Table 2. General Perceptions on the Merit System.

Avg. Score*		
3.6	1.	Overall faculty performance would decline without a merit system in place.
2.4	2.	Overall, our present merit system has been beneficial to both the faculty and UMW.
6.0	3.	I believe a merit/evaluation system could be developed that would be beneficial to both the faculty and UMW.
5.3	4.	Merit raises should be a one time bonus, rather than added to the base salary.
5.6	5.	An annual merit review process segments a faculty member's career unnaturally - a longer time span (2-3 years) should be utilized to get a clearer picture of performance.
3.9	6.	A person's base salary should be taken into account when deciding if that person deserves a raise or "merit".
6.0	7.	Our present system undervalues the importance of "years of experience" (teaching, industry, etc.) when making rating decisions.
3.4	8.	Faculty of higher rank should be financially rewarded more than they presently are compared to faculty of lower rank.
5.5	9.	There should be an automatic salary adjustment for faculty earning advanced degrees while at UMW.
2.7	10.	Our present merit system has worked well.

* Scored on 1 to 9 scale with 1 being "disagree", 5 "neutral", and 9 "agree".

scored the statement an average of 3.1 indicating general dissatisfaction throughout the faculty.

The respondees felt the merit system has not been beneficial (#2 scored 2.4), that overall faculty performance would not decline without a merit system in place (#1 scored 3.6). Even though there was dissatisfaction with the present merit system, faculty and administrators remained somewhat optimistic that a merit system could be developed that would be beneficial to both the faculty and the University (item #3 received an average score of 6.0).

Conclusions

The present merit system in use has demoralized faculty, ranking many low without resources available for developmental assistance. The competitive nature of the system has discouraged cooperation among faculty and lead to an adversarial relationship with the administration.

Discussion is currently underway to develop a new merit system at UMW. Hopefully, by considering the 21 criteria listed in this survey in the development of the plan, a useful system can be developed that will truly help motivate and encourage excellence in teaching.

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SURVEY

Retention of Poultry Faculty And Poultry Departments

Joe Berry, Richard Reynells, Mike Hewlett, Tony Pescatore and Don Bell

The number of poultry faculty positions has gone down in many universities across the United States. This loss of positions has not come without warning (Reynells, 1988). A decline of teaching positions can probably be linked with a reduction in student numbers (Pescatore, 1988). To improve student numbers an active recruiting program may be needed, or at least efforts may need to be directed toward prospective students to acquaint them with industry needs. To improve success in recruiting efforts it may be appropriate that members of particular youth groups be targeted. Bradley (1988) suggested that a majority of students majoring in poultry science have a farm, 4-H, or Future Farmers of America background. University teaching programs are usually reviewed in reference to declining student numbers, however, since research is also a vital university function it must be considered a factor in the loss of poultry positions (Cook, 1988). Another university function, extension education, should also be addressed in reference to meeting industry needs and determining what the employment needs of the industry are and may be in the future. Smith (1988) suggested that extension may need to move away from production oriented programs and provide more focus on the area of public policy.

In an effort to gain some insight into the cause and determine what might be done to continue to provide well-trained students to the poultry industry, a university and industry survey was conducted. The industry survey was conducted among poultry companies to determine the background of current employees and their future needs in order to assist universities in doing a better job of training students to meet industry needs. The university survey was conducted

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to determine their present status and the future direction of their programs.

University Survey

The initial question in the survey addressed recruiting of Poultry Science students by Poultry and Animal Science Departments. Most of those responding to the survey identified personal contacts as being most effective. Potential students in many states are unaware of the opportunities in the poultry industry and as a result do not actively seek information about a major in poultry. This may not be true in states where the poultry industry is more visible, but even there the industry is frequently concentrated in specific areas and students originating outside of those areas might not be aware of the potential. Some respondents from high beef-producing states point out that peer pressure and a low status rating for a major in poultry are also hurdles which must be overcome. Lack of teachers, counselors and college advisors with an understanding of poultry careers is also a problem in recruiting.

The faculty situation varies widely among universities. Of the 21 responses to this question only 7 represented Poultry Departments, with the remainder being Animal Science Departments. When all responses were summarized the full time equivalent (FTE) of poultry faculty at all responding departments was 134, and 141.7 for 1986 and 1980 respectively. In contrast, the anticipated number for 1990 was 144.9. When the responses from only the universities with Poultry Departments were summarized separately they had 66.2 FTE in 1980, 70.6 currently and anticipated 76.1 in 1990. The trends here is increasing numbers. One school responding in this category had none in 1980 and 2 currently, so it is just beginning the program. Of the remaining 6 schools with Poultry as a separate department the current average FTE is 11.43 as compared to 4.68 FTE for the 14 schools where poultry is combined with Animal Science. Research is the dominating category with it being the category with the largest FTE in 1980, new and expected in 1990. The FTE numbers for teaching and extension were about equal.

It was learned that 52% of the faculty had a farm background, but less then 25% had either a 4-H or FFA poultry background. This information suggests that 4-H and FFA may not be strong influences on students who later become faculty.

The schools responding indicated a total of 170 students with either a major, a minor or expressing an interest in poultry and an additional 10 students were pre-vet students. That number would increase to 180 when students from pre-vet are included. Thirty four percent of the students were women. Enrollment is projected to increase by 70% to 289 students in 1990. The number of women enrolled in poultry related majors is also expected to increase by 92 or 161% by 1990.

In recruiting students it may be important to know about the background of potential students. Of the 170 students represented by responses to the questionnaire, 39 (23%) were from a poultry farm background with an additional 26 (15%) from farm other backgrounds. When the two farm background categories are combined, 65 students or 38.2% are from some type of farm. This is similar to results of the faculty background question. A summary of the responses indicated 18 and 19 respectively had 4-H or FFA background.

Students in poultry programs across the country are predominantly from the U.S. Only 22 of the 170 students were listed as international students and when the U.S. students were broken down by race 119 (70%) were found to be Caucasian and only 17 others were divided among Black, Hispanic & Orientals.

Of the M.S. graduate programs represented by the responses to the survey, 6 were Poultry Science programs while 13 were Animal Science. Nutrition, physiology and management were found to be the emphasis areas with the highest number of masters degree students. Table 1 shows the summary of the responses from a total 93 students. Not all students responded to each question.

Graduate students were found to be from a farm background more frequently (12) than specifically a poultry farm background (8). 4-H and FFA background accounted for 3 and 1 respectively. Of the graduate students at the Masters level, 35 or 37.6% were international. Of the 45 U.S. students 77.5% were Caucasian.

At the Ph.D. level, 6 programs were poultry and 9 were Animal Science. The areas of emphasis were similar to the responses at the M.S. level with Nutrition and Physiology having the most students. The total responses are shown in Table 2. A total of 75 students were identified.

When identified by background, 17 Ph.D. students were from a poultry farm background and additional 12 were from a farm background. Of the 75 Ph.D. students included in the survey - 31 or 41.3% were International. Of the remaining students 34 or 45% were Caucasian.

An additional aspect of the survey dealt with the poultry courses offered by universities responding to the survey. For the undergraduate courses, most were taught by poultry personnel. In fact a total of 107.5 classes were taught by poultry instructors as compared to 18 taught by veterinarians or other faculty. Of the poultry classes, 62 had laboratory sections with 52 of those falling into the required category.

As for graduate classes, it was learned that 64 classes were taught by poultry personnel as compared to 10.5 taught by other instructors. Here again classes with required labs predominated with 18 out of 21.

The responding universities appear optimistic about the future of the poultry industry within their state. When asked about current numbers of all types of poultry in 1980, 1987 and 1990, many indicated they had already seen increases. For laying hens, 11 out of 14 states indicate that from 1980 to 1990 the number was expected to remain the same or increase. Broilers were to decrease in only three states and

Table 1. Emphasis Areas of M. S. Students.

	Nutr.	Mgt.	Phys.	Gen.	Prod.	Econ.	Other
No. Men	17	19	12	1	2	1	7
No. Women	12	1	5	1	1	1	

Table 2. Emphasis Areas of Ph.D. Students.

	Nutr.	Phys.	Mgt.	Gen.	Prod.	Econ.	Other
No. Men	20	18	6	4	9	0	2
No. Women	5	4	1	3	5	0	-

broiler breeders and turkey numbers are expected to increase in 16 states.

When asked about potential or actual cooperative work between states, a total of 21 states responded. Of those states only two indicated a possible waiver of out of state fees to encourage students to attend their university. A total of eight states indicated a possibility of sharing extension personnel. Other suggested cooperation activities included cooperative research including regional research projects or at least cooperate on regional extension meetings.

Industry requirements for employees indicated the need for more B.S. students exceeded other needs. This response was as expected. The indicated need for students completing a 2-year course was currently only 27 with the demand increasing to 37 by 1990. A total of 130 students would be needed at the B.S. level with that number estimated at 186 by 1990. As the M.S. level, the numbers were 43 currently and 65 by 1990. The need was 24 currently and 38 by 1990 for graduates with a Ph.D.

Of those responding to the questionnaire 57% of the departments had a 5 year plan, while only 19% had a 10 year plan. Planning for the future and seeking the advise of others indicate that the departments are interested in understanding and meeting the needs of industry. In 62 percent of the schools, the use of an advisory committee was popular with giving a positive reply.

It would appear from the responses to the first and last questions on recruiting that this could be an important factor in student numbers. Personal contacts seem most successful and perhaps those universities without an active recruiting program should consider initiating one.

Industry Survey

The objective of the industry survey was to collect information about present management personnel, to identify needs and then perhaps make recommendations that would assist in the training for future management positions.

Currently, companies had a total of 401 full-time management level employees with the range being from a low of 1 to a high of 135. A total of 37 companies responded, therefore the average number of management employees was 10.8. As expected most of the companies were producers of eggs, turkeys or broilers, with some falling into more than one category.

By 1990 the total management employee number is estimated to climb to 644 or an average of 17.4 per company. This would appear to indicate expected growth and the need for more trained managers.

Of the 401 management level employees, (15.7%) and (16.2%) had participated in 4-H and FFA respectively. A much larger group totaling 168 (41.8%) were found to have a poultry background while 87 (21.6%) had some other agriculture background. Apparently farm background rather than 4-H or FFA background is more often a characteristic in management employees than it was with faculty.

The largest percentage of management personnel included in the survey has a B.S. in Poultry Science instead of post high school training, a two year degree, or a B.S. in Animal Science. The number of employees with degrees in Poultry Science was 72 (17.9%). The next largest category (26 or 6.4%) was B.S. in Animal Science with a poultry major. From this information it seems that companies prefer Poultry Science majors, if they are available, to fill management level jobs. This would be as expected. Projections for 1990 were incomplete.

Following closely behind is the number of management personnel with a M.S. degree. That number was 22 (5.4%) with the categories of expertise scattered among the various options. The largest number (4 or 18%) were in the management area. Here again estimates for 1990 were not complete.

A total of 11 Ph.D.'s were identified by the responses to the survey with 5 in genetics, 4 in nutrition, 1 in physiology. Two additional M.S. level and 1 Ph.D. were identified in the Food Science area.

Summary

In summary, the largest number of opportunities for employment are at the B.S. level and students with a degree in poultry would be preferred. When asked about management personnel with college training, other than poultry, company representatives identified 163 (40.6%) in this category. This is not too surprising since many companies are large enough to need accountants, computer programmers, marketing personnel and others with special training in fields other than poultry.

The average age of management personnel was determined to be 39.3 years with estimates ranging from 30 to 52. Only 7 current employees out of the 401 were identified as former faculty members.

When the subject of salary was surveyed, the averages of salary estimates are show below:

A variety of responses were obtained from the question concerning how the Extension service and the university have assisted the companies. Among the more frequently used responses to what extension is doing included nutritional information, management information, seminars on ventilation, disease diagnosis, and hatchery information. Most of the comments were favorable toward extension, however some suggestions such as needing faster response time to problems and the need to stay up-to-date on all aspects of commercial production may be very valid suggestions in some areas.

Company representatives suggested universities should do a better job of serving the poultry industry by training

Table 3. Estimate of Salaries (thousands of dollars).

	Start	1 Year
High School	12.0	13.9
Some college	16.0	17.3
B.S.	21.25	24.3
M.S.	22.4	26.4
Ph.D.	28.8	38.3

Journal Writing for Technical Courses In Writing-Across-the-Curriculum

Allen P. Zimmerman

Introduction

The importance and need of well-developed communication skills to the success of college graduates has received considerable attention in *NACTA Journal* articles in recent years as part of overall efforts addressing curriculum modernization and change. Schaefer (1984) listed "above average verbal and written communication skills" as one of the requirements for a graduate to have maximum marketability. Riesenberg (1988), in discussing results of a survey of graduates' recommendations for curriculum emphasis, included "written communications, and oral communications and public speaking" as one of four major areas cited. Broder and Houston (1986), in discussing implications of a survey of employer needs and perceptions concerning graduates, concluded that "colleges of agriculture need to critically assess the level of communications skills requirements in their degree programs". Cobia (1986) stated that "the single factor that hinders performance of our graduates on the job more than any other is the inability to communicate". Coorts (1987), in writing about updating college curriculum, included "to continue improving communication skills of our students (both verbal and written)" as one of seven curricula needs.

Many college campuses are responding to the need to improve the communication and thinking skills of graduates by implementing a "writing-across-the- curriculum" program. This program is based on the concept that: *all teachers should both require students to use a variety of writing techniques and help teach writing.*

The program emphasizes writing as a process and puts it at the center of the curriculum. Sources of additional information about the writing- across-the-curriculum concept and techniques include Fulwiler (1984 and 1985), Fulwiler and Young (1982), Gray (1988), and Bean and Ramage (1986).

Previous *NACTA Journal* issues have contained articles by instructors describing the application of various writing-across-the-curriculum concepts in technical courses to improve the communication skills of graduates. Cobia (1986) discussed the whys, hows, and fears associated with incorporating more writing in courses. Gamon (1988) described the use of class presentations to teach communication skills. Smith, Poling, and Van Tilburg (1989) detailed an extensive "Learning Through Writing" pilot program involving several faculty/courses in the Ohio State University's College of Agriculture. Tudor (1989) provided examples and samples of various writing assignments actually used in a course. Koch and Houston (1989) presented techniques for including more writing in coursework.

One type of writing often included in writing-across-the-curriculum programs which was not highlighted in the articles cited above is the use of journals. This article discusses the concept of journal writing and the use of journals in three different technical courses.

Journals and Journal Writing

What are journals and journal writing? Britton et al. (1975) placed journal writing in the category of expressive

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POULTRY (continued from previous page.)

students, particularly in areas such as personnel management; providing more short courses; offer more specialized 1 or 2 day seminars; develop correspondence programs so interested individuals can take courses without being away from home.

Of the 112 companies responding, only 31 (27.6%) indicated they were actively recruiting at universities. Most of the yes responses (19/31) were from the southern region and they indicated their preferences as to the university at which they recruit. North Carolina State received six votes from that region and three from other regions. University of Georgia received five votes from the southern region and two from other regions. Auburn received all six of their votes from the southern region, and VPI had 4 out of 5 votes from that region as well.

Based on information gained from the survey, it appears there will indeed be a demand for well-trained college graduates to fill industry positions in the future. These positions will be filled from both the poultry area as well as other areas. Universities will likely need to increase their recruiting efforts if student numbers are to meet industry demands for qualified students. Recruiting should perhaps focus on students with farm backgrounds, but should not be limited to that.

Cooperation between industry and university in identifying, attracting and recruiting students can benefit university, industry and the individual students.

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