
ETHICS EDUCATION IN UNIVERSITY AVIATION MANAGEMENT PROGRAMS IN THE U.S.: PART THREE – QUALITATIVE ANALYSIS AND RECOMMENDATIONS

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ABSTRACT

This three-part study examined how four-year U.S. universities 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 status of ethics instruction. Statistical tests in Parts Two A and Two B established that ethics is not widely included in aviation curricula. Part Three continues by probing for deeper understanding of current practice. It was found that little is being done to increase ethics instruction, as no sense of urgency exists to bring about change. Recommendations to improve ethics coverage include proactive involvement of those currently interested in the subject, cooperative relationships between academia and the aviation industry, and a phased program to increase the level of ethics inclusion in aviation curricula. Ideas for future study are suggested.

INTRODUCTION

It has been said that the term, business ethics, is an oxymoron. Looking at the long and growing list of corporate ethics scandals in the past several years would certainly reinforce this idea. If one were to look at discoveries made about corporate behavior in the aviation world, one could easily find additional support for this adage.

For instance, the now defunct ProAir, a Seattle-based air carrier, was charged with falsification of training and maintenance records, intentional

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cover-up of maintenance records, failure to report accidents and incidents to the Federal Aviation Administration (FAA) and the National Transportation Safety Board (NTSB), and numerous other things (AirJet News, 2000). Fine Air, a Miami-based cargo carrier now known as Arrow Air, was found guilty of obstructing justice and making false statements during the NTSB investigation of its 1997 DC-8 crash in Miami (Wilson, 2000). A sampling of many ethical violations by individual airline and airport employees includes pilfering passenger luggage (Leveque, 2003), participating in drug smuggling (Loney, 1999), and intentionally damaging aircraft to get more work (Skolnik, 2002). Can anything be done to reverse such trends?

Three earlier installments in this series of articles on ethics education in collegiate aviation management programs explained: (a) the need for studying ethics and some suggested hypotheses for investigating inclusion of ethics in aviation curricula (Oderman, 2002); (b) a survey and statistical description of current practices used by aviation departments to include ethics in their curricula (Oderman, 2003a); and (c) an extensive statistical evaluation of responses by aviation department heads about their departments' inclusion of ethics in their curricula (Oderman, 2003b). The aim of Part Three in this study is to go a step beyond the quantitative analysis of Part Two. (Part Two will be used throughout this report to refer to Parts Two A and Two B together.) Although Part Two produced data describing current practice concerning the teaching of ethics, the statistical distributions and analysis did not completely explain why or how ethics instruction is being implemented. Part Two determined that some schools have a much higher commitment to integrating ethics into their curricula than others; wanting to know why this is so, more research was needed.

RESEARCH DESIGN AND METHODOLOGY

To probe deeper, Part Three turns to qualitative research methods. The author conducted six individual interviews with department heads from universities and colleges that responded to the Part Two survey instrument. The author also interviewed aviation professors identified by their department heads as already demonstrating an interest in teaching ethics in collegiate aviation programs. Only four were so identified during the Part Two survey process, and all were interviewed.

Interviews – Department Heads

The author conducted telephone surveys with six aviation department heads. Based on responses to the Part Two survey and the resulting distribution of schools on the Ethics Inclusion Scale (EIS; Oderman, 2003a), the author divided responding universities into six groups. Group One represented schools with an EIS (or level of planned inclusion) of 1. Schools

with a level of planned inclusion of 2 and 3 were placed in Groups Two and Three, respectively. If a school had an EIS of 5, then it was placed in Group Four. All schools in Group Five had a level of planned inclusion of 6 through 8, and the members of Group Six had an EIS of 9. From the schools in each group, the author randomly selected one department head to be interviewed.

The telephone survey had two sections. The first was for departments that have already initiated efforts to incorporate ethics into their aviation management curricula, and the second was for departments that have done much less to establish ethics as part of their curricula. The author used the first section to interview Groups Four through Six and the second to interview Groups One through Three. The reason the dividing line was set between Groups Three and Four is that Groups Four through Six represent departments that actually have aviation professors teaching a course principally devoted to discussing ethics. In Groups One through Three, any efforts to include ethics instruction are either the result of isolated endeavors by one or a few aviation professors to discuss the subject in classes primarily devoted to other topics or only if an elective course taught outside the aviation department.

The aim in questioning the sample who include ethics instruction in their curricula was to discover the specifics of what they have done, why they have done what they have done, what obstacles they faced along the way, to what they attribute their successes or failures, and their general opinions on the effectiveness of their programs. The aim in questioning the sample from schools that have not included ethics in their curricula was to discover their reasoning for not doing so. The author sought to determine if they simply ignored the subject for no particular reason at all or whether not including ethics was a conscious decision. If for no particular reason at all, the author sought to determine if there was an awareness of ethical problems in the aviation industry. If not including ethics was a conscious decision, follow-up questions delved into reasons for such a decision. In describing interview results, the author looked for themes and repeated patterns in responses to both sections of the telephone interview.

Interviews – Faculty Members

A question on the study's written survey asked department heads to identify faculty members who have demonstrated an interest in teaching ethics and/or have initiated efforts to do so. Four professors gave permission to their department heads to identify them. The author followed-up with all four and asked questions about their experiences in bringing ethics to their curricula. The questions were based on those asked of heads of departments which currently include ethics in their curricula; however, the objective in

these interviews was to get the opinions of faculty who are possibly on the leading edge of implementing ethics instruction.

CONCLUDING PROCEDURES

To conclude this entire three-part research project, the findings in the reports of all three parts are combined to describe the current state of ethics instruction in collegiate aviation management programs. A number of recommendations are made, and several questions are formulated for future study.

RESULTS

All department heads and professors selected to be interviewed consented to a tape-recorded interview for accurate reporting and evaluation of their responses. It is noteworthy that in the professor interview category, in three of the four cases, department heads identified themselves as professors who have demonstrated an interest in the subject. One stated he has been interested in the subject for a long time and has incorporated ethics in all courses he teaches. A second stated that the current ethics component in the curriculum at his university has been there since before he arrived, but this fact was a reason which attracted him to come to that university. The third stated that he is alone when it comes to including ethics in aviation courses at his school. Thus, there was a wide range of experiences between the three department heads that identified themselves as interested professors.

The fourth professor identified by a department head as interested in ethics is an adjunct professor. Her perspective is unique in that her background is not in aviation. She has been around the aviation industry because of her husband's job as an aviation consultant, but her interest in ethics comes from time in the community health industry and strong personal interest. She has taught some general courses (technical writing, career development, and introductory management) for her school's aviation department for 15 years, and she incorporates ethics in those courses.

When interviewing these professors, the author used a telephone survey designed for professors rather than the one designed for department heads, and the responses of the professors are not included in the discussion of information derived from the six department heads that were selected randomly for this study. Nevertheless, it must be understood that the opinions given by the three department heads identifying themselves as interested professors also come from the perspective of being a department head.

A Comparison with Lessons from other Academic Areas

The telephone interview responses are used to illuminate the lessons learned from other academic areas as described in Part One (Oderman, 2002) and as evaluated statistically during Part Two (Oderman, 2003a; Oderman, 2003b) of this study.

Lesson one – the need for ethics instruction

The general conclusion reached previously about lesson one was that many aviation management department heads agree with the need to include ethics instruction in aviation curricula; however, their opinion is not necessarily supported with actual programs to do so. Part Three interviews supported this. Regardless of the EIS level of their school, all department heads stated that they see the need for ethics instruction in their curricula based on several factors. First, every department head reported that they have personally seen multiple situations in the aviation industry in which individual ethics or lack thereof created problems. No department heads had difficulty recounting stories of poor ethical behavior from their own days working in the industry. They cited such cases as intentionally misreporting information, gender issues, political payoffs, poor employer-employee relationships, lying about aircraft maintenance inspections, and failure to take needed safety action when it would cost the company money. To a question asking about the prevalence of ethical failures, most concurred that they were common during the period when they were in the industry. When asked about current impressions of industry ethics, they reported that the industry has improved somewhat, but also stated that they are not entirely sure about that since they are further removed from the industry now.

Secondly, department heads described what could best be called professional behavior. It is their unanimous belief that the aviation industry is an industry of professionals and that professionals need to assume responsibility for their actions and be held accountable for what they do. The heads believe there is an unwritten code within the industry that says certain behavioral standards should be met. Department heads sense a responsibility to send their graduates to industry with an awareness of expected professional standards and, thus, they stated that they seek to inculcate these values in students while still in school.

A third reason given by a couple of the department heads deals with a subject not specifically addressed in this paper but which should be mentioned. One department head stated it this way, “It’s important since there is a general feeling that students today need more ethics.” The implication is that the current generation of students has lower values than previous generations. This viewpoint is somewhat controversial, and evaluating it is certainly beyond the scope of this project. Nevertheless, it is

a perception maintained by many people across a variety of curricular areas. It definitely has an impact on pedagogical issues related to the best methods for bringing ethics into the classroom, and it is an area for further study.

Given these reasons for including ethics, it must also be noted that all department heads interviewed are comfortable with the way in which ethics is currently included in their curricula, regardless of where their schools fall on the EIS. In every case, department heads said that their university's current plan for including ethics in their aviation curricula existed prior to the time that they assumed the department head position. When asked about future plans in this area, four department heads said they have no plans to change. A fifth head said his department is considering adding a Master's degree program (beyond the realm of this study), and that faculty has expressed a desire for greater emphasis on ethics if this graduate program is eventually established. The sixth head mentioned that his department is planning to add an ethics component to a revised aviation safety course dealing with human factors. So, at the undergraduate level, most heads expressed complete satisfaction with current levels of including ethics regardless of the level of planned ethics inclusion.

Lesson two – higher-level support

In Part Two, the data indicated that few department heads consider a lack of higher-level academic administrator support to be problematic for including ethics in aviation curricula (Oderman, 2003a; Oderman, 2003b). During Part Three all department heads were asked the following open-ended question: "How could higher-level academic administration personnel help you in adding ethics to the curriculum?" Though all responded that their higher-level administrators do support including ethics in their aviation curricula, the heads also stated that there is not much that higher-level staff can do to assist them in adding ethics to the curricula. Curricular issues are generally decentralized at most campuses. Course content is left up to individual faculty members or small committees within departments. Higher-level personnel can encourage a topic like ethics, but usually do not mandate such things. Thus, the reason for the conclusion that lack of higher-level administrative support is not an obstacle is because department heads do not think that higher-level administrators can have much impact one way or the other on specific curricular issues like including ethics.

When the four aviation professors were asked a similar question, they responded similarly. Those that already have higher-level support (in the form of tacit approval of the current arrangement) stated that they are not sure what more can be done. The one professor who responded that there is not much support from above said the main thing higher-level administrators can do is to encourage adding ethics to the curriculum. He stated that the

administrators are not disinterested; they are simply not aware of the ethical problems in the industry, and consequently, do not care very much about resolving these problems from an educational standpoint.

Study data revealed that almost half of the department heads have faced or expect to face problems finding funding to include ethics in their curricula. They said that either fund will not be available or that they are not sure if they will be available. They cited the commonly known fact that funding is tight at most universities, including their own. Interesting though, they stated that even though more funding would be nice, more funding is not really needed to bring ethics into the curriculum. Those heads of departments already including ethics at the higher EIS levels pointed out that teaching ethics does not require much in the way of funding; it simply requires time in the curriculum which is a much more difficult problem to solve.

Adequate recognition of faculty for efforts to bring ethics into the curricula was mentioned as important in the Part One review of non-aviation academic areas (Oderman, 2002). Though not studied in Part Two, a specific question was asked during Part Three about this. All department heads were asked if faculty members would receive promotion and tenure recognition for efforts to bring ethics into the curriculum. Responses were mixed; however, a general thread ran through the answers regardless of the school's EIS level. By itself, adding ethics to the curriculum can be mentioned in promotion and tenure documents, but it probably would not be very significant. If, however, a professor did scholarly activity in the area like publishing research about ethics, then he or she would receive recognition during the promotion and tenure process.

Since promotion and tenure are of concern to faculty members, the four professors were asked about this issue. None gave an unqualified supportive answer. One said efforts to bring ethics to the curriculum would be supported at the department level, but she was unsure of its impact beyond that. One of the schools does not have a tenure process so it was not applicable. A third said lip service would be given to it but not much more than that. The fourth said it could be put in a promotion and tenure document, but it is not being done now.

Generally then, in Part Three, as in Part Two, department heads and professors do not think higher-level administrators can make a major difference in offering ethics in aviation curricula. Upper echelons stay out of curricular content issues, additional funding for including ethics is not anticipated (nor perceived to be needed), and efforts to include ethics in the curriculum would not have much impact on promotion and tenure.

Lesson three – importance of departmental advocates

Earlier study data substantiated the hypothesis that an interested department head or faculty member can have an impact on including ethics in the curricula. The impact of the department head will be discussed in a later section dealing with factors influencing educational change. Regarding faculty contributions, questions were asked during Part Three about depth of faculty support for including ethics in the curriculum. All heads responded without hesitation that there is strong faculty support for the current level of ethics in their programs. As to the most likely way in which faculty demonstrate this support, heads said that professors talk about it in classes as the subject arises, implying that ethics is not necessarily a preplanned topic. While it is good that faculty members support ethics instruction by discussing it in class when the subject is raised, this also illustrates a subtle difference between support and advocacy.

Earlier in the discussion about the need for ethics instruction it was mentioned that two of the interviewed department heads discussed possible changes to their curricula (one at the graduate level and one at the baccalaureate level) to include more ethics. In both cases interested faculty members initiated these proposed changes. These examples demonstrate advocacy as opposed to mere support. The professor who is an advocate will take steps ahead of time to include ethics in course content or will develop his or her own materials on aviation ethics to use in class.

Needless to say, interviews with the four professors supported the conclusion that professors who are advocates can make a difference. All four stated that they include discussions about ethical principles and practice in all classes they teach because they see a strong need for such in developing their students into responsible industry professionals.

Lesson four – the pervasive method

Data from Part Two gave a distribution of schools by using the EIS, and only five schools in the database were classified as pervasive (Oderman, 2003a). The interviews did not raise new information about EIS classification of schools in the study; however, the interviews did answer a question concerning the small number of schools at higher levels of inclusion. As mentioned earlier, all department heads interviewed reflected a degree of satisfaction with their school's current level of planned ethics inclusion. The implication of this for the future is that if it is truly desirable to teach ethics pervasively, then the level of satisfaction that department heads currently experience must be lowered. The question is how to accomplish this, and this question will be addressed later.

Lesson five – involvement and training of faculty

The earlier conclusions dealing with this lesson were that few aviation professors are teaching anything about ethics in their classes, that most department heads support special training for aviation professors to teach ethics, and that department heads from departments whose professors do teach ethics are more likely to fund such training. Regarding the first conclusion, there appears to be a discrepancy between the written surveys and the telephone interviews. Interviewed department heads indicated a wider level of faculty involvement in teaching ethics than generally reported on the written survey instruments. A possible explanation is the lack of differentiation in terms during telephone interviews when discussing breadth of faculty support. The written surveys clearly specified teaching ethics as a planned topic, not just as a subject that gets mentioned in an impromptu manner during discussion about other material. Most aviation professors will casually discuss issues like professional behavior when applicable subjects are raised in class; however, the real question is whether a professor thinks the subject is important enough that he or she actually plans ahead to raise it in an organized and thought-out manner before class ever starts.

The issue of willingness to provide training to aviation professors was not directly raised during Part Three, and it did not come up in any of the conversations. Department heads were asked how their current faculty members acquired their expertise in this area in order to teach the subject in the classroom. All mentioned industry experience. Though this study did not delve into pedagogical methods, most of the department heads stated that the primary method used by faculty to discuss ethics is case study and example. For this method of bringing ethics to the classroom, industry experience does provide a very good training ground because, as the department heads testified, there are a lot of examples of poor ethics in the industry. Most aviation educators can relate some of them from personal knowledge (not involvement).

Another question for future study is how to most effectively teach ethics in the classroom in terms of course content and delivery method. The author suspects that a balance between ethical theory and ethical practice in an aviation course would be most effective. Although most aviation educators have a good repertoire of stories from industry, they may not have much basis for talking about ethical theory. Thus, training or self-study would be essential. As one department head said, training would require funding of some kind, even if it means nothing more than release time to accomplish such training.

The interviews with professors confirmed that they had never received formal training in ethics. All said they draw on personal experiences, for half of them this experience includes years of military service. One

mentioned personal reading, and another mentioned discussions of the topic while attending meetings of national aviation organizations like the Council on Aviation Accreditation and the University Aviation Association. If ethics education is to go beyond discussion of cases, it seems apparent that some training or self-study dealing in ethical theory is essential as only one department head or professor interviewed stated that he has such a background.

Lesson six – influence of outside support

The conclusion concerning lesson six was that the most influential support from outside the university for helping to establish ethics as part of aviation curricula comes in the form of accreditation standards. Apart from accrediting bodies, the only other significant input that comes to higher education institutions comes by way of representatives from industry in the form of guest speakers on the subject of ethics. Thus, outside support does not appear to be very influential except in a negative sense, that is, a mandate to include an ethics component in the curriculum or lose your accreditation. Part Three confirmed this observation as no department heads cited anything that outside organizations, specifically the aviation industry, are currently doing to help educators bring ethics to their students.

During the interviews, department heads were asked an open-ended question about outside support, specifically: “How could the aviation industry help you in adding ethics to your curriculum?” Almost all said there has to be feedback from industry to academia. Many collegiate aviation departments have industrial advisory committees with members from the aviation industry who agree to advise the departments about industry trends, needs, problems, forecasts, requirements, and other areas. In the area of ethics, companies need to provide feedback to universities about the current ethical climate in the industry. They should talk about ethical problems they face, and they need to communicate observations and perceptions. Without this feedback educators will assume this is not a problem or will certainly underestimate its significance.

Department heads suggest industry could also assist in curriculum development. Industry could provide case studies (sanitized if need be) to help professors have real-world examples for class discussion. Department heads report a dearth of published materials on ethics that are aviation specific. With educational institutions lacking funds, department heads see this as a place where industrial funding could greatly complement educational efforts. The heads are aware of other educational projects that have been successfully conducted with cooperation and support of industry; they see potential for the same thing in bringing ethics to aviation curricula.

Two other ideas were voiced by a couple of department heads. First, one head suggested that industry can participate in seminars or symposiums on the subject of ethics at professional aviation educational organization meetings. This would promote discussion of the subject and produce wider coverage of this important topic. Another head reiterated the idea studied in Part Two of guest speakers addressing students in the classroom (Oderman, 2003a; Oderman, 2003b). In sum, the department heads do not view lack of industry support as an obstacle, but they do see clear and practical ways that industry can be a catalyst for more substantial coverage of ethics in college curricula.

All four professors also mentioned lack of written materials specifically focusing on ethics in aviation. When asked how industry can help them, they stated that industry can fill the void in the area of published materials, that industry can provide feedback to help academicians understand the ethical problems with which they deal, and that they can make ethics training an item of interest during the hiring process. In short, they called for a more active role in the whole process by the aviation industry.

Lesson seven – modeling

This lesson was not studied during Part Two (Oderman, 2003a; Oderman, 2003b). It was addressed indirectly during telephone interviews with heads of departments with an EIS of 5 and higher in the form of open-ended questions dealing with the effectiveness of their ethics instruction programs, the success of efforts to incorporate ethics, and the receptivity of students to such instruction. Modeling had to be addressed indirectly because asking a direct question, such as “Do your professors model ethics before their students,” would most likely receive an affirmative answer.

With this in mind, it is interesting that all three department heads commented on the importance of modeling at some time during the interview. One said, “Professionalism and ethics go hand in hand. Atmosphere is very important, and we try to create this right away.” Another said, “It is important to set a good example for students. We don’t have to include it [ethics] – we choose to. Why? It is an important part of life.” The third said, “We have very respected professors who teach these courses. They are good role models and bring strong personal ethics to their courses.” One of the professors confirmed this by saying, “You must live by the ethics you promote in class. By doing that you are as effective in getting the principles across as anything.” That modeling is essential is intuitively obvious; the interviews confirmed it.

Lesson eight – obstacles

Specific conclusions were drawn earlier about certain obstacles to including ethics in aviation curricula. The intent of the telephone interviews was to discover how department heads had faced and overcome these obstacles. Although questions were prepared on this subject, they were never asked because none of the department heads interviewed had anything to do with establishing the ethics content in their universities' current curricula. Nevertheless, earlier conclusions were confirmed in Part Three. Without specifically asking department heads to identify obstacles, several identified two obstacles in their interviews. Two heads, from both ends of the EIS spectrum, mentioned lack of time in the curriculum for ethics. Several heads from across the EIS spectrum mentioned lack of good course materials specifically related to the aviation industry.

All of professors interviewed confirmed the lack of good course materials, and two also mentioned lack of time in the curriculum for separate courses on ethics. They specifically mentioned that they would never be able to add a separate ethics course because of all the other requirements, so the only way for them to get ethics into the program is to add it piece by piece to other related courses.

A Comparison with Lessons from Fullan and Stiegelbauer

The telephone interview responses were used to illuminate the factors affecting educational change learned from Fullan and Stiegelbauer (1991) as described in the Part One literature review (Oderman, 2002) and as evaluated statistically during Part Two of this study (Oderman, 2003a; Oderman, 2003b).

Factor one – connection between publications and change

The study's hypothesis regarding this factor said that aviation departments would be hesitant to initiate and fund ethics instruction programs because little has been published on the subject in the aviation academic community. Though a direct question was not asked to tie connections between publications and change, several thoughts can be inferred from the department head interviews. First, as mentioned previously, all are content with their department's current level of ethics inclusion, and there is no sense of urgency to make any major changes. Second, most mentioned the lack of written materials specifically dealing with ethics in the aviation industry. Third, although all the heads were able to recollect several instances of unethical behavior in the industry while they were in it, they had a less clear picture of the current status of ethics in the industry.

If one puts these facts together, it is reasonable to conclude that department heads are content with the status quo because they may simply be unaware of the prevalence of the current problem. This is certainly not an indictment against the department heads as several also said that one of the key ways in which industry could help academia is to provide feedback to universities in this very area, but it does appear that none have been proactive in seeking this information from the industry.

Again, it is important to reiterate that nothing could be found in any journals on the subject of ethics and aviation education. This reminds one of the old adage that the squeaky wheel gets the grease. Ethics is not perceived to be a squeaky wheel at the moment. Other priorities squeak more loudly. Thus, Fullan and Stiegelbauer's conclusion is correct as applied to aviation education.

Factor two – experience as a motivator

Factor two leads one to believe that department heads with more industry experience will be more likely to lead departments that have a higher level of planned ethics inclusion. Statistical analysis demonstrated that this hypothesis does not hold up. Part Three interviews surfaced reasons as to why this hypothesis fails. The department heads interviewed averaged 14.2 years of industry experience (9.8 years standard deviation and a range of 2 to 25 years). Yet despite the experience differences, all had no trouble describing multiple incidents of unethical behavior in the industry of which they were personally aware. Thus, based on their experience, they all saw situations in which there was a lack of ethics displayed, and length of experience was simply not a differentiating factor in their knowledge of industry ethics.

This held true for the professors interviewed except for the one adjunct professor with no direct aviation industry experience. The other three averaged close to 19 years of industry experience and could easily cite instances of ethical problems in industry. These incidents helped them bring ethics instruction to the classroom, but the motivating factor to include ethics did not go back to specific incidents they had observed. Rather, they had a picture in mind of professional behavior for aviation industry personnel, and they assumed responsibility for getting this across to students. Industry experience laid a foundation for course work, but it was not a differentiating factor for motivation to teach ethics in the first place.

Factor three – importance of administrative advocacy

Study data indicated that aviation management departments that currently include ethics are more likely to have department heads that support such efforts. Findings from Part Three illuminate this. Although all

department heads interviewed support including ethics, the heads representing departments with an EIS of 3 or lower are not advocating change to bring their departments to higher levels. The two heads representing colleges at EIS levels of 1 and 3 (indicating that ethics is not taught as a planned subject by aviation professors) stated that they are content to piggyback on ethics offerings outside the aviation department. When asked if they have plans to bring ethics education inside the department, both reported they have none at this time due to unnamed competing priorities. In these two departments, it would take an interested professor to initiate actions to begin discussing ethics as a preplanned topic in the aviation classroom.

The department head from the college with the EIS level of 2 spoke of a faculty member's plan (supported by the head) to add more ethics to another aviation course within the existing curriculum. This would not change the EIS level of this institution, however, because it already includes ethics in other aviation courses. Thus, in these three departments at the lowest three EIS levels, it would take an interested professor to initiate actions to raise departmental commitment to include ethics in their curricula.

The professor interviews validated department head support as important. The adjunct professor made a point of this, and the example of the three professors who are also department heads confirm this. In one case, the head is alone in his advocacy in that he is not actively supported from above nor has his faculty developed a sense of urgency on this. So he is the difference between some inclusion of ethics versus none.

The conclusion to be drawn here is that department heads can be very influential in defining the priorities of a department. If the department head thinks that ethics instruction should be a priority, he or she can bring this about through administrative leadership or sustained personal effort. If a department head does not set this as a priority, then it would take an interested faculty member to shape change.

Factor four – importance of professor advocacy

As seen previously, data demonstrated that despite low interest by aviation faculty in teaching ethics, when there is a faculty member who is interested in teaching ethics, departments are far more likely to have higher levels of ethics inclusion. As mentioned earlier, two of the six interviewed department heads discussed possible upcoming changes to their curricula. In both cases, faculty members initiated the changes. In the case of the four professors interviewed, their efforts either initiated or continued action to integrate ethics in their curricula.

Factor five – importance of external change agents

Factor five would suggest that aviation departments that have initiated changes to incorporate ethics are more likely to be ones that have been influenced by organizations outside the university. However, the conclusion drawn earlier in the study was that outside organizations have had very little influence in bringing ethics into collegiate aviation management programs and that this negligible impact is a partial reason for the lack of ethics education in aviation programs. Part Three supports this.

None of the six department heads and none of the four professors interviewed related any ways in which the aviation industry or any other outside organizations had helped them or even encouraged them to include ethics in their students' plans of study. One department head at the lower end of the EIS spectrum specifically mentioned that ethics education has not been raised as an issue by his department's industrial advisory board. Despite this lack of interest by industry, each department head and three of the professors have concrete ideas about how industry can assist in bringing viable ethics instruction to collegiate curricula. The apparent need for future progress in this area appears to be in some way connected to creating a relationship between industry and academia in which cooperative programs can be initiated to help each other.

Factor six – importance of accrediting agencies

Factor six was not specifically addressed in the prepared questions of the telephone survey instrument, and no department heads or professors raised the issue of accreditation. No department heads randomly selected to be interviewed represented any of the ten schools in which ethics is a component of accreditation standards so it is not surprising that these heads did not raise this issue.

Factor seven – slow step-by-step change

According to this factor, any curricular changes to incorporate ethics into aviation management programs at the higher education level will only proceed in a slow, step-by-step manner rather than proceeding from no ethics to the pervasive inclusion of ethics in a short period of time. The initial intent of Part Three was to identify one or more department heads that had been through the change process related to increasing ethics coverage in their programs and discuss the change process with them. Unfortunately, none of the department heads interviewed fell into that category.

When the department heads were asked what it would take to add more ethics to the curriculum than was currently being covered, they responded with the procedural means to make curriculum changes, that is, develop a

course, get a departmental committee to approve it, and then get faculty senate approval. Procedurally, this does not have to consume a lot of time. However, documenting course approval procedures was not the aim of this study.

Concerning this line of thought, though, it is interesting to note that department heads included in this study have had relatively short tenure as the head of an aviation management program. Among all 41 responding department heads, the average number of years as head of the department is only 4.63 (standard deviation – 3.63 years); it was even lower for the six heads interviewed in Part Three (average – 2.1 years, standard deviation – 0.73). The author does not know how this compares with department head tenure in other fields of academia, but the numbers stated appear to be very low. If the process of educational change is a very slow, step-by-step process, it is not surprising that none of the department heads interviewed were a part of the process that created the current ethics coverage in their curricula. If there was a lot of interest being generated on a national basis to change aviation curricula to include more ethics education and if this process was speedy, one would expect that some of the department heads would have been part of the change process, especially since they also have an average of 6.5 years of faculty experience before becoming department heads.

Despite their interest in the subject of ethics, none of the professors interviewed said that they have any specific plans to make changes either. Two of them expressly stated that their current efforts are sufficient. The other two said they are always looking for new ways and new materials to add more ethics to the curricula, but neither of them have any definite plans to implement in the future.

To summarize this point, it appears that the current state of affairs regarding ethics inclusion in collegiate aviation management programs has existed for quite a while without change. At the present time, change is not only slow, it is non-existent.

DISCUSSION AND CONCLUSIONS

The purpose of this research study was to describe and analyze the current situation regarding the inclusion of ethics instruction in all colleges and universities in the United States that have four-year aviation management degree programs. To cover key findings, first, current practices of aviation departments are reviewed. Next, the factors currently influencing the level of ethics inclusion in aviation curricula are discussed. Third, the author identifies factors that do not influence differentiation in the various levels of planned ethics inclusion in aviation curricula. Then, a number of recommendations for future progress and educational practice are made to

those interested in aviation management education. Finally, potential areas for future research are suggested.

A Summary Description of Current Practices

The literature review for this study revealed that nothing published was found concerning the inclusion of ethics education in curricula for aviation management students in four-year baccalaureate degree programs in the United States. It was suggested that this might indicate that not much is being done to bring the subject of ethics to the aviation management classroom. This suggestion was supported during this study. Although many assent to the importance of the subject, actual practice matches this uniform assent in just a few programs.

From reviews of efforts by non-aviation academic areas (principally law, medicine, business, and public administration), the author developed a construct called the EIS, which measures commitment of aviation management departments to include ethics in their curricula. Levels vary from 1 through 9 and correlate to descriptors of no ethics coverage to pervasive coverage. Level 9 is the desired level as established by the non-aviation fields that have been most successful in including ethics in their curricula (Culver et al. 1985; Link, 1989; Menkel-Meadow & Sander, 1995; Piper, Gentile & Parks, 1993; Weatherall, 1995). Of the 61 schools in the country offering aviation management as a major, 41 responded to this study, and statistical tests infer that these 41 represent the entire population. Despite the critical importance of ethics as an essential trait in aviation professionals, nearly half of the responding aviation management departments reported EIS levels of 3 or lower, meaning that, at best, an ethics course taught outside the aviation department is a possible elective class for students or that ethics is a planned subject in an aviation course primarily devoted to a topic other than ethics. Only five schools in this study have an EIS level of 9.

Combining the results of a written survey instrument with an extensive college catalog search, the author concluded that less than 25 percent of aviation departments require an ethics course and only 40 percent of those actually teach the course themselves. Most aviation departments delegate this responsibility to other departments at their universities, which reduces the potential impact of the course according to authors writing about ethics instruction in non-aviation academic areas (Bundy, 1995; Gilbert, 1992; Spaeth, Perry & Wachs, 1995). Several aviation departments that do require an ethics course and teach it internally are actually part of their universities' business schools. Because business schools are more likely to require ethics in their curricula, this means that the presence of ethics in aviation

departments might be even less evident if some aviation departments were completely independent.

An even more surprising statistic is the relatively low number of aviation departments offering courses having ethics as one pre-planned topic among many others for discussion. It must be emphasized that ethics problems are common in the industry and that some more notable problems have led to fatal aviation accidents. Knowing this, it seems obvious that students should be exposed to the subject at some point during college. Nevertheless, only 22 of 41 responding schools stated that they included ethics as a planned topic in any aviation courses.

Other indicators of the low priority given to ethics instruction exist. Few aviation professors actively teach the subject, and even fewer do any research in the area. Very few college catalogs mention ethics in aviation course descriptions. No one responding to or interviewed for this study was aware of any aviation-specific published materials that would help them bring ethics education to the aviation classroom. No responding departments had ever received any grants or gifts from within the university or from the aviation industry to develop an ethics component for their curricula.

Efforts to include ethics in aviation curricula are stagnant. It was found that not only is the level of ethics inclusion generally low in aviation school programs, but also that most department heads are content with the status quo. The department heads and professors interviewed in this study were knowledgeable of ethical lapses in industry based on their own industry experience. Although their current assessment of industry ethics was a little more clouded, present problems are not hidden from view. At the same time, not one of the department heads interviewed was part of the process that produced their schools' current level of ethics inclusion. Additionally, only one of the department heads interviewed had any current plans to change his school's baccalaureate degree program to include more ethics (a change to include more ethics in a department safety course). Thus, it appears that the level of planned inclusion of ethics in aviation curricula which now exists has existed for a while. Though change may be needed in light of industry problems and the correspondingly low coverage of the subject in academic programs, change does not appear to be forthcoming. There is no sense of urgency in the aviation education world to upgrade the content or manner of teaching ethics.

Before making recommendations to change this situation, one must consider this study's findings regarding factors that have influenced the degree to which aviation departments have already included ethics in their curricula. One should also ponder factors, which have not yet been influential, as lessons can be learned from them as well.

Factors Influencing Level of Ethics Inclusion

Part One explained a number of hypotheses that were investigated during this study regarding factors that influence the inclusion of ethics in academic curricula (Oderman, 2002). A survey instrument was sent to department heads of all collegiate aviation management programs in the country, and statistical tests were performed on data received to examine the hypotheses. The data produced a number of statistically significant findings indicating influential characteristics on a school's level of planned ethics inclusion.

Several factors revolve around the department head. As expected, institutions with heads that support decisions to incorporate ethics into the curricula are more likely to have higher levels of planned ethics inclusion. The same is true for institutions that have heads who have actually taught the subject of ethics at some point in the curriculum, as a required course, an elective course, or as a planned topic in another non-ethics specific aviation course.

Several other factors correlated with higher levels of planned ethics inclusion. Schools with faculty members who demonstrated an interest in teaching ethics are more likely to be on the upper end of the EIS. Universities with accreditation standards requiring an ethics component in their curricula are more likely to be on the upper end of the EIS. Colleges that hosted speakers or seminars on campus about ethics in the aviation industry are more likely to be those on the higher end of the EIS spectrum. In this last case it is possible that the driving variable could be either the guest speakers or the higher EIS level. That is, guest speakers from industry may have raised awareness of ethical issues to the point that more ethics education was added to the curriculum. Alternatively, a higher level of ethics inclusion may have led academic officials to host guest speakers from industry. Both could be true as they complement one another.

No other investigated variables were shown to influence a differentiation between levels of planned inclusion, but several variables do have some impact on particular methods for including ethics in the curriculum. The following variables have a direct correlation with aviation departments requiring students to take an ethics course taught by professors outside the aviation department:

1. Approval of decisions to support including ethics in the curriculum by the current department head.
2. Perception that lack of course materials is not an obstacle to teaching ethics.
3. Likelihood that a department does not have aviation faculty members interested in teaching ethics.

4. Requirement to include ethics somewhere in the department's program in order to meet accreditation standards.
5. Department head agreement with the statement that if ethics is taught, it should be taught outside the department.

The following variables directly related to aviation departments requiring students to take an ethics course taught by professors within the aviation department:

1. Aviation faculty members with a demonstrated interest in teaching ethics.
2. Willingness of department heads to fund training of faculty to teach ethics.
3. Willingness of department heads to fund efforts to advance ethics instruction in the department.
4. Importance placed by a department head on including ethics in the curriculum.
5. Department head agreement with the statement that if ethics is taught, it should be taught within the aviation department.
6. Lower student enrollment in the school's aviation department.

The following variables directly correlated with aviation departments allowing an ethics course taught by professors outside the aviation department to count as an elective course for graduation credit:

1. Previous approval of decisions to support including ethics in the curriculum by the current department head.
2. Department head disagreement with the statement that if ethics is taught, it should be taught from within the aviation department.

The following variables directly related to aviation departments teaching ethics as a planned topic in aviation courses whose principal subject matter is not ethics:

1. Approval of decisions to support including ethics in the curriculum by the current department head.
2. Department head himself or herself having taught ethics in the curriculum.
3. Perception by department heads that lack of trained faculty is not an obstacle to including ethics in aviation curricula.
4. Aviation faculty members with a demonstrated interest in teaching ethics.
5. Willingness of department heads to fund training of faculty to teach ethics.
6. Requirement to include ethics somewhere in a department's program in order to meet accreditation standards.
7. Hosting guest speakers and seminars on ethics in the industry.
8. Willingness of department heads to fund efforts to advance ethics instruction in the department.

Factors not Influencing Differentiation in Levels of Ethics Inclusion

On the surface, it seems obvious to say that any factors not mentioned in the preceding section would now be listed as those which do not influence how ethics is included in aviation management curricula. Yet, a cursory dismissal of these statistically non-significant factors should not be made because some of the factors about to be discussed are very likely influential but they influence all aviation departments regardless of EIS. Discussion is also needed because the literature review suggested that several of these non-influential factors would be influential. To merely dismiss them without comment could lead to neglecting some unique considerations within aviation management programs that might not be characteristic of the non-aviation curricular areas reviewed earlier.

The review of non-aviation curricular areas predicted that higher-level academic administration support would be an influential factor in the level of planned ethics inclusion. This study did not support this. The vast majority of department heads did not view a lack of higher-level support as an obstacle. At the same time though, in interviews with aviation department heads, none really had a clear picture of what higher-level administrators can do to actually support adding more ethics to the curricula. If these administrators took similar actions with regard to their aviation departments that other higher-level administrators took with regard to their business, law and medicine departments, significant backing might make a difference in an aviation department's ability to develop a pervasive ethics education package.

In Part One, several examples were documented of momentous actions taken by outside organizations, which assisted non-aviation curricular areas in establishing ethics instruction programs (Oderman, 2002). In this study of aviation departments, outside support was not shown to be an influential factor. The reason is clear. The only outside support received by aviation departments was hosting guest speakers on the subject of ethics in the industry. In the aviation world, there have been no outside grants of any size to fund initiation of an ethics education program. There have been no cooperative efforts between industry and academia to develop materials to be used at the collegiate level, nor have there been any funds for training faculty to teach the subject more effectively. Those aviation departments that are doing anything in this area either rely on extra-departmental expertise for teaching or they rely on aviation faculty who are using their own personal experience to bring ethics content to the curriculum.

Academic and industry experience levels of department heads are not influential in differentiating levels of ethics inclusion. Though experience levels in both areas vary widely, all department heads knew of multiple instances of unethical behavior and also knew of the pressures within the

industry that are a catalyst for unethical behavior. Thus, because all are on common ground, this is not a prevailing issue in determining level of planned inclusion. Nevertheless, knowledge of ethics in the industry is something that department heads cited as a reason for their current opinions regarding the inclusion of ethics in the curricula, so experience cannot be dismissed as non-influential.

Part One also suggested that three obstacles to offering ethics instruction exist: (a) lack of time in an already-packed curriculum; (b) lack of good course materials; and (c) lack of trained faculty (Oderman, 2002). Thus, it was expected that programs with a higher EIS would be less likely to perceive these as obstacles. This is not the case. Lack of time in the curriculum was the number one obstacle listed by department heads in written surveys and telephone interviews. This obstacle affects including ethics instruction regardless of a department's EIS. Though lack of good course materials was not as frequently mentioned as an obstacle, it too was cited across the board as problematic. It is interesting to note that departments that rely on outside departments to provide their ethics instruction do not regard course materials as a problem. Lack of trained faculty was cited as a common problem; however, this obstacle is present at all EIS levels. Regarding this point though, it is important to note that there is broad agreement across all EIS levels that faculty training should be done, though there is less agreement on the willingness of department heads to fund such training.

A final factor that was expected to influence differentiation in EIS, but did not, is school category. It appeared to be intuitively apparent that schools that are sponsored by religious organizations would have a higher EIS than secular private and public schools. Such is not the case, possibly because religiously sponsored institutions cover ethics in ways not documented in this study. Nevertheless, it seems that the recommendations about to be made apply to all colleges and universities regardless of their sponsoring and funding sources.

Recommendations for Future Progress and Practice

A number of recommendations logically emerge from this study. In light of the current state of affairs regarding including ethics in aviation curricula, the most important conclusion is that a sense of urgency needs to be created among aviation educators for advancing the level of ethics education at most schools offering aviation management as a major. Interested department heads and faculty should attempt to influence other aviation faculty. To do this, they must take initiative to do research, publish articles, and make presentations on the subject within the normal aviation-related academic forums available. Such efforts could lead to a wider

understanding of the problem, cooperative efforts within the aviation education community on dealing with the issue, and substantial efforts to improve pedagogy on the subject. Hopefully, this effort would demonstrate the critical importance of the subject and push it toward the top of the priority list. Though not eliminating the obstacle of lack of time in the curriculum, it might elevate ethics and, if necessary, push less important topics down the list of needed curricular subjects.

Second, aviation educators need to engage the resources of the aviation industry to develop cooperative programs to improve ethics education efforts. To begin this process, educators must show the industry that it needs ethical leaders and that efforts to bring ethics instruction to colleges can make a difference in the graduates that show up on industry's doorstep. If this can be done, industry may be willing to fund efforts to improve ethics instruction at the university level. Such funds could be used by the academic community to develop needed course materials that are aviation specific. Industry could help develop these materials. Individual companies could submit case studies of actual ethical problems with which they have dealt (sanitized if necessary). They could submit company codes of ethics as examples of industry standards that could be discussed in class and they could explain their own policies and experiences with company training programs on ethical issues. Perhaps some companies have developed successful internal programs that help employees deal with ethical issues and pressures. This expertise could be shared with academia with a view toward improving the educational methods used by aviation education departments.

As mentioned already, the development of course materials must be given priority. When talking about course materials used for teaching ethics at their schools, several department heads and professors made comments similar to the following paraphrase, "If someone writes a book on the subject, I will buy it." Teaching a subject is always a lot easier when one can begin with a good textbook. Most professors can take a well-referenced book and develop a thought-provoking course using it. To a certain extent this would alleviate the need for a lot of faculty training in this area. In addition to an entire textbook on the subject, it would be important to develop individual case studies on a variety of aviation subjects. Such cases could then be used in a variety of other aviation courses to discuss ethical issues. This would help aviation professors who do not teach a department's primary ethics course but nevertheless want to talk about how ethics applies to other aviation topics.

This study suggests that ethics is best taught pervasively. A required course in aviation ethics should be offered during the first two years of the aviation management curriculum. Furthermore, it is important for aviation departments to assume this teaching requirement themselves rather than requiring a course from another department on campus because it more

readily demonstrates the commitment of aviation professionals to ethics. The effectiveness of offering the required course early in a student's career has been shown in other curricular areas. Additionally, wherever possible, aviation departments should include ethics courses taught elsewhere on campus on the approved list of general education electives needed to complete aviation degree requirements. As a last segment of the pervasive approach, ethics should be included as a planned topic in all applicable aviation courses. Department heads should encourage this of all faculty members. However, faculty members should not be forced to cover the topic if they do not want to do so.

Establishing a pervasive program to teach ethics is a long-term project. As shown by Fullan and Stiegelbauer (1991), educational change is slow. Knowing this, the author suggests a sequenced phase-in of course offerings. First, add elective ethics courses taught outside the department to the general education requirements for aviation degrees. In this way, most schools could easily upgrade the ethics component of their curricula almost immediately. Second, add ethics as a planned topic to existing aviation courses whenever the content of such courses deals with issues relating to ethics. An example would be a safety course dealing with preventing accidents caused by human error when that error is a lapse in ethical judgment. This will get more aviation professors involved in the overall effort to incorporate ethics in the curriculum. As ethics is added to aviation courses, departments should also consider adding ethics to course catalog descriptions to document their commitment to this subject. Third, add a required aviation ethics course. This is obviously the most difficult task because it requires complete course development. During this entire process all faculty should model ethical behavior before students. Department heads should insist that all faculty act according to the highest ethical standards and that all department practices conform to and encourage such standards as well. A department code of ethics that is published and distributed to faculty and students would aid this effort.

Faculty training should be provided for those desiring it. On a spectrum ranking concreteness of subject matter content from explicit to ambiguous, most aviation subject matter is explicit with a specific way to do things. Checklists and precise regulations guide decisions and procedures. Thus, discussing ethics may induce a bit of fear and trepidation in the typical aviation professor because there is often ambiguity when talking about ethics. An aviation professor who knows his aviation subject matter enters class with a certain ease because of familiarity with the subject. Consequently, teaching ethics may be perceived to be more difficult, and in fact, it may actually be more difficult. Department heads should think creatively in this area and provide some kind of training for interested faculty members. To help alleviate apprehension, it may be useful for

aviation professors to audit other classes on campus that have ethical content. In this way, aviation faculty can get a better idea of how to teach such subject matter by watching others more experienced in this. Many schools have teaching seminars in which successful faculty members share their methods and experiences with other faculty in order to assist in faculty development.

Department heads can build the expertise of their faculty by holding seminars or discussions on the topic. Professors from other departments on campus who have specialized in the subject of ethics could be brought in to lead discussions on content or pedagogy. Representatives from industry could be brought in to discuss ethics from an industrial viewpoint. Interactive discussion on the subject will build expertise and provide experience in thinking through ethical issues.

One final recommendation deals with aviation accreditation. The Council on Aviation Accreditation (CAA) sets and publishes standards for accrediting aviation management degree programs in their Accreditation Standards Manual (CAA, 2001). Coverage of ethics is suggested but not mandated. To date, CAA accredits 18 of the colleges and universities that were part of this study, and one more is currently a candidate for accreditation (CAA, 2003). These schools represent some of the largest collegiate aviation education programs and are recognized as influential leaders in this area. If CAA were to mandate ethics instruction as one of their accreditation criteria, this would help establish the importance of ethics education and would set an example for the rest of the nation's aviation management institutions of higher learning.

POTENTIAL RESEARCH AREAS IN THE FUTURE

This research study was an exploratory study in the sense that no previous research had been done to describe the status of ethics education in aviation management baccalaureate degree programs. Because of its exploratory nature and due to the breadth of the subject area itself, much more research remains to be done.

First, this study did not go into any depth on pedagogy. Although the importance of incorporating ethics in the curriculum was demonstrated and the concept of offering ethics pervasively was established, nothing was said about content for such coursework nor was anything said about the best methods for teaching such courses. Examples from the literature review and this study point to methods like using case studies and teaching ethical principles and theory, yet actual course design and materials development would be an appropriate place to begin after reaching the conclusion of this report.

Second, although it was stressed that ethics belongs in the curriculum, nothing was said about how to fit it into the current curricula at each of the institutions offering aviation management. Each department will need to consider this topic individually because their curricula are all different and their current efforts to bring ethics education into their programs also vary.

Related to the pedagogical concerns is the issue of the generational differences between most of the current faculty and most of the current student population. Questions to be answered include the following. Is there a difference between generations on ethical issues? If so, what are they and how should this affect the way ethics is taught in the classroom? What barriers exist between faculty and students in discussing ethical issues? What methodology for teaching ethics best reaches the current generation of students? How should student background shape course content? Do students in aviation programs differ from their counterparts in other educational specialties? If so, does this influence how ethics is offered to aviation students?

Finally, there is still a question about the breadth and depth of faculty support for including ethics in the curriculum. This study was primarily aimed at department heads. As a result, data on faculty support was secondhand. To get a more complete assessment of faculty perspectives on this issue, a study designed to survey and interview faculty should be completed. This could add much light to all the matters discussed in this paper.

FINAL STATEMENT

Many issues have not been covered in this paper; however, some critically important points have been made. At this time, it is important to seize the initiative and act rather than ignore the problem and hope it will go away. Lacking complete research is not an excuse for inaction. Some people may be called to do further research. Some may be called to write or speak. Some may be called to initiate relationships with industry personnel. Others may be called to begin work on course development or course revision. Whatever the case may be, this author encourages everyone in the aviation education community to begin somewhere. It may require trial and error. It may result in taking one step back for every two steps forward. Nevertheless, begin. It is important.

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