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ETHICS EDUCATION IN UNIVERSITY AVIATION MANAGEMENT PROGRAMS IN THE U.S.: PART TWO A—THE CURRENT STATUS

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ABSTRACT

This three-part study examines how four-year universities in the United States with baccalaureate programs in aviation management include ethics instruction in their curricula. Part One justified the need for ethics education and developed hypotheses to evaluate the current status of ethics instruction. Part Two of the study continues with an extensive survey conducted in 2000 of all collegiate aviation management department heads. Part Two A, the first of two reports on the results of the survey, describes the current status of teaching ethics in the nation's aviation management education programs. It was found that ethics is not widely included in collegiate aviation programs at levels expected in light of current industry problems.

INTRODUCTION

In the aftermath of the tragic events of September 11, 2001, many news stories have been published about the sorry state of U.S. aviation security. However, problems in airport security existed long before September 11. And if the long list of problems had been carefully analyzed for commonalities from one instance to another, a recurring item that would certainly surface would be the lack of ethics on the part of individuals and whole organizations in dealing with airport security.

Within the past few years the security problem first became prominent as a result of drug smuggling operations involving airline and contractor employees. These employees used their insider status and restricted area access badges to aid and abet drug smuggling operations at a number of

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airports, most prominently Miami (Loney, 1999). Such incidents certainly indicate ethical problems with individual employees, but they are also indicative of organizational problems. Organizations like airlines and airports "are very vulnerable because they dont want to spend the money it takes to screen the people that work at their facilities" (Loney, 1999). The government sting operation that netted 58 suspects at Miami is just one of a number of similar incidents (Airline Worker Admits, 2000; Anderson, 2000; Loney, 1999). And obviously, a major worry is that if employees can be bribed for drug smuggling, they can be bribed for other security related issues.

Other security problems related to poor ethical standards existed prior to September 11. For example, Argenbright Holdings Ltd. was fined $1.6M on October 20, 2000, for falsifying training and background investigation checks on employees who manned security checkpoints at 68 U.S. and European airports (Slobodzian, 2000). Personnel employed by Argenbright included people with criminal records. AirJet Airline World News (2000) reported that Aviation Safeguards of Florida, Inc., pled guilty to similar charges, and that Delta Air Lines, in an effort to hire workers for low paying security jobs, coached prospective applicants on what to include and not include on their job applications. This included altered addresses so background checking firms would not discover criminal activity on their records. Evidence of employer-altered application forms was also found (AirJet Airline World News).

Following September 11, many more similar stories appeared in the media, and once again, although the term ethics never appears in the news reports, lack of ethics was foundational to the events discussed in every news report. Even after the fine against Argenbright Holdings mentioned earlier, Argenbright was charged again in October 2001 with improper employment application screening and falsified records at 14 airports (Levin, 2001). In December 2001, the Department of Transportation indicted 69 workers at Salt Lake City International Airport for falsifying applications for airport security screening positions (Barnes, 2001). In January 2002 another company responsible for security screening at Miami International Airport pled guilty to similar charges (Yanez, 2002). Finally, a February 2002 report cited more of the same at Boston's Logan Airport and Las Vegas' McCarran Airport (Mehren, 2002).

As if report after report of falsified employment applications and intentional duping of the security background investigation system were not enough, new reports of deliberate government suppression of information about the poor state of airport security hit the media in February 2002 (Morrison, 2002). It seems that the Federal Aviation Administration's (FAA) Red Team, an undercover government team

formed to inspect airport and airline security systems for vulnerabilities, was able to routinely penetrate existing security screening systems in 1998 and 1999. When the team reported the results of their activities, they were ordered not to make reports, they were ordered to provide advance notice of their inspections, and their data was manipulated "in order to protect the airline industry" (Morrison, 2002). It is especially interesting that these reports are surfacing again after September 11, because they were originally published in late 1999 (Associated Press, 1999; Levin, 1999).

All of these reports over the past couple years serve as an indicator that organizations and individual supervisors and employees are willing to sacrifice ethical principles in the interest of financial well-being. Part One of this study (Oderman, 2002) investigated ethics education in aviation management programs at the university level. Due to the lack of any published articles in this area, the assumption was made that little was being done to discuss ethics with students in such programs. Part One established the need for and justified ethics education at the higher education level. Through an extensive literature review, the author developed a series of hypotheses based on what other curricular areas have done to bring ethics education to their programs and also based on some general education principles dealing with educational change. The author went on to study these hypotheses in relation to collegiate aviation management programs in the U.S. The following reports on that study. Due to the volume of data gleaned, this part of the study will be reported in two separate articles. Part Two A will describe a survey conducted by the author and will report on responses received in an effort to describe current practices used by collegiate aviation management programs to teach ethics. Part Two B (in an article to be published) will cover the statistical analysis of the data reported in Part Two A.

RESEARCH DESIGN AND METHODOLOGY

An author-designed survey instrument was sent to department heads of all colleges and universities that offer baccalaureate degrees with aviation administration as an academic major. Data was collected regarding departmental and department head demographics, departmental methodology for including ethics in the curriculum (if any), and department head opinions about ethics and its incorporation in aviation administration programs. Additionally, each department head responded to questions about obstacles faced in establishing ethics instruction and about his or her department's organizational culture as related to ethics. Independently derived data on funding and sponsorship categories of the colleges and universities in the study and about their Carnegie

classification were added to the database for statistical analysis as well. The responses to this instrument were statistically analyzed to describe current practices used to incorporate ethics in aviation management curricula.

Peterson's Guide to Four-Year Colleges—2000 (1999) lists a number of colleges and universities in the U.S. that offer baccalaureate programs in aviation administration, aviation technology, or both for undergraduate students. By crosschecking this list with another more detailed list in the *Collegiate Aviation Guide* (Kiteley, 1999) and with information found for schools on their Internet web sites, a list of 62 higher education institutions that offer four-year aviation administration programs was generated. Each of the schools was categorized in two ways for use in statistical analysis. First, each school was classified by funding or sponsorship source as public, private-secular, or private-religious. Second, the author determined the Carnegie classification for each school using the millennial edition of the Carnegie Foundation's typology (Carnegie Foundation, 2000).

Survey Instrument

The survey instrument was sent with a cover letter and a participant consent form to department heads at all 62 colleges and universities. The survey instrument was developed based on: (a) information gained from a literature review concerning the incorporation of ethics instruction in non-aviation academic programs, and (b) educational change concepts described by Fullan and Stiegelbauer (1991). The instrument has 52 multiple-choice or short answer questions plus two open-ended questions. The survey was designed to obtain information about the inclusion of ethics education in the undergraduate aviation management programs of all universities in the U.S. offering them. If ethics is part of the curriculum, the survey asks whether it is taught from inside or outside the department, the degree of faculty participation in teaching ethics, and whether it is a required or elective course(s) or both. The questionnaire also asks for the department heads' opinions related to offering ethics as part of the curriculum. Survey questions also sought evidence of other artifacts of an ethical organizational culture, such as ethical codes, seminars and educational meetings on the subject, curriculum development, faculty research in the area, guest speaker presentations, and departmental ethics committees.

The author pre-tested the survey instrument with department heads from eight departments in the School of Technology at Purdue University. Although the survey specifically addresses aviation, a similar study concerning ethics inclusion could be made in the disciplines represented by these eight technology departments because they have a similar association between their educational goals and the industries to which they provide

students. In a cover letter, test participants were asked to substitute their academic disciplines each time the term "aviation administration" appeared on the survey instrument. Seven of eight department heads responded to the test survey instrument. Their responses led to correction of some minor wording problems in a few of the questions on the instrument, and also provided an estimate of the time needed to complete the survey.

In addition to relying on the survey responses, the author conducted searches of college catalogs of four-year institutions with an aviation management major. The searches were done using an on-line database of college catalogs that is maintained by the Career Guidance Foundation (2000). All catalogs in this database were current as of the 2000 academic year except for five; for these five schools the author used current catalogs available on their individual Internet sites to conduct the searches. The searches were conducted on two groups of institutions. First, a search was made of schools that responded that they either require students to take an ethics course, that they allow elective credit for ethics courses, or that they teach aviation courses that have ethics as a planned topic of instruction. This search was done in order to determine if departments publish evidence of the inclusion of ethics in plans of study or course descriptions. The second search was conducted on schools that did not respond to the survey instrument in an attempt to learn if these non-responding schools publish anything about the inclusion of ethics in their programs.

Definitions of Variables

A number of variables were defined and investigated in the survey instrument. These variables have been suggested by the Part One literature review (Oderman, 2002) as factors that could be associated with the initiation or adoption of effective ethics instruction programs in academic curricula, and they are listed below:

> **Department head's experience**—three quantitative variables which indicate the number of years the department head has spent as a department head, as a faculty member before becoming department head, and as an employee in the aviation industry (not including his or her time in collegiate aviation education).
>
> **School size**—a quantitative variable indicating the total number of undergraduate students in the department.
>
> **Funding or Sponsorship category**—a categorical variable indicating the type of college or university of which the department is a part by funding or sponsorship source. Three categories are used: public, private-secular, or private-religious.

Carnegie classification—a categorical variable determined by reference to the Carnegie Classification of Institutions of Higher Education (Carnegie Foundation, 2000).

Administrative approval—a categorical variable indicating whether or not the department head has already supported the inclusion of ethics in the curriculum.

Administrative disapproval—a categorical variable indicating whether or not the department head has already disapproved decisions to include ethics in the curriculum.

Administrative concern—a quantitative variable based on a five-point Likert scale to indicate the importance the department head places on including ethics as part of the curriculum.

Administrative involvement—a categorical variable indicating whether or not the department head has actually taught ethics as a planned part of the curriculum.

Administrative funding—a quantitative variable based on a five-point Likert scale to indicate the willingness of the department head to commit current departmental resources to include ethics instruction in the curriculum.

Extra-departmental support—two categorical variables indicating whether or not the department has received resources to include ethics instruction in its curriculum from: (a) outside of the university or (b) inside the university, but outside the department.

Administrative position on non-aviation professors teaching ethics—a quantitative variable based on a five-point Likert scale to indicate the department head's opinion about utilizing professors outside the aviation department to teach ethics when ethics is part of aviation curricula.

Administrative position on aviation professors teaching ethics—a quantitative variable based on a five-point Likert scale to indicate the department head's opinion about utilizing professors within the aviation department to teach ethics when ethics is part of aviation curricula.

Obstacles faced—a series of seven categorical variables indicating whether the department head had faced or would expect to face the following obstacles in establishing ethics as a part of their curricula: (a) lack of higher-level administrative support, (b) lack of support from outside the university, (c) lack of funding, (d) lack of course

materials, (e) lack of trained faculty, (f) lack of time in an already-packed curriculum, and (g) lack of faculty support for including ethics.

Accreditation requirements—a categorical variable signifying whether any of the school's accrediting agencies require ethics to be a part of an aviation department's program. Aviation departments may have multiple accrediting bodies to include the regional accrediting body of the institution as a whole, an accrediting agency that deals only with aviation programs, and/or accrediting bodies affiliated with those institutions that are sponsored by religious organizations.

Departmental code of ethics—a categorical variable indicating whether the aviation department or its university has a published code of ethics.

Faculty member research—a categorical variable which indicates whether the aviation department has any faculty members who have conducted research in the area of ethics and aviation.

Speakers or seminars on ethics—two categorical variables signifying whether the aviation department has hosted guest speakers, seminars, or educational meetings to address: (a) including ethics in departmental curricula or (b) ethical problems in the aviation industry.

Departmental ethics committee—a categorical variable indicating whether the aviation department has an ethics committee within the department.

Faculty interest in teaching ethics—a categorical variable indicating whether the aviation department has any aviation faculty members who have demonstrated an interest in teaching ethics or have initiated efforts to do so.

Ethics Instruction Delivery Method as a Variable

Another data set collected during the survey consisted of the methods used by schools to bring ethics to the students in their programs. The five general instruction delivery methods are: (a) a required ethics course taught outside the aviation department, (b) a required ethics course taught by aviation professors, (c) an elective ethics course taught outside the department, (d) an elective ethics course taught by aviation professors, and (e) an aviation course in which ethics is only a planned topic in a course principally devoted to teaching another aviation subject.

The Ethics Inclusion Scale

An author-developed construct called ethics inclusion was determined using responses to several of the questions on the survey. As suggested by the findings in Part One (Oderman, 2002), academic programs have varied levels of commitment to teaching ethics. The Ethics Inclusion Scale (EIS) assigns a number from one through nine to each department as a measure of its commitment to include ethics instruction in its curriculum. The entire scale is charted in Table 1. This scale was developed in order to identify factors associated with schools at varied levels of the scale. By assigning scale levels, statistical analyses could be done later to see if other variables are associated with the spectrum of ethics inclusion, from schools that do not include ethics in any way in their current curriculum to schools that are currently including ethics in many facets of their curriculum.

The lowest level of the scale (Level 1—None) indicates that ethics is not included in the curriculum at all. The top end of the scale (Level 9—Pervasive) indicates that ethics is included in the curriculum using the pervasive method. As one goes from a lower level to a higher level, the

Table 1. Ethics Inclusion Scale

Level of Planned Ethics Inclusion in the Curriculum	*Required Ethics Course Taught outside department*	*Required Ethics Course Taught within department*	*Elective Ethics Course Taught outside department*	*Elective Ethics Course Taught within department*	*Aviation Courses with ethics as planned topic*
1. None					
2. Isolated					X
3. Elective A			X		
4. Elective B				X	
5. Elective C			X OR	X	X
6. Required A	X				X
7. Required B		X			X
8. Required/ Elective	X OR	X	X OR	X	
9. Pervasive	X OR	X	X OR	X	X

Note. An X indicates the inclusion of ethics courses in an institutions plan of study as denoted by the column titles in the table. A blank box indicates that ethics courses indicated by the column titles above are not included in an institutions plan of study.

scale indicates increasing commitment by department members to include ethics in their curriculum. At Level 2 (Isolated) one or more professors in the department is interested enough in ethics to include it as a planned topic in one or more of their courses, but ethics does not receive department-wide recognition. At Level 3 (Elective A) there is enough departmental commitment to allow students to incorporate an elective course principally devoted to teaching ethics in their plan of study as part of their graduation requirements. In going from Level 3 to Level 4 (Elective B), the increased commitment of the department is demonstrated in that an aviation professor (as opposed to a professor from outside the department) is responsible for teaching the elective ethics course. The fact that an aviation professor rather than a professor from another department teaches the course is important because the course will more likely be directly related to aviation and because students will see that the subject is so important that aviation professors actually teach it themselves rather than farming it out to someone in another department.

At Level 5 (Elective C), departmental commitment increases again. Such departments permit students to take an elective course principally devoted to teaching ethics, for which they receive credit toward degree requirements. In addition, ethics is a planned topic in one or more aviation courses; thus, ethics is not isolated to just one ethics course. Level 6 (Required A) is the first level at which an ethics course is required of all students in order to meet baccalaureate degree requirements; however, this level is lower than that of Level 7 (Required B) because at Level 7 the required course is taught by faculty members within the aviation administration department. Level 8 (Required/Elective) is similar to Levels 6 and 7 except that elective courses principally devoted to teaching ethics are offered in addition to the required ethics courses. Level 9 is called pervasive because ethics is infused in the whole curriculum—as a required ethics course, as elective ethics course options, and as a planned topic in other applicable aviation courses. The nine levels of the EIS, as described above, meaningfully capture the variations in a departments commitment to teaching ethics.

There is good reason for using both instructional delivery method and the EIS in this study. The EIS is derived from a combination of ethics delivery methods and indicates a department's overall commitment to teaching ethics. However, a department that only teaches ethics using one of the delivery methods may have many things in common with institutions of differing levels of planned inclusion which share use of the same delivery method. For example, suppose a school teaches ethics by including it as a planned topic in aviation courses primarily devoted to other subject areas, but this school does not require or offer courses

principally devoted to teaching ethics. This school would have a level of 2 on the EIS. Other schools at higher EIS levels also offer aviation courses with ethics as a planned topic. Using this delivery method (aviation courses with ethics as a planned topic) as a variable allows comparison of all colleges and universities that use this delivery method. In other words, using delivery method as a variable cuts across the grain of the level of planned inclusion and provides another valuable way to look at the data.

RESULTS

During Part Two of the study, the author sent survey instruments to the department heads of 62 universities with four-year aviation management programs. One department head returned his instrument with the annotation that the school did not have an aviation administration program, so this school was dropped from the study. Of the remaining 61 colleges and universities, replies were received from 41 for a response rate of 67.2%.

The responses to all questions on the survey instrument are charted in tables below, and key findings are discussed. For those questions having a numerical answer, the mean, standard deviation, and range of the variables are listed. For those questions having categorical responses, the distribution of the responses is shown. For categorical responses, if department heads left some questions unanswered on the survey response, the total responses to individual questions may not equal the total number of responding institutions (n = 41). Cross tabulation of data is not presented in tabular form due to the multiple possibilities for doing so.

As noted previously, the author also conducted searches of college catalogs of four-year institutions with an aviation management major. It is important to note that even though catalogs may have a current date, they may not be current due to curricular changes approved subsequent to publishing. Furthermore, courses listed in an institution's catalog may not be regularly or recently taught. Therefore, catalog data may not provide a completely accurate picture of a department's current program. For purposes of this study, survey responses took precedence over catalog data whenever there was disagreement.

College or University Classifications

The 61 schools in the study were categorized using two classification systems: (a) sources of funding or sponsorship and (b) the Carnegie Classification. Table 2 shows the number of schools surveyed within each category of the first classification system along with the number and percentages of responses received by category.

Table 2. Funding or Sponsorship Sources of U.S. Institutions with Aviation Management Programs, 2000

Category	*Number of Schools Surveyed*	*Number of Schools Responding*	*Percent Responding*
Public	39	28	71.8
Private-Secular	13	7	53.8
Private-Religious	9	6	66.7
Total	61	41	67.2

Table 3 charts the number of colleges and universities that were surveyed in each category of the Carnegie Classification System, and it lists the number of schools and percentages of those actually responding to the survey instrument. Not all categories in this classification system were represented in the database for this survey, and those categories in the Carnegie System not represented by institutions in this study are not shown.

The overall response rate to the survey instrument was slightly higher than two-thirds. Though less than the desired 100 percent response rate, the responses appear to be representative of what is being done across the board especially considering the categorization of schools used in the survey. As can be seen in Tables 2 and 3, all major categories of the

Table 3. Carnegie Classification of U.S. Institutions with Aviation Management Programs, 2000

Classification	*Number of Schools Surveyed*	*Number of Schools Responding*	*Percent Responding*
Doctoral/Research UniversitiesExtensive	12	10	83.3
Doctoral/Research UniversitiesIntensive	9	6	66.7
Masters (Comprehensive) Colleges and Universities I	28	17	60.7
Masters (Comprehensive) Colleges and Universities II	3	3	100.0
Baccalaureate Colleges General	6	4	66.7
Baccalaureate/Associates Colleges	1	0	0.0
Specialized Institutions	1	0	0.0
No Carnegie Classification	1	1	100.0
Total	61	41	67.2

institutions using both categorization methods were represented at a rate close to the overall response rate. Indeed, chi square statistical tests were done using both classification systems to see if there were any significant differences between schools that responded and those that did not respond, and no significant differences between groups were noted regardless of classification system used. Thus, one can be confident that all types of aviation management programs received relatively equal representation in the overall statistical results, and that no one type of college or university dominated the statistical data. Nonetheless, it is not known whether and how non-respondents (and the programs they represent) differ from the responding department heads and their programs.

Aviation Department Demographics

Table 4 indicates data related to department heads' experience. As can be seen, the average aviation department head has not been in his or her position very long. The typical department head has about four and one-half years experience as a department head and just over eight years as a faculty member prior to that. However, the typical department head also has over 18 years of experience in the aviation industry which means that he or she has spent more time in the aviation industry than in academic circles.

Table 4. Department Head Experience, U.S. Aviation Management Programs, 2000

Position	*Mean*	*Std Dev*	*Range*
Years as Department Head	4.63	3.63	0.5 to 15.0
Years as Faculty Member prior to being Department Head	8.19	6.72	0.0 to 30.0
Years in Aviation Industry (excluding academic years)	18.33	11.19	0.0 to 39.0

Table 5 tabulates numerical data related to aviation department characteristics such as the size of the aviation administration program, the number of courses taught in the department, the expected teaching load of the faculty, and the actual teaching load of faculty and the department head. The number of courses taught within the department in which ethics is a planned topic is also listed; these numbers only include the 20 institutions that responded with the number of courses taught in this way. The typical aviation management department has close to 100 students enrolled and teaches about 13 to 14 courses specifically related to aviation management. The aviation faculty members have an actual teaching load that is slightly higher than their expected teaching load. The department head typically

teaches courses as well as administers, but the department head's teaching load is lower than that of the typical aviation professor.

Table 5. Department Characteristics, U.S. Aviation Management Programs, 2000

Characteristic	*Mean*	*Standard Deviation*	*Range*
Number of Students in Program	97.5	89.4	2 to 350
Number of Aviation Courses in Department	13.5	8.5	3 to 50
Number of Courses Taught by Department Head	2.5	1.6	0 to 6
Expected Faculty Teaching Load (Courses/Semester)	3.7	0.7	1.5 to 5
Actual Faculty Teaching Load (Courses/Semester)	3.8	0.9	1.5 to 6
Number of Aviation Courses Having Ethics as Planned Topic	2.9	2.3	1 to 10

Methodology for Including Ethics in the Curriculum

Within Table 6 is a tabulation of whether or not ethics is included in an aviation departments curriculum. The three principal methods for inclusion are: (a) as a required course for graduation, (b) an elective course for which a student receives credit toward graduation requirements, and (c) as part of other aviation courses in which ethics is a planned topic of discussion in a course whose primary subject matter is something other than ethics. Directly below the listings for departments with required ethics courses and for those with elective ethics courses, a further breakdown appears with a tabulation of schools which teach those courses from within the department and those having the courses taught outside the department. Finally, for each of the three methods of inclusion, the number of department heads who have taught such courses is listed. Discussion about how colleges are currently incorporating ethics into their curricula will be broken down by method of inclusion.

Table 6. Inclusion of Ethics in the Curriculum, U.S. Aviation Management Programs, 2000

Methods for Including Ethics in Curriculum	*Yes*	*No*
A Required Course for Graduation	12	29
Taught within aviation department	4	
Taught outside aviation department	8	
Department Head has taught required course	2	
An Elective Course Counting toward Graduation Credit	24	15
Taught within aviation department	1	
Taught outside aviation department	23	
Department Head has taught elective course	0	
A Planned Topic in Other Aviation Courses	22	16
Department Head has taught such a course	17	

A Required Ethics Course

Only twelve of the responding department heads (29 percent) reported that their school requires students to take an ethics course to graduate, and of those twelve, only four actually teach such a course within the department. Considering the fact that the author could find nothing written by professors from an aviation department on the subject of ethics during Part One (Oderman, 2002) of this study nor was anything published about any aviation departments teaching on this subject, it is not surprising that the percentage of institutions that have ethics as a requirement is so low. This is reinforced by the fact that of the twelve schools reporting that they require an ethics course for graduation, one-half state that ethics is required by their accreditation standards. One wonders whether the requirement for students to take an ethics course at these schools would be eliminated if there was no requirement for teaching ethics in the accreditation standards.

A catalog search was made of published plans of study to locate the ethics course requirements for those schools that stated they required an ethics course for graduation. Each of the four schools that said they taught a required ethics course from within their aviation department had an ethics course listed on their suggested plan of study. It is especially interesting to note, however, that two institutions actually house their aviation management programs within their schools' business departments. One school does it with a dual degree program. In this case, a local two-year community college offers the aviation coursework while the four-year college's business department grants the baccalaureate degree. The required ethics course resides in the baccalaureate college's business department. In the other university with aviation housed in the business department, the aviation management faculty are actually part of the

university's business and management department, and the required ethics course has a business course code. Because many business administration schools offer ethics courses, it may be that the basis for the ethics requirement in these two aviation programs is their association with their school's business program.

Of the eight colleges and universities that stated that they require students to take an ethics course that is taught by a non-aviation department, two did not list an ethics course on their suggested plans of study for students in their catalogs. Follow-up telephone conversations confirmed that the institutions do require an ethics course, but the requirement was not obvious from reading the college catalog.

Finally a catalog search was made of the 20 colleges and universities that did not respond to the survey instrument to see if they publish a requirement for students to take an ethics course. Only three of the 20 publish a requirement for such a course (15 percent), and two of those three teach the course internally. Therefore, summing up the activity of all 61 schools in the country with aviation management programs shows that less than 25 percent require an ethics course from their graduates, and only 40 percent of those teach the course internally.

An Elective Course

About 62 percent of schools responding to questions about permitting students to take ethics courses as electives for graduation credit allow such practices, but only one school allowing such electives actually teaches the course within the aviation department. In responding to a series of questions about obstacles to including ethics in the curriculum, department heads acknowledged "lack of time in an already-packed curriculum" as the obstacle with the highest percentage of "yes" votes (see Table 9). Nearly 72 percent of department heads stated they had faced or expect to face this obstacle to include ethics in their curriculum. Indeed, of 28 department heads responding to an open-ended question on what the greatest obstacle to ethics instruction was, 16 (57 percent) listed lack of time in the program. If lack of time is a problem, adding elective courses would probably be perceived as only compounding the problem further.

Additionally, that only one aviation department actually teaches an elective ethics course is not surprising given the fact that, in general, the actual aviation course teaching load is slightly higher than the expected course teaching load (see Table 5). Even department heads have a fairly substantial teaching load considering their administrative responsibilities. Only five of 40 department heads responding to a question on this subject report that they do not teach any courses; the remaining 35 teach an average of 2.7 courses per semester (compared to the normal faculty expected

teaching load of 3.7). Adding optional courses to a curriculum is not usually done under these circumstances because professors are already fully committed with their currently scheduled teaching load.

A catalog search was made of the 20 schools that did not return their survey instruments. Seventeen of the schools (85 percent) appear to allow aviation students the freedom to take humanities and/or business electives, and all of these schools have either a general ethics course taught in their philosophy department or a business ethics course taught by business administration faculty. It is impossible, though, to determine whether this percentage is correct from a catalog search alone. Many catalogs simply show the general education requirements for all students at the university. The catalogs list such items as Humanities Elective, but some departments within the university restrict the course choices for such electives without stating them in the course catalog. Thus, in this present search, 17 is the maximum number of schools in this category, but it may be fewer.

A Planned Topic in Other Aviation Courses

Department heads in the 41 departments responding to this study reported that their departments teach a total of 552 aviation administration courses. Ethics is a planned topic in 57 of those courses (10 percent). This appears to be adequate; however, only 22 of 38 aviation department heads responding to a question about offering ethics as a planned topic in other courses (58 percent) stated that their department teaches ethics in this manner. Although 22 departments represents a slight majority of the responding schools, the number appears low when considering the prevalence of ethical problems within the aviation industry. It would seem essential that somewhere during a student's four-year aviation course of study that educators would plan to expose these future aviation management professionals to the fact that they will have to deal with difficult personal and corporate issues having an ethical component.

A catalog search was made of all schools that reported in their survey responses that ethics is offered as a planned topic of discussion in courses that had other subjects as the principal focus. Using the descriptor, ethics, a comprehensive search was made of every aviation course listed in the current catalog of the 22 schools in this category. Only three courses were found in all of the catalogs that list ethics in the course description. Department heads of these 22 schools reported a total of 57 courses that have ethics as a planned topic, but in only three of them is ethics listed in the course description. Again, ethics may be covered in every one of those 57 courses; however, it is important to note that ethics is only significant enough to make the course description of three of them.

A similar search was conducted of the catalogs of the 20 non-responding institutions to see if they offered ethics as a published topic of study in any of their aviation courses. The author found no courses at any of the 20 universities in this search. This reinforces the findings covered in the previous paragraph. Thus, in all of the aviation courses published in the catalogs of the 61 colleges and universities in the United States with aviation management programs, there are only three courses with ethics mentioned in the course description. This is markedly different than what the author discovered in other curricular areas while doing the catalog search of ethics in aviation curricula. Other curricular areas like business, nursing, computer science, engineering, communication, journalism, and education list ethics in multiple course titles and descriptions.

It should be emphasized once again that none of the written survey response data were changed on the basis of the on-line college catalog searches mentioned above, and the statistical data following from this point does not include any results from the catalog search. The catalog search will be used only to supplement some of the points made in the conclusion of this report.

Department Head Actions and Opinions

Table 7 lists the distribution of responses to questions concerning a department head's support for or disapproval of actual or proposed decisions to include ethics in the aviation administration curriculum of his or her school. While many department heads reported having supported decisions to include ethics in their departments' curricula by the various methods to do so, no department heads reported disapproving the inclusion of ethics.

Several questions were asked in the survey instrument concerning department heads' opinions about ethics and the delivery of ethics instruction. Table 8 lists the distribution of responses to those questions. Each question had a five-point, Likert-style response. For each item, department heads were asked if they strongly agree, agree, have no opinion,

Table 7. Support or Disapproval of Department Heads for Ethics Courses, U.S. Aviation Management Programs, 2000

Issue	*Yes*	*No*
Have supported decision to require ethics course	14	27
Have disapproved decision to require ethics course	0	41
Have supported decision to allow elective ethics course	17	22
Have disapproved decision to allow elective ethics course	0	39
Have supported decision to include ethics as planned topic	21	19
Have disapproved decision to include ethics as planned topic	0	40

disagree, or strongly disagree with the statement in the question. Two noteworthy distributions are seen on the agreement side of the response spectrum. Department heads generally support the ideas that ethics should be taught in all applicable aviation courses and that aviation professors should receive training to do this. For all other statements, department head opinion was not as conclusive, and the average level of agreement or disagreement was just above the no opinion response.

Table 8. Department Heads Opinions about Ethics and Ethics Instruction, U.S. Aviation Management Programs, 2000

Issue	*Strongly Agree*	*Agree*	*No Opinion*	*Disagree*	*Strongly Disagree*
Ethics should be a required course in aviation curricula	12	11	6	10	2
Ethics should be an elective course in aviation curricula	6	18	9	5	3
When taught, ethics should be taught outside the aviation department	1	14	9	15	1
When taught, ethics should be taught within the aviation department	4	13	10	13	0
Ethics should be taught in all applicable aviation courses	23	16	0	1	0
When taught in an aviation department, professors should receive training in teaching the subject	15	20	3	2	0
Willing to devote present funds to train aviation professors to teach ethics	1	23	5	9	2
Willing to devote present funds to initiate or enhance teaching of ethics	1	19	10	8	3
Willing to devote present funds to develop course materials in ethics	1	20	6	11	2

Department heads were asked if they had faced or expect to face various obstacles in beginning a program to include ethics in their curricula. Table 9 tabulates their responses. Additionally, department heads were asked in an open-ended question to list the greatest obstacle they would have to overcome in order to include ethics instruction in their aviation curricula. Responses follow in Table 10. It should be noted that a large number of department heads (13) either listed the word, “None,” or left the answer blank. The most commonly listed responses to the general questions about

obstacles were lack of time in an already-packed curriculum, lack of funding, and lack of trained faculty, in that order. By far, the obstacle cited as the greatest obstacle to be overcome was the lack of time in the curriculum.

Table 9. Obstacles Faced or Expected to Face in Establishing Ethics as Part of Curricula, U.S. Aviation Management Programs, 2000

Obstacle	*Yes*	*No*
Lack of higher-level university administration support	6	34
Lack of support from outside university (industry, professional groups, etc.)	4	35
Lack of funding 18 21 Lack of good course materials	11	26
Lack of trained faculty	17	21
Lack of time in an already-packed curriculum	28	11
Lack of faculty support for teaching ethics	11	27

Table 10. Greatest Obstacle to Overcome in Including Ethics in Curricula, U.S. Aviation Management Programs, 2000

Obstacle	*Number of Responses*
Lack of time in an already-packed curriculum	16
Lack of faculty support	4
Lack of trained faculty	4
Lack of funding	2
Lack of higher-level administrative support	2

Organizational Culture

Department heads were asked a series of questions about the organizational culture of their departments and about other issues related to the inclusion of ethics in their departments' programs. Authors from non-aviation curricular fields suggested the indicators listed in Table 11 as being characteristic of higher levels of interest and commitment to including ethics in their programs. For example, one would expect that if a department had taken the time to formulate its own code of ethics, it would probably have a higher level of interest in ethics and resultantly would include ethics instruction in their curricula. Table 11 charts the distribution of responses concerning the indicators suggested in Part One of this study (Oderman, 2002). Several indicators show virtually nothing to support the

inclusion of ethics in the curriculum: gifts and grants from outside or within the university, departmental ethics committees, and faculty members who have conducted research in aviation ethics. A number of departments (or their parent universities) publish a code of ethics, but that is the only indicator with more "yes" than "no" responses.

Table 11. Organizational Culture Regarding Ethics, U.S. Aviation Management Programs, 2000

Indicator	*Yes*	*No*
Department has received gift or grant from outside university to teach ethics	0	40
Department has received gift or grant from within university to teach ethics	0	40
Ethics is required as part of curriculum for accreditation	10	31
Department has published code of ethics	30	10
Department faculty have conducted research in aviation ethics	3	38
Department has hosted guest speakers or seminars about including ethics in curriculum	12	29
Department has hosted guest speakers or seminars about ethics in aviation industry	18	23
Department has ethics committee	1	39
Department has faculty members who demonstrated interest in teaching ethics	11	30

Level of Planned Ethics Inclusion

As explained earlier, each responding department was classified using the EIS (see Table 1). Departments were categorized on this scale using survey responses to questions dealing with how ethics is or is not incorporated in their aviation administration curriculum. Of the 41 responding departments, 39 were assigned a level of planned ethics inclusion in the curriculum. Two colleges or universities were not included in this listing because the responding department heads omitted data needed to completely define their departments' levels. Table 12 reports the results of this classification.

As can be seen by comparing the EIS distribution with the EIS descriptions found in Table 1, the numbers in Table 12 indicate very low levels of ethics inclusion for 20 of the 39 responding schools (51 percent). Their EIS scores of 3 or less indicate low levels of including ethics in the curricula. Sixteen colleges and universities (41 percent) have levels of 1 or

Table 12. Level of Planned Ethics Inclusion in the Curriculum, U.S. Aviation Management Programs, 2001

Level of Planned Inclusion	*Number of Institutions Within Each Level*
1. None	8
2. Isolated	4
3. Elective A	8
4. Elective B	0
5. Elective C	9
6. Required A	1
7. Required B	2
8. Required/Elective	2
9. Pervasive	5

3, meaning that they either have no ethics component in their program at all or that if ethics instruction exists, it is only an elective course wholly taught outside the aviation department. Students at schools with an EIS of 3 could easily go through their entire aviation curricula with no ethics instruction if they choose a non-ethics general education elective. In contrast to the high number of schools on the low end of the EIS, only 5 schools (13 percent) are in the highest category, that is, they include ethics instruction as a pervasive part of their curricula. This supports the previous discussion about the low percentage of colleges and universities with an ethics component in their aviation management curricula.

The obvious questions at this point are: (a) why do so few aviation departments include ethics as part of their curricula, and (b) why do they often leave this task to others outside the department. Statistical analyses of data from the survey instrument provide some answers, and these tests will be discussed in detail in Part Two B of this report.

CONCLUSION

In summary, an investigative survey instrument was distributed to department heads of collegiate aviation management programs throughout the U.S. to analyze the current state of ethics education within such departments. A very representative sample of responses was received, and a preliminary evaluation of the data was made by looking at the statistical distribution of those responses. This preliminary evaluation supported the initial assumption that not much is being done at the present time to incorporate ethics education into the curricula of collegiate aviation management programs. Before discussing any implications of this data, it is necessary to perform more thorough and rigorous statistical tests on the data. Those tests and their results will be reported in Part Two B of this study.

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