

Airmanship in Australian Aviation

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Thesis submitted for the degree of Doctor of Philosophy
(Aviation)

December 2015

Declaration

I hereby certify that the work embodied in this thesis is contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to the final version of my thesis being made available worldwide when deposited in the University's Digital Repository, subject to the provisions of the Copyright Act 1968.

Christine Carrick

Acknowledgements

I owe many thanks to my supervisor Dr Kerry Chalmers for her guidance, patience and tenacity. My thanks also go to the organisations that allowed me access to their personnel and to the many friends and acquaintances who participated in or promoted my research.

I am also very grateful to my children, Luke and Ruth, and my mother, Sheila (1925-2015), for their support and encouragement.

Publication Notes

Excerpts and summaries from two chapters of this thesis have been presented as conference papers, as shown below.

Carrick, K. (2009, June). *Human factors as a component of airmanship*. Paper presented at the 8th Industrial and Organisational Psychology Conference, Sydney, Australia.

Carrick, K. and Chalmers, K. (2010, April). *Airmanship: Voices from an on-line survey*. Paper presented at the 9th International Symposium of the Australian Aviation Psychology Association, Sydney, Australia.

Carrick, K. and Chalmers, K. (2010, April). *Development of airmanship*. Paper presented at the 9th International Symposium of the Australian Aviation Psychology Association, Sydney, Australia.

Carrick, K., Wahlberg, J., Wright, K. and Chalmers, K. (2014, August). *Australian aviators' conception of airmanship*. Paper presented at the Massey Academic Forum of the 2014 PACDEFF, Auckland, New Zealand.

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Abstract

The current project involved investigation into the understanding of airmanship among Australian aviators and the way in which airmanship is trained in Australia. The starting point was Kern's model of airmanship (1996, 2009a), developed from research with aviators in the USA. The current research revealed two insufficiencies in the Kern model. First that it includes few of the non-technical skills that become important as an aviation career progresses, and secondly it emphasises knowledge over application. The Ebbage and Spencer (2003) model of airmanship, developed in the UK, includes non-technical skills more overtly and some additional concepts not included in the Kern model. Both Kern and Ebbage and Spencer recommend that training of airmanship should include three phases: 1) instil the importance of airmanship; 2) overtly teach and model airmanship; and 3) assess and provide feedback.

In the current project, an initial on-line survey reached mainly general aviation pilots. The participants mentioned many of the concepts included in the existing models but also some additional concepts. A second survey reached more participants and enabled comparison of differences in views between military and civilian background aviators. It also established the relative importance placed by the participants on the component concepts of airmanship. A third study involved the interviewing of a cross-section of flight instructors and trainers from civilian and military sectors, at ab-initio and advanced levels of training. It appears that the training of airmanship generally meets the final two phases of the suggested training process, but there seemed to be a lack of formal introduction to airmanship and no use of a structure to facilitate development of airmanship. A model of airmanship was developed and its structure tested empirically. A revised model is presented, which provides a more balanced approach to the importance of the component concepts than earlier models and also recognises the influence of context on the development and expression of airmanship. The use of the revised model to expressly embed airmanship in training programs may alleviate the paradox of the use of the term 'airmanship' both as a global expression of safe and efficient flight and also to describe only the non-technical skills component, in some training environments.