





#### THE RCAF AIR CADET PROGRAMME AND ITS IMPACT ON CANADA'S AEROSPACE INDUSTRY

#### **Major James Fedevich**

## JCSP 48

## **Service Paper**

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#### CANADIAN FORCES COLLEGE – COLLÈGE DES FORCES CANADIENNES

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#### Service Paper – Étude militaire

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#### **Major James Fedevich**

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#### The RCAF Air Cadet Programme and Its Impact on Canada's Aerospace Industry

#### AIM

1. The aim of this service paper is to describe the history of the RCAF Air Cadet program and its impact on Canada's aviation industry. An analysis is provided of who the cadets are, what they have done, and what their impact is on Canadian society. An assessment will highlight potential impacts and risks to Canadian aviation industry, civilian and military, if the Air Cadet program makes cuts and reduces financial support for the flying scholarship. Finally, recommendations are included to improve the RCAC program to ensure Canada's aviation industry, the RCAF, and Canadian society continues to benefit from this youth program.

#### **INTRODUCTION**

2. The Air Cadet League of Canada (ACLC) was formed in 1940 by the Minister of National Defence for Air as a response to the growing hostilities in Europe.<sup>1</sup> The initial concept was to create a youth program to prepare individuals for service in the RCAF as aircrew. This program ran parallel to the British Commonwealth Air Training Plan (BCATP) that trained more than 131,000 aircrew at nearly 200 training establishments located across Canada from 1939-1945.<sup>2</sup>

3. To implement the cadet program a group of volunteers led by influential civilians including the First World War Ace Air Marshal William (Billy) Bishop worked closely with the RCAF. The Order-in-Council PC 6647 was passed in November 1940 authorizing the organization of a junior (boys aged 12-14) and senior (boys aged 15-18) Air Cadet corps.<sup>3</sup> On April 09, 1941, the Air Cadet League of Canada was granted official status as a charitable organization that operates not-for-profit in all regions of Canada.

4. Since 1941, the CAF and the ACLC have worked together to implement the Air Cadet program. Initially conceived as a method of early recruitment for the RCAF, the program has evolved over the years following the end of the Second World War.<sup>4</sup> The RCAC has become a youth development program that promotes an interest in aviation while developing the necessary values to becoming engaged and contributing citizens of Canada.<sup>5</sup>

<sup>&</sup>lt;sup>1</sup> Air cadet League of Canada - History, https://aircadetleague.com/about-us/history/

<sup>&</sup>lt;sup>2</sup> National Defence Government of Canada, "British Commonwealth Air Training Plan | Royal Canadian Air Force," March 7, 2016, http://www.rcaf-arc.forces.gc.ca/en/history-heritage/british-commonwealth-air-training-plan/index.page.

<sup>&</sup>lt;sup>3</sup> "About Us," Air Cadet League of Canada, accessed January 4, 2022, https://aircadetleague.com/about-us/.

<sup>&</sup>lt;sup>4</sup> "Canadian Armed Forces," Air Cadet League of Canada, accessed January 4, 2022, https://aircadetleague.com/about-us/our-partners/department-national-defence/.

<sup>&</sup>lt;sup>5</sup> "About Us."

5. The Royal Canadian Air Cadet (RCAC) program is administered as a partnership between the Air Cadet League of Canada and the Canadian Department of National Defence (DND). Under Canadian law, the National Defence Act (NDA) authorizes the formation of cadet organizations that are supervised by the Canadian Armed Forces (CAF).<sup>6</sup> The NDA elaborates the responsibility of the CAF to provide training while providing the necessary provision of material and accommodations. The act also authorizes the Minister of National Defence to provide authority and command to the officers, referred to as Cadet Instructor Cadre (CIC), who provide the ongoing training within the cadet program.

6. The RCAC program is not contained within the CAF.<sup>7</sup> As such the DND supports the ACLC to deliver this youth program in a symbiotic manner. DND also incorporates the provision of cadet uniforms, manuals and training aids into its budget. The maintenance of the CIC, by DND, includes pay, as well as the professional development necessary to support an effective officer cadre. The ACLC is a federally incorporated not-for-profit organization who supports the cadet organizations as requested by the CAF.<sup>8</sup>

7. Today the ACLC's mission is, "To promote and encourage the nation's youth to develop and maintain an interest in aviation, leadership and citizenship, in partnership with the Canadian Armed Forces and other organizations."<sup>9</sup>

#### CONTEXT

8. The RCAC program exposes Canadian youth to modern aviation through academic instruction, familiarization flights and a year-round gliding program. The Air Cadet League of Canada owns and operates a fleet of Schweizer 2-33 and 2-33A glider aircraft. The program offers experience flights to all cadets during the fall and spring seasons at over sixty locations across Canada. The program provides more than 50,000 glider flights per year.<sup>10</sup> Additionally, each summer, the RCAC program operates five regional gliding schools that provides flying training to an average of 301 select cadets who earn their cadet glider wings and a certified Transport Canada (TC) glider pilot license.<sup>11</sup> During the first thirty-two years of the gliding program nearly 10,000 cadets completed the glider pilot course.<sup>12</sup>

<sup>&</sup>lt;sup>6</sup> Legislative Services Branch, "Consolidated Federal Laws of Canada, National Defence Act," August 1, 2019, https://laws-lois.justice.gc.ca/eng/acts/N-5/index.html.

<sup>&</sup>lt;sup>7</sup> "DND-MOU-26-June-2020.-English.Pdf," accessed January 4, 2022,

https://aircadetleague.com/wp-content/uploads/2020/12/DND-MOU-26-june-2020.-English.pdf. <sup>8</sup> *Ihid*.

<sup>&</sup>lt;sup>9</sup> "About Us."

<sup>&</sup>lt;sup>10</sup> Air Cadet League of Canada, Policy and Procedure Manual, PPM-EN-JUL\_2020.-FINAL.Pdf, accessed January 5, 2022, https://aircadetleague.com/wp-content/uploads/2020/12/PPM-EN-JUL\_2020.-FINAL.pdf.

<sup>&</sup>lt;sup>11</sup> *Ibid*.

<sup>&</sup>lt;sup>12</sup> *Ibid*.

9. Beyond the gliding program the RCAC offers senior cadets an opportunity to obtain a full scholarship towards a certified TC private pilot's license.<sup>13</sup> The flying scholarship program is a seven-week course completed during the summer period at many civilian flying schools across Canada. The program is comprised of ground school instruction combined with flying instruction. Upon successful completion cadets receive their pilot wings and full, visual flight rules, private pilot license issued by the Government of Canada.<sup>14</sup>

10. Data presented by TC and the Airline Pilots Association of Canada indicates that one out of every five currently licensed Private Pilots in Canada was a previous Air Cadet.<sup>15</sup> An overwhelming 67 percent of commercial Pilots flying for Canadian regulated airlines attended the Air Cadet program as a youth.<sup>16</sup> These statistics indicate the considerable influence the RCAC program has on the aviation industry in Canada.

#### **DISCUSSION AND ANALYSIS**

11. Following the end of the Second World War, the Air Cadet League replaced its mission focus from providing candidates to the BCATP. The peacetime goal became a centered approach to develop the nations' youth into becoming engaged citizens, while maintaining a direct link to the emerging field of aviation. In 1946 the government approved a peacetime posture of 15,000 cadets.<sup>17</sup> The RCAF facilitated the creation of summer training programs held at multiple RCAF stations across Canada. Between 1946 and 1997, 14,361 cadets completed the flying scholarship program and most received their wings as qualified pilots.<sup>18</sup> Over the years this program has been offered at little to no cost to the individual cadets or their families, which was jointly managed by the ACLC and the RCAF.

12. The success of the RCAC program was highlighted during the tenth anniversary, celebrated by the League in 1951. At this point in time, more than 150,000 Canadian youth had worn the cadet uniform and the total number of squadrons had grown to 332. The positive impact that the RCAC program has had on Canadian youth was acknowledged by the government who approved over the years incremental increases to the cadet strength to the present-day annual establishment of 28,000 Air Cadets.<sup>19</sup>

<sup>&</sup>lt;sup>13</sup> National Defence, "Evaluation of the Cadets and Junior Canadian Rangers (Youth Program)," March 30, 2021, https://www.canada.ca/en/department-national-defence/corporate/reportspublications/audit-evaluation/eval-cadets-jcr.html.

<sup>&</sup>lt;sup>14</sup> Transport Canada, "Standard 421 - Flight Crew Permits, Licences and Ratings - Canadian Aviation Regulations (CARs)," AARBH 15472583 (AARBH, November 4, 2019), https://tc.canada.ca/en/corporate-services/acts-regulations/list-regulations/canadian-aviation-regulationssor-96-433/standards/standard-421-flight-crew-permits-licences-ratings-canadian-aviation-regulations-cars.

 <sup>&</sup>lt;sup>15</sup> National Defence, "Evaluation of the Cadets and Junior Canadian Rangers (Youth Program),".
<sup>16</sup> *Ibid.*

<sup>&</sup>lt;sup>17</sup> *Ibid*.

<sup>&</sup>lt;sup>18</sup> "About Us."

<sup>&</sup>lt;sup>19</sup> "History," Air Cadet League of Canada, accessed December 31, 2021, https://aircadetleague.com/about-us/history/.

13. In 1975 the Air cadet league opened membership to girls for the first time. In 1989 thirty percent of cadet who occupied the 440 Squadrons at the time were comprised of young women.<sup>20</sup> This value has remained constant over the years, providing many young women access to aviation through the RCAC program.<sup>21</sup>

14. The RCAC program offers youth many opportunities to experience aviation related disciplines. Summer training centers across Canada offer courses in basic and advanced aviation, Airport Operations, and Aircraft Maintenance.<sup>22</sup> These courses provide cadets access to all facets of the modern aviation industry. Many influential figures in Canadian aviation began their careers as an Air Cadet.

15. Canada's renowned former RCAF pilot and Astronaut, Commander of the International Space Station, Col Chris Hadfield (Ret'd) began his aviation life as an air cadet in 1971, at Milton, Ontario.<sup>23</sup> His many accomplishments in aviation include fighter test pilot qualification, the first Canadian to perform an extravehicular activity in space, the only Canadian to board the Russian Space Station, Mir, and the director of operations at the Yuri Gagarin Cosmonaut Training Center in Star City, Russia.<sup>24</sup> Undoubtedly, he has inspired countless Canadian youth during his career.<sup>25</sup>

16. There have been many other notable Canadians who were previous Air Cadets. For example, The Right Honourable Joe Clark, Prime Minister of Canada 1979-1980, The Right Honourable Ray Hnatyshyn, Governor General of Canada 1990- 1995, General Walter Natynczyk (Ret'd), Chief of Defence staff 2008-2012. Pioneering women of the CAF include, LCol Maryse Carmichael (Ret'd) who became the first female to lead the Canadian Forces Snowbirds aerobatic team.<sup>26</sup> LCol Karen McCrimmon (Ret'd) who was the first female Air Navigator and the first woman to Command an Air Force Squadron (429 Sqn). Following her military career, she entered federal politics and served two terms as a Member of Parliament where she had the distinction to Chair the Defence Committee in the 43<sup>rd</sup> Canadian Parliament.<sup>27</sup>

<sup>26</sup> "Maryse Carmichael," in *Wikipedia*, December 3, 2021,

<sup>&</sup>lt;sup>20</sup> "Air Cadet League of Canada - Canada's Aviation Hall of Fame."

<sup>&</sup>lt;sup>21</sup> Defence, "Evaluation of the Cadets and Junior Canadian Rangers (Youth Program)."

<sup>&</sup>lt;sup>22</sup> "Royal Canadian Air Cadets," in Wikipedia, December 18, 2021,

https://en.wikipedia.org/w/index.php?title=Royal\_Canadian\_Air\_Cadets&oldid=1060869979. <sup>23</sup> "Chris Hadfield," in *Wikipedia*, December 16, 2021,

https://en.wikipedia.org/w/index.php?title=Chris\_Hadfield&oldid=1060638658. <sup>24</sup> Ibid.

<sup>&</sup>lt;sup>25</sup> Canadian Space Agency, "12 Great Chris Hadfield Moments in Space," August 29, 2016, https://www.asc-csa.gc.ca/eng/blog/2016/08/29/12-wonderful-chris-hadfield-moments-in-space.asp.

https://en.wikipedia.org/w/index.php?title=Maryse\_Carmichael&oldid=1058395921.

<sup>&</sup>lt;sup>27</sup> "Karen McCrimmon," in *Wikipedia*, October 26, 2021,

https://en.wikipedia.org/w/index.php?title=Karen\_McCrimmon&oldid=1051861441.

17. The Canadian Armed Forces (CAF) has highlighted a reduction in recruiting and retention in recent years.<sup>28</sup> This has led to an increasing disparity between the desired establishment and the actual size of the Regular Force, See figure 1-1.

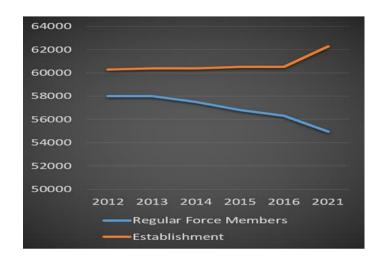


Figure 1-1 – CAF Desired Establishment vs. Regular Forces Members

Source: Annual CM Brief 00185 AERE. October 22, 2022 and 2016 Fall Reports of the Auditor General Government of Canada, Report 5-Canadian Armed Forces Recruitment and Retention.

At the same time, an evaluation of the Canadian Cadet Organization conducted by the Assistant Deputy Minister (Review Services) notes a decline in youth participation in the cadet program in the past two decades.<sup>29</sup> The same report acknowledges the positive impacts that the cadet program has had on the CAF.

...There was evidence to suggest that the Cadet and JCR Programs have had some positive, unintended outcomes. While not an objective of either program, some cadets and JCRs do end up joining the CF. The Cadet Program plays a role in developing senior CF leaders. Running the Cadet Program also helps the CF to promote a positive self-image and generate support for the military, while cadet corps and squadrons allow the CF to maintain a presence in communities across the country. Furthermore, a significant proportion of Canada's airline pilots were formerly air cadets.<sup>30</sup>

<sup>&</sup>lt;sup>28</sup> Office of the Auditor General of Canada Government of Canada, "Report 5—Canadian Armed Forces Recruitment and Retention—National Defence," November 29, 2016, https://www.oagbvg.gc.ca/internet/english/parl oag 201611 05 e 41834.html#hd2e.

<sup>&</sup>lt;sup>29</sup> National Defence, "Evaluation of the Canadian Cadet Organizations (CCO)", audit, February, 2013, https://www.canada.ca/content/dam/dnd-mdn/migration/assets/FORCES\_Internet/docs/en/about-reports-pubs-audit-eval/p0958-eng.pdf.

<sup>&</sup>lt;sup>30</sup> *Ibid*.

The reduced interest by the youth of Canada in the cadet program is a contributing factor to the recruiting challenges faced by the CAF in recent years. Additionally, the reduced cadet participation directly affects the Canadian aerospace industry.

18. Canada's private aviation industry has relied on aviation outreach programs like the RCAC program as a source of talented and motivated personnel.<sup>31</sup> A large portion of Canada's commercial aviation aircrews and support trades began their life in aviation at one of the multiple Air Cadet squadrons across Canada.<sup>32</sup> The focus on aviation that the Air Cadet system provides forms a solid base from which many Canadian youth have used to build a career in the aviation sector. Canada is comprised of large and remote areas. The RCAC program is the only source of exposure to aviation that is accessible to the youth who live within many of these regions.<sup>33</sup> Without access to the many career options available in the Aerospace industry that the RCAC program provides, many Canadian youth would not consider a career in aviation.

19. A 2019 poll by management consulting firm Oliver Wyman found that 62 percent of aviation companies considered a shortage of qualified pilots to be a significant threat in their ability to operate in the future.<sup>34</sup> The looming global pilot shortage has highlighted the gender diversity disparity in civilian aviation worldwide. According to Oliver Wyman group only 5.1 percent of commercial pilots, globally, are women.<sup>35</sup>

20. The Canadian Aviation Maintenance Council (CAMC) was formed in 1991 as a response to a critical shortage of skilled technicians and overall lack of standards in most aviation related trades.<sup>36</sup> In 2010, the CAMC changed its name to the Canadian Council for Aviation & Aerospace (CCAA) to better reflect the scope of its mission to develop a human-resource strategy for the Canadian Aviation and aerospace industry.<sup>37</sup> The organization highlighted that too few Canadian young people are pursuing a career in aerospace to meet future demands.<sup>38</sup> One of the initiatives being pursued by CCAA to address this shortage is the Youth Internship Advisory Committee (YIAC) that consists of membership from the Aviation and Aerospace Orientation Program, created by the

<sup>&</sup>lt;sup>31</sup> "Cultivating the next Generation of Aviation Professionals," *Skies Mag* (blog), accessed January 6, 2022, https://skiesmag.com/news/the-next-generation-of-aviation-professionals-threats-and-opportunities/.

<sup>&</sup>lt;sup>32</sup> Ibid.

<sup>&</sup>lt;sup>33</sup> Defence, "Evaluation of the Canadian Cadet Organizations (CCO)." Audit, 2013.

<sup>&</sup>lt;sup>34</sup> "Perfect Storm: The Looming Pilot Shortage," *Skies Mag* (blog), accessed December 31, 2021, https://skiesmag.com/features/perfect-storm-looming-pilot-shortage/.

<sup>&</sup>lt;sup>35</sup> Oliver Wyman, "How Our Daughters Can Solve The Pilot Shortage," Forbes, accessed January 6, 2022, https://www.forbes.com/sites/oliverwyman/2020/03/06/how-our-daughters-can-solve-the-pilot-shortage/.

<sup>&</sup>lt;sup>36</sup> "History | Canadian Council for Aviation and Aersopace," accessed January 8, 2022, https://www.avaerocouncil.ca/en/about/ccaa-history.

<sup>&</sup>lt;sup>37</sup> "About the CCAA | Canadian Council for Aviation & Aerospace," accessed January 8, 2022, https://www.avaerocouncil.ca/en/%3Cfront%3E/about-ccaa.

<sup>&</sup>lt;sup>38</sup> "Introduction\_to\_the\_canadian\_council\_for\_aviation\_aerospace\_ccaa.Pdf," accessed January 8, 2022, https://www.avaerocouncil.ca/sites/default/files/introduction\_to\_the\_canadian\_council\_for\_aviation\_aerospace\_ccaa.pdf.

CCAA, and the ACLC. The YIAC provides inputs to recruitment, career education and sector awareness programs.<sup>39</sup>

#### CONCLUSION

21. The RCAC program recently celebrated 80 years of success. Each year, approximately 22,000 cadets participate in the gliding familiarization program.<sup>40</sup> In recent times, this program supported more than 500 Air Cadets who received glider and power pilot training and their Transport Canada (TC) license during the annual summer training camps.<sup>41</sup> The influence on the Canadian aviation industry is not limited to pilot production. The RCAC program offers training in multiple aviation disciplines which provide a benchmark for career options to countless Canadian youth. Estimates, in lieu of statistical data, suggest that 28 percent of the members serving in the RCAF today as aircrew, aircraft technician's and support staff received some form of cadet training prior to enlisting.<sup>42</sup> The declining youth participation in the RCAC program in recent years may likely be a contributing factor to the current challenges the RCAF is experiencing with recruitment and retention.

#### RECOMMENDATIONS

22. The Air Cadet League of Canada is not keeping pace with multimedia trends that are attractive to the current youth in Canada.<sup>43</sup> A revised national policy on marketing the cadet program needs to evaluate and modernized the Air Cadet League's approach to social media. Although, several independent squadrons across Canada have independently created some sort of social media presence, the overall impact is regionally focused. Engagement by the ACLC could provide a national perspective while reaching out to youth on their preferred internet platforms. This could also be a method to disseminate initiatives, that are being employed by the CAF to affect culture change to create a safe and inclusive work environment in the RCAF.

23. The RCAF must leverage the diversity in the cadet program to facilitate the recruitment to meet gender equality goals as laid out in Strong, Secure, and Engaged (SSE).<sup>44</sup> Although SSE does recognize the importance of the cadet programs, and even proposes the expansion of the reach of the program, SSE does not link the possibility of participation in cadet programs as being a precursor to military service.<sup>45</sup> The lack of statistical data concerning serving CAF members who attended a cadet program may be intentional. Although the RCAC program was conceived to populate the RCAF during

<sup>&</sup>lt;sup>39</sup> "Boards and Committees | Canadian Council for Aviation and Aersopace," accessed January 8, 2022, https://www.avaerocouncil.ca/en/%3Cfront%3E/boards-committees.

<sup>&</sup>lt;sup>40</sup> "Royal Canadian Air Cadets."

<sup>&</sup>lt;sup>41</sup> Defence, "Evaluation of the Canadian Cadet Organizations (CCO)."

<sup>&</sup>lt;sup>42</sup> "PPM-EN-JUL\_2020.-FINAL.Pdf."

<sup>&</sup>lt;sup>43</sup> Defence, "Evaluation of the Cadets and Junior Canadian Rangers (Youth Program).", Audit 2020.

<sup>&</sup>lt;sup>44</sup> Strong Secure Engaged, Book, Whole (National Defence, 2017), 23,

https://go.exlibris.link/mRP5pkf9.

<sup>&</sup>lt;sup>45</sup> *Ibid*, 70.

the Second World War, following the war the ACLC provided a revised focus on citizenship training and community support to the RCAC with a reduced emphasis on military recruitment. The fact that young women comprised 30 percent of the RCAC program for the last two decades, suggests that more women could be attracted to the CAF with appropriate knowledge of the culture changes that are occurring inside the organization, coupled with the increased opportunities for women in the RCAF. With continued investment and improvements to the Cadet program there is hope for the RCAF to overcome the current challenges to diverse recruitment and long-term retention.

24. The RCAC program must leverage the CCAA accreditation process. The RCAC would benefit from the development of a technical accreditation for RCAC aerospace and aviation courses currently provided by the Air Cadet program.<sup>46</sup> Currently, the only two summer courses that offer an education certification are the Gliding Pilot course and the Power Pilot course. Although the gliding and power scholarship programs are successful, they are limited and allow only approximately 500 cadet each year to participate. The incentive of obtaining a TC pilot license is a powerful motivator and an attractive reason to join the Air Cadet youth program. Likewise, a recognized certification or meaningful acknowledgement for the technical aerospace summer courses provided by the RCAC will facilitate easier entry and even reduced cost to aviation colleges and training centers by graduated cadets. The potential increase in the number of RCAC alumni applicants to aerospace training facilities would support the CCAA mission statement. This would help to rectify the declining number of Canadian aerospace applicants as described by industry experts.<sup>47</sup>

<sup>&</sup>lt;sup>46</sup> "Aviation Accreditation | Aerospace Accreditation | Canadian Council for Aviation and Aerospace," accessed January 8, 2022, https://www.avaerocouncil.ca/en/accreditation.

<sup>&</sup>lt;sup>47</sup> "Cultivating the next Generation of Aviation Professionals."

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