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ATTRIBUTES OF AN EFFECTIVE FLIGHT
INSTRUCTOR IN A UNIVERSITY AVIATION
DEGREE PROGRAMME

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Abstract

The flight instructor is at the heart of aviation practice and safety. Problems have arisen with the practice of flight instruction and it has been identified that improvements in flight instruction are required for the maintaining of good aviation practice and safety. Possible reasons for these problems are identified including the practice of flight instruction being used by newly qualified pilots as a career route towards an airline position.

Two methods of evaluating teaching, student evaluations of teaching (SET) and self reports from teachers, were used in this study to investigate the perceived attributes of effective flight instructors as rated by both students and flight instructors in a university aviation degree programme.

Twenty two flight instructors and seventy eight student pilots completed surveys which included questions on the importance of technical attributes, personal attributes, interpersonal skills and teaching ability for effective flight instructors.

Similar to previous research, students and flight instructors perceived domain expertise (piloting skills) and being a good teacher as attributes of effective flight instructors. Traditional measures of aviation expertise, namely the number of hours accumulated by pilots – were not rated as attributes of effective flight instructors. Differences between the students and flight instructors were in the area of interpersonal skills which were rated more highly by the students. This also closely aligns with findings from the literature, especially medical studies, where the teacher – learner relationship is highly valued by medical students.

General limitations and possible areas for future research are discussed. It is concluded that the findings from this study also align with the regulatory requirements for the training of new flight instructors.

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Overview

This study seeks to establish the attributes of effective flight instructors as identified by students and flight instructors.

Flight Instructors are the foundation of the aviation industry (Henley, 1991). From this person the student aviator learns the physical flying skills, the cognitive knowledge of the operating environment and is imbued with a safety discipline. The instructor is the pilot, the teacher and the role model laying down the foundations of the student's future flying. Despite the increasing availability of technology in flight instruction and changes in the aircraft being used for flight, there has been little change in the way that flight instructors teach students how to fly. Koonce (2002) describes how many training organisations actually pride themselves on being old fashioned in the flight training offered to students.

Due to the industry structure, most new commercial pilots become instructors not for a career option but as a stepping stone (Henley, 1995) on the pathway to future employment by an airline. Instructor training has become a continuation of the training provided for the pilot as he/she progresses to their goal of employment with an airline (Woodhouse, 2001). As most new Commercial Pilot Licence holders need to become instructors to advance their employment credentials there is little or no attempt to select or train the type of person who may have the attributes to be an effective flight instructor. Complaints about the decline in instructing standards have come from all sectors of the aviation industry, (O'Hare & Roscoe, 1990). The New Zealand Civil Aviation Authority's "Towards 2005 – The Aviation Safety Plan Forum" (Civil Aviation Authority of New Zealand, 2001) identified 24 specific areas of concern regarding

aviation safety and nearly one third of these areas of concern were to do with flight training and the standards of flight instruction offered by current flight instructors. Discussions arising from this Safety Forum about improving the standard of flight instruction focus on the instructor (instructor-centred, Telfer, 1993a), as in broader educational settings it has been noted that improving the instructor can improve the effectiveness of the instruction provided (McKeachie, 1997a).

There has been little or no examination of the students' expectations of flight instruction and flight instructors. Yet within many academic disciplines students are used to evaluate the effectiveness of the teaching they have received in order to improve the teaching (Marsh, 1987). Not only are learning institutions using student evaluations but national government bodies are also drawing upon student evaluations as an indication of effective teaching (Ballantyne, Borthwick & Packer, 2000).

The present study uses the ratings of students within a university aviation programme to evaluate their perceptions of the attributes required of flight instructors that are effective or ineffective in helping them learn to fly. This input by the students into shaping the learning process is considered beneficial for instructors (Henley, 2003).

This study will also evaluate the perceptions of the flight instructors themselves regarding the attributes of effective flight instructors and note any lack of congruence or alignment between students and flight instructors perceptions, (Moore, Lehrer & Telfer, 2001).

Chapter One will describe the role of the flight instructor. It will describe the current flight training practices arising from the flight instruction practices developed in the first and second world wars. The problems created for flight instructing by the

necessity of newly qualified Commercial Licence Holders using flight instructing as a means to advance their own professional aviation careers will also be discussed (Henley, 1995; Woodhouse, 2001).

Chapter Two reviews the literature surrounding the evaluation of effective teaching and how teaching and teachers can be evaluated. The use of students to evaluate teaching (SET – Student Evaluation of Teaching) has been found to be a valid and reliable method of evaluating teaching (Marsh, 1987). Although there is a paucity of material regarding flight instruction, the field of medicine has been regarded as similar to aviation as both are complex environments where the future actions of the student may cause serious injury or death and where teamwork is required (Helmreich, 2000b). Therefore the literature related to the attributes of effective medical teachers, both classroom and clinical, as evaluated by medical students is reviewed. The aims of this study are presented at the conclusion of Chapter Two.

Chapter Three outlines the methodology, design and procedures of the present study. A survey instrument formulated through the review of material surrounding the evaluation of effective teaching by students and teachers was used for data collection. The data was collected from (a) students in the flight training major of a university aviation degree programme, and (b) their flight instructors through a cross-sectional survey.

Chapter Four describes the participants and presents the results of the present study.

Chapter Five discusses the findings of the present study in the context of previous research. Limitations of the study and implications for future research are also discussed.