 2022); RAND Europe Interview (14 July 2022); RAND Europe Interview (13 July 2022).

¹⁸⁴ RAND Europe Interview (13 July 2022).

virtual.¹⁸⁵ While these students recognised that virtual courses could be beneficial in some circumstances, they stressed the need to select them carefully and ensure high-quality content (Figure 3.8).

Figure 3.8 Preference for online vs in-person teaching, RAF IOD1 cohort, Defence Academy



Source: RAND Europe analysis of RAF IOD1 survey responses.

Generation Z prefers a learning environment that makes use of modern technology

In addition to understanding the benefits of using digital technologies in education, Generation Z students prefer a learning environment that integrates modern and cutting-edge technology as far as possible.¹⁸⁶ This aligns with evidence showing that one of Generation Z’s key characteristics is technological competency, as described in Section 2.1. At the minimum, they expect all learning resources to be available online, allowing access on any device and from anywhere.¹⁸⁷ Such learning resources should also include graphics and videos that cater to Generation Z’s preference for visual learning.¹⁸⁸ While focus-group participants also saw value in simulations, they noted this is often constrained by inadequate IT infrastructure.¹⁸⁹ Moreover, while video/simulation use is helpful – particularly in practical learning – it cannot replace in-person, on-the-job training and must be accompanied by supervision and instructor feedback.¹⁹⁰ In addition, evidence from the surveys conducted with RAF IOD1 students suggests that many members of Generation Z and older peers still prefer to access course information via paper handouts rather than electronic means such as laptops or tablets. This suggests that a mixed, flexible approach might be preferable, with resources available in physical *and* online formats.

¹⁸⁵ RAND Survey (2022).

¹⁸⁶ Hashisho & Mamaghani (2020); RAND Europe Interview (12 July 2022); RAND Europe RAF IOD1 focus group 2 (29 June 2022).

¹⁸⁷ Reid (2018); Hashisho & Mamaghani (2020).

¹⁸⁸ Cretu et al. (2020); Sanalan & Taşlibeyaz (2020); Gajdacova Vesekla & Puschenreiterova (2020); Seemiller & Clayton (2019).

¹⁸⁹ RAND Europe RAF IOD1 focus group 2 (29 June 2022).

¹⁹⁰ RAND Europe Interview (12 July 2022).

Generation Z also recognises that technology can help to enable more individualised learning pathways.¹⁹¹ For example, it can allow veteran students with disabilities to engage in virtual learning¹⁹² or facilitate information-sharing and engaging conversations. To this end, a 2018 report found that the technological platforms most frequently used by students were Google Drive, Google Docs and Facebook.¹⁹³ The latter can create a learner-centred environment, thereby contributing to the educational experience.¹⁹⁴ However, another 2018 report found that even those platforms and apps recognised as highly suited and conducive to Generation Z's learning are rarely used by teachers, suggesting that instructors could be better trained and encouraged towards flexible and adaptable teaching methods.¹⁹⁵

Looking ahead, interviews with military education experts suggest a growing need to regularly assess developments in human-machine teaming as technology evolves to become an increasingly important part of people's lives. This will necessitate identifying which tasks are fulfilled by machines versus humans and adapting education appropriately (e.g. nurturing the skills that humans are uniquely good at, such as critical thinking, while 'delegating' data-processing tasks to machines).¹⁹⁶

¹⁹¹ RAND Europe Interview (13 July 2022).

¹⁹² Pavel & Bernard (2021).

¹⁹³ Naveh & Shelef (2021).

¹⁹⁴ Cilliers (2021); Relucenti et al. (2019).

¹⁹⁵ Vogelsang (2018).

¹⁹⁶ RAND Europe Interview (13 July 2022).

4. Implications for the Defence Academy

Building on the understanding of Generation Z's general characteristics and how they manifest in the military profession (Chapter 2) and related educational preferences (Chapter 3), this chapter offers reflections for the Defence Academy. This chapter supplements the data gathered through the literature review, focus groups and survey with information from the workshop conducted with the CDDG at the Defence Academy on 1 September 2022.

4.1. Future-oriented Joint Professional Military Education (JPME)

This project's research findings have several implications for how the Defence Academy can adapt to future generations' needs to continue meeting its primary objective to provide education that translates into a real-world military advantage. These were discussed during the workshop with the CDDG and detailed in the sections below.

The Defence Academy needs to consider the needs of an inter-generational student body when designing courses to ensure a holistic approach to education

This short study focused explicitly on Generation Z; it did not intend to provide an in-depth analysis of other generations' key characteristics, who are also often members of professional military education's student body. Therefore, the Defence Academy must consider designing any changes to JPME provision to better respond to the needs and preferences of an inter-generational student body, of which Generation Z is part. As this study shows, inter-generational differences may be less critical when considering motivations for joining a workplace (including entering the Armed Forces, see section 2.1) or learning/teaching preferences (see sections 3.1–3.3) than other factors, e.g. career stage or membership of the military profession. While providing a complete comparative analysis of inter-generational differences and similarities was outside this study's scope, our findings support the notion that overemphasising differences can undermine efforts to implement changes benefitting the whole inter-generational student body. For example, some Generation Z-specific characteristics – such as increased anxiety about the future, greater and more openly acknowledged concerns about mental health and deeper distrust of authority – may merit focused attention when considering student welfare policies and practices. Likewise, they may also warrant particular attention on core critical-thinking skills to better determine a trustworthy vs untrustworthy source. However, such measures would likely benefit *all* members of the student body, not just Generation Z. Finally, the Defence Academy may wish to consider the needs and demands of different (and potentially cross-generation) groups when designing course-delivery modes. An example is enabling online participation for members unable to attend long-term residential courses due to caring responsibilities or

other commitments. Considering options and choices likely to broadly benefit the whole student body will likely make JPME provision more future-oriented, resilient and inclusive.

Any JPME adaptations will inevitably be shaped by the UK's Defence needs and should seek to harness the student body's unique capabilities

Fundamentally, JPME focuses on educating defence personnel to deliver the UK's Defence requirements. Of these, its priority outcomes include: (i) strengthening the UK's national security, (ii) protecting the UK and its Overseas Territories, (iii) enhancing global security through persistent engagement and crisis response, (iv) contributing to NATO collective deterrence and defence, and (iv) modernising and integrating defence capabilities through a whole-force approach, greater use of technology and innovation.¹⁹⁷ As such, JMPE must first articulate how it expects a specific course to help meet the broader Defence requirements regarding the Armed Force's requisite composition of skills and capabilities. The Defence Academy will therefore need to view any generational characteristics and preferences through a practical lens, considering how to use them to improve or support Defence in achieving its priorities and goals. To do so will require careful balancing of UK Defence's educational outcome/output requirements and opportunities to introduce greater flexibility, e.g. combining face-to-face and online learning, adopting modular approaches and flexible schedules, or other approaches. In doing so, there will likely also be a need to balance generational preferences with resource-limitations.

Changes to course design, teaching styles and learning environments should pro-actively consider how to harness generational characteristics of potential benefit to Defence (e.g. Generation Z's deep familiarity with technology and desire for a purposeful career with meaningful impact) while mitigating those that might present challenges for education delivery (e.g. short attention span, frustration with rigidity in military hierarchies, and hesitancy in participating in social activities).

The Defence Academy should continue embedding practical and current content and technology-enabled learning to support the new generations' learning

Chapter 3 discussed the range of preferences Generation Z military professionals expressed about teaching methods, styles and tools, some of which are already in place in the Defence Academy (e.g. the use of scenario gaming, table-top exercises and seminar-style discussions). Our analysis of preferences specific to the Defence Academy draws on a limited sample of 53 focus-group participants from the RAF IOD1 cohort (including 12 Generation Z military professionals). Although their experience may not be generalisable to the remaining courses the Academy offers, their preferences are nevertheless important to note. In particular, the RAF IOD1 cohort expressed preferences for real-world learning applications, engaged and interactive teaching provision (utilising simulation and software-based technology, for example), and approachable and empathetic instructors. These preferences broadly align with academic evidence on Generation Z's preferences (see Section 3.2).

The academic literature explicitly discusses strategies to motivate Generation Z military personnel and recommends the following approaches to teaching: a) the need to explain the work's relevance; b)

¹⁹⁷ UK Ministry of Defence (2021b).

encouraging active participation, allowing learners to see their impact on an organisation and c) enabling learners to make choices for themselves to create value.¹⁹⁸

While educational delivery at the Defence Academy already integrates these principles and approaches, the practical reality of implementing them is complex and evolving. The Defence Academy should leverage its partnership with King's, RAND and Cranfield University under the CSAP contract to identify current good practices to continue and implement change where needed.

4.2. Areas for further research

This study was conducted at a time when the full impact of the education-delivery changes introduced during the COVID-19 pandemic – often in an ‘emergency response’-type manner – was not fully evaluated and understood. Peer-reviewed evidence on the lessons and risks arising from the pandemic’s impact on higher education is only slowly emerging. Longer-term impact analyses will take several more years to manifest. As education institutions grapple with these questions, the Defence Academy has an opportunity to lead the way by identifying how best to capitalise on learnings from the pandemic and adapt military-education delivery to integrate emerging good practice – e.g. in technology-enabled learning and appropriate utilisation of face-to-face and virtual engagement (‘blended learning’). This is also an opportunity for the Defence Academy to contribute to an improved evidence base on UK-specific Generation-Z military professionals, and their motivations and incentives for joining the Armed Forces.

More research and experimentation are needed to understand if and how blended learning could bring value to JPME

Contrary to common perceptions of the technology-centric generation, evidence from the literature review shows that Generation Z does not advocate a wholesale implementation of online education. Moreover, focus-group and survey evidence suggests that Generation Z students have an even lower preference for online courses in a military setting. However, we must interpret these observations with caution. Several members of the CDDG commented that this likely reflects Generation Z students’ lack of choice in switching rapidly from in-person courses to online content delivery during the Covid-19 pandemic. Some also highlighted that such courses were essentially in-person courses delivered online rather than online courses designed to be delivered online, as it was impossible to design these from scratch based on good online-education practice in such a short period. This lack of choice and rapid ‘good enough’ adjustment could explain some of the reluctance among the Defence Academy’s student body and other higher-education institutions regarding entirely virtual courses. In addition, Defence Academy students face a specific ongoing challenge, particularly on shorter courses like JSCSC, as their superiors constantly delegate ‘day-job’ tasks. Unable to step away from their job-related commitments, they often cannot fully commit to the course.

As shown in Sections 3.2 and 3.3, some degree of flexibility in combining online and face-to-face provision was welcomed, particularly by students from older generations who participated in the focus groups and the survey. The generational difference may be because more family and job-related responsibilities interfere

¹⁹⁸ Moore (2019).

with older generations' education, meaning blended courses may be more relevant to them than their younger peers.

Moving forward, the Defence Academy should consider designing a blended learning system that caters for some students' need for flexible learning online while maintaining the student-teacher and student-student interactions shown to be vital to knowledge assimilation and learning. To achieve this, they will need to undertake more research and experimentation, and consider student priorities and preferences.

Primary research on the characteristics of next-generation UK military professionals is lacking, with conclusions being drawn from a range of contexts and sources

As this short review demonstrates, there is limited UK-specific academic research investigating Generation Z's characteristics. Of the studies that do, none explicitly consider how these characteristics manifest in the military or within military education settings. There are undoubtedly similarities between Generation Z members in Western countries (where most of the literature evidence originates). However, in the UK, Generation Z has experienced unique influences that could have generated differences, e.g. the UK's experience of the war in Iraq, Afghanistan, Brexit and others. Understanding the unique characteristics of the UK's Generation Z – specifically its UK military professionals – could challenge or validate this study's overarching findings and help the Defence Academy develop more informed tailored approaches. Once completed, the ongoing Haythornthwaite Review of Armed Forces Incentivisation will likely offer important insights into the future UK military. However, the Defence Academy will likely have to identify its specific implications for providing JPME.

Articulating JPME's purpose, aims and benefits more clearly and attractively may help increase student engagement and recruitment

There is clear evidence that Generation Z military professionals may not perceive their military career as a life-long choice but as one of several different careers in their lifetime (see section 2.2 for detail). This finding aligns with Generation Z's expectations for a better work-life balance and continuous professional development (see sections 2.1 and 2.3). As such, Generation Z sees education as integral to enhancing one's career prospects and expects as much relevance to their future job as possible (see section 3.1), whilst providing them with transferrable skills for later-life careers. To acknowledge such trends and preferences, defence academies and other professional military education institutions may need to articulate and communicate JPME's purpose, aims and benefits more attractively to future generations – particularly those interested in military service but keen to gain transferrable skills and experiences. This may improve student engagement and recruitment, allowing the Defence Academy to enhance the attractiveness of the Armed Forces as an employer of choice for future generations for whom this may be only one of several career options. The Defence Academy should consider emerging insights from the ongoing Haythornthwaite Review of Armed Forces Incentivisation to better understand what attracts different generations to the Armed Forces, what motivates and encourages them to commit to a career in the military, and what role JPME can play in Armed Forces incentivisation.

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Annex A. Approach to the literature review and interviews

A.1. Literature Review Approach

The literature review implemented the following search criteria:

DATE RANGE: 2000 – present

SOURCE TYPE: Scholarly, peer-reviewed literature; Grey literature; Summary reports; Policy reports

SEARCH METHOD: Title-Abstract Keyword search

Based on these criteria and the Boolean search strings (see Table A.1 below), RAND Knowledge Services turned out 694 sources across all RQs from Academic Search Complete, ERIC, Military & Government Collection, Scopus and Web of Science. Some 20 additional grey literature sources were identified. This list underwent an initial sift, refining these down to 592 sources. The table below describes the Boolean search strings implemented across each Research Question (RQ) and the number of sources identified for each RQ.

Table A.2 Boolean search strings implemented and number of sources identified

Research Question	Search Strings	Number of sources identified (and refined) by KS
RQ1: What are the key characteristics of 'Generation Z'?	Generation Z AND characteristics, character, behaviour/behavior	197
RQ2: How are these characteristics different from previous generations (e.g. the Millennials)?	Generation Z, Generation Z AND Baby Boomers, Boomers, Generation X, Gen X, Millennials AND (characteristics, character, behaviour/behavior) AND comparison, difference(s), similarity(ies)	107
RQ3: To what extent do these characteristics manifest in the military profession?	Generation Z, Generation Z AND military	100
RQ4: To what extent do these characteristics manifest in 2–3 comparator professions (e.g. medicine, law, emergency services)?	Generation Z/Generation Z in medicine, Generation Z/Generation Z in emergency services, Generation Z/Generation Z in law AND (characteristics, character, behaviour/behavior) AND comparison, difference(s), similarity(ies)	46
RQ5: What are the explicit and implicit demands on education arising from the unique characteristics of 'Generation Z' professionals?	Generation Z, Generation Z AND military AND education, teaching, learning, learning methods, teaching environment, military learning environment, military students, learning style, learning motivation, Generation Z challenges, Generation Z challenges, blended, virtual, practical, generation education requirements	2
RQ6: What teaching methods and education approaches are being adopted by universities, JPME programmes in other countries and other comparator professional education bodies to respond to the unique demands of 'Generation Z'?	Generation Z, Generation Z AND education, teaching, teaching methods, learning, learning methods, military learning environment, military students, learning style, learning motivation Generation Z challenges, Generation Z challenges AND military, Joint Professional Military Education, JPME	140

The study team narrowed down these 592 sources based on relevance, accessibility and reliability, extracting a final total of 72. The table below demonstrates the number of sources extracted by publication type.

Table A.3 Publication type and sources extracted

Type of publication	Number of sources extracted
Report	5
Journal article	51
Conference Proceedings	4
Others	7
News article/Opinion piece	5

A.2. Interview participants

We conducted interviews with seven experts from the military alongside education and learning specialists. The table below outlines the participants interviewed during this study.

Table A.4 Interview participants

Name	Position	Organisation
Lt Col Lionel Mayade	Commandant	École Militaire De Haute Montagne
Wg Cdr Jacqui Carswell	Director of Joint Professional Military Education	Australian Defence College
Dr Chaitra Hardison	Senior Behavioural Scientist	RAND Corporation
Dr Lisa Harrington	Senior Operations Researcher	RAND Corporation
Dr Stephen Dalzell	Senior Political Scientist	RAND Corporation
Dr Paul Mayberry	Senior Policy Researcher	RAND Corporation