CASE REPORT

How Management by Objectives (MBO) Works at a Montana State U. Department

Max L. Amberson

Introduction

In July 1972 two departments at Montana State University (MSU) were merged by edict from the president. Prior to the merger the separate departments of Agricultural Education and Industrial Education had small staffs, but in their teacher training programs and their extension agent and industries option programs the scope of their work was reasonably similar. Because MSU is a land-grant institution, the overall charge to all departments on campus was quite clear: each department will teach, do research, and carry out some service function. Of course every department has a unique role on campus, and it must define its role within the framework of the general charge.

The way in which the newly formed Department of Agricultural & Industrial Education (A&IE), set about to accomplish its role within the university changed markedly after the merger. The department chairperson agrees with Drucker that, "Each member of the enterprise contributes something different, but all must contribute toward a common goal. Their efforts must all pull in the same direction, and their contributions must pull together to produce a whole without gaps, without friction, without necessary duplication of effort" (Drucker, 1973, p. 430). Wishing to put these ideas into practice, the Department of A&IE adopted a management by objective (MBO) system which has prevailed within the department from 1976 to the present. Following is a description of the path the department has taken in adopting this system over the past eight years.

Determining Department Guidelines

As a framework for determining specific goals, the staff members of the department set down broad, general guidelines characterizing the nature of the activities which the department should conduct in order to fulfill its unique role. These guidelines were initially formulated by the chairperson, then were discussed in some detail with the department staff members, then finally were reworded and adopted by the staff at their first annual fall retreat.

The Guiding Statements for the Department of A&IE are to:

1. Provide an adequate number of well educated vocational agriculture and industrial arts graduates to fill teaching and non-teaching job opportunities in schools and related areas of employment in Montana.
2. Provide adequate counseling, orientation, and instructional programs which insure that graduates develop competencies needed for successful employment in either teaching or non-teaching occupations.
3. Articulate the administration of its program at the local and state level and insure that short and long range planning is carried out at the department level.
4. Make its staff accessible to students, other faculty, local teachers, administrators and lay citizens of Montana for purposes of counseling, speaking, and/or consulting.
5. Develop, field test, and disseminate curriculum guides and instructional materials to local teachers throughout Montana.
6. Provide graduate programs for teachers and others who desire additional professional and technical preparation in agricultural or industrial education.
7. Provide inservice credit and non-credit educational workshops, seminars, and courses for agricultural and industrial education teachers on and off campus.
8. Direct and conduct studies and research in the areas of agriculture and industry which will help identify, clarify, and ultimately improve manpower education at all levels in Montana.
9. Provide for systematic evaluation of its staff, courses, and programs.

Determining Specific Goals

During the first year of the merged department, staff committees met to formulate long-term (5 year) goals for the department. Each goal was then broken down into objectives, stated in behavioral terms, along with the ways and means of accomplishing that objective. Bainbridge & Evans referred to this type of format as "four-tiered set of objectives" for accomplishing its years work.[2] Two additional items were also included in the format. These were:

1. a calendar or targeted time period for accomplishing the objective, and
2. specifically who on staff would assume leadership for a particular objective.

As committee activity drew to a close, they presented the staff with the format included in Figure 1.

Amberson is head of Agricultural & Industrial Education, Montana State University, Bozeman, Montana 59717.

Figure 1. Agricultural and Industrial Education Management By Objectives Program Planning Guide

Guiding Statement I	Goals	Objectives	Ways & Means	Who's Responsible
The Department of Agricultural and Industrial Education at Montana State University should provide an adequate number of well-educated vocational agriculture and industrial arts graduates to fill teaching and non-teaching job opportunities in schools and related areas of employment in Montana.	Increase the numbers of persons graduating in both the teaching and non-teaching options of agricultural education and industrial arts so as to meet the needs in Montana and contribute for the national pool.	1. Have a graduating class that equals or exceeds 20% of the number of Montana Vocational Agriculture teachers in the field. 2. Have a graduating class that equals or exceeds 10% of the number of industrial arts teachers in the field.	a. Makes presentation to groups in Montana about the need for added students to enroll in Ag. & Ind. Ed. Dept.	
			1. Voc. Agr. Teachers Association at Annual Conference Winter Fair State FFA Conv.	XXXXXXXXXXXX XXXXXXXXXXXX XXXXXXXXXXXX
			2. Montana Counselors Association Staff, visit school counselors at schools.	XXXXXXXXXXXX XXXXXXXXXXXX XXXXXXXXXXXXX
			3. Montana School Administrators. Communicate through mailings and departmental newsletters.	XXXXXXXXXXXX XXXXXXXXXXXX
			4. Contact potential students when visiting secondary schools.	XXXXXXXXXXXX XXXXXXXXXXXX

Determining Individual Staff Role and Scope

President William Tietz, Montana State University, in his address to the academic department head (1976) strongly suggested that each department head would design a tangible system of measuring and rewarding faculty on the basis of their contributions to the department and university.[3] With the department's overall MBO system in place, the charge given by the president was fairly easy to incorporate, yet the usual problem of evaluation, measurement, and determining differences in contributions and performance was yet to be determined.

The whole process really starts with individual staff planning. When staff members prepare their individual role and scope (program of work) they list in behavioral terms what they plan to accomplish under the areas of teaching, research, and service. Typically listed under teaching are items such as classes to be taught, syllabus revisions, new teaching techniques, and how courses are to be evaluated. Listed under research are funded and unfunded investigations, anticipated results, groups involved, and the impact on the area being studied. Typically listed under service are groups to be served, meetings, workshops planned, and the immediate impact on the service rendered. Many of the items on the staff's program of work come from the department's MBO for assignments for which they have agreed to be responsible.

The computation and determination of the percent of time to be spent in each of the three categories is determined jointly by the department head and the individual faculty member while in conference.

In order to determine the time allocation of staff in teaching, research and service, the department head uses 12 quarter hour credits per quarter as a full-time teaching load for three quarters along with the normal advising load of from 15 to 30 students. Typically, staff members in the department spend 80 percent of their time teaching and advising, and 20 percent on service and research. Different faculty members may allot differing percentages of their time to these areas depending upon their expertise. Staff members who have funded research and service grants are able to buy time from their teaching activities to "free up" time to perform functions for which they have received funding.

MBO Modification — A Continuing Process

Off campus staff retreats in autumn before classes start have been the primary time when the department MBO receives attention. Midyear, a half or full day is often devoted to updating or revising the MBO document. Following the fall retreat, staff begin to design and work up their own role and scope. Initially, these were to be finalized by November 1. However, because staff evaluations are held at the start of spring quarter, individual role and scopes are now finalized during spring quarter. As a result, faculty have three full quarters (spring, autumn, winter) of activities upon which to be evaluated rather than two quarters (autumn, winter) as was the case with the previous

November filing date for individual role and scopes.

As individual role and scopes are completed, the department head meets with each individual staff member to discuss his/her role and scope. Any questions, comments, and criticisms are discussed, changes are made and the staff member's role and scope is completed and filed. Should there be reason for adjustment after this formal meeting, these changes are made in writing anytime during the year. Because it serves as the document upon which they are evaluated at the appointed review time, staff members are very careful about putting together their role and scope.

Evaluation Mechanism

At MSU none of the forty-seven (47) departments use identical evaluation processes. The process used by the department of A&IE was designed by the staff as an outgrowth of the departmental MBO management system.

When staff reviews are announced, all staff members quantify the objectives as stated on their individual role and scope. The quantifying data are assembled and placed in a portfolio with a copy of the staff's role and scope complete with a table of contents. These data are left with the department head's secretary for distribution to other staff and to the department head.

Three different groups look at and rank each staff member's portfolio. Self rating is extremely important and accounts for 25 percent, peer rating 25 percent, and department head evaluation 50 percent of the final aggregate rating. Each staff member, peer, and department head assigns a low (1) to high (5) rating to each of the three areas in which the staff member reported activities. When the evaluation exercise is complete, and the numbers for teaching, research, and service are computed, each is weighted in accordance with the agreed on time the staff reported spending in each area of the role and scope. When the computations are complete, it is then possible to determine which staff member completed, completed to some degree, did not complete, or excelled in the area in which they had leadership responsibility. An example of this computation appears in Figure 2.

Figure 2.

Overall performance is determined using the following factors:

Teaching - Advising - Percent of FTE spent =TF
Research - Percent of FTE spent =RF
Service - Percent of FTE spent =SF

Teaching - Advising - Performance =TP
Research - Performance =RP
Service - Performance =SP

Rating Scale
1 Low — 5 High

Overall performance - TF(TP) + RF(RP) + SF(SP)

	Time Allocation	Composite Rating
Example: Teaching (Ave. 9 cr./qt.)=	.75%	4
Research	.15%	2
Service	.10%	2

Overall performance - .75(4) + .15(2) + .10(2) = 3.5

Use of Evaluations

Promotion, tenure, and salary determinations are made on the basis of the outcome of the aggregate scores staff members receive on the departmental evaluation.

As a result of annual evaluations, staff members know what is expected of them and receive feedback on their progress. A paper trail exists and is easily pulled together when documentation for promotion/tenure purposes is needed. Salary considerations are important, and using this system, there are fewer questions about staff accountability, since the correlation between aggregate evaluation scores and salary have ranged between .95 and 1.0. When a person's salary base is increased due to a promotion to another professional rank, the correlation varies. It has been the philosophy of the department head to increase salary base to a higher level when promotions in rank occur.

The MBO system used by this department has been recognized and respected by the College Dean and Vice President as being progressive and accountable. When it was demonstrated to the MSU administration that, based on the annual Oklahoma study, salaries for the department were at a .93 ratio of their peers over the nation, additional salaries were provided to bring this to a 1.01 ratio.[4] That particular year it took an average 18 percent salary increment for the department to accomplish that goal. This increment was something more than was given other departments, but the funds would be well accounted for through the MBO system used by the department.

Staff Reactions to Departmental MBO

Positive

On the whole, staff members like the system because it removes the mystery about their role and expectations. They especially like being involved in determining the department's thrust into the future. They feel a very personal involvement and thus are interested in the quality aspects of the departmental output. As a result, no staff promotions sent forward from the department have been denied since adoption of the MBO system. Currently, staff mean salaries by professional rank are above those of comparable peers in other departments in the university. Staff members realize that all the funds coming to the department will be distributed on a merit basis based on an evaluation process of which they have been a part.

This system gives the department head a tangible basis upon which to promote, deny promotion, or to terminate staff. Since the inception of the MBO, one non-tenured and one tenured staff have been terminated. Both terminations were mutually agreed upon by both the department head and the staff involved when evaluations of performance were quantified.

Negative Staff Reactions to Departmental MBO

Few systems are without problems. The MBO which is in its seventh year of use in the Department of A&IE at MSU is no exception. Staff members sometimes look across campus and feel that inherent in this system is a greater expectation than is requested of staff members in departments where no MBO exists. Some staff members have expressed a concern that the system is demeaning and they do not need to be driven by such a management system. They feel their freedom is inhibited by having to plan and state tangibly their expected output. These findings parallel those of Terpstra, Olson, and Lockeman when they commented that, "Scholars and academicians have traditionally placed much value on individual autonomy, behavioral flexibility and academic freedom."[5]

New staff to the department and established staff have voiced their concerns. New staff suggest that the system does not provide enough protection during the period when they are new and developing. Established staff express a concern that the MBO system does not provide enough protection for them when they are winding down their career. A fear shared by all staff is that the MBO system, if not carefully monitored, may tend to make individuals more concerned about their own personal growth and development than about the department as a whole.

From the department chairperson's viewpoint, the departmental MBO has been particularly beneficial in encouraging staff planning, resulting in increased staff and departmental productivity. Staff members benefit in knowing the whole department's goals, objectives, and direction, as well as the part staff members play in the department's thrust. The system of individual staff role and scope development followed by the several step evaluation involving self, peer and department head is fair in that it rewards output and provides the basis for more rapid staff advancement. A major concern is whether the system's limitations can be fully identified and adjustment made so that the department and its faculty will remain dynamic, which was the original intent for instituting the MBO system.

Internal peer evaluations at MSU conducted in 1975 and again in 1982 indicated that the department is among the best managed within the university. Reviewers felt the department should share its MBO system with others.

References

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A Future For Agriculture

J. David McCracken and
L.H. Newcomb

In this article, the probable future changes in agriculture will be presented. Then questions regarding current practices among professors of agriculture and the need for future changes in how professors organize and deliver educational programs will be raised. The intent of the article is to cause professors of agriculture to evaluate current practices and begin to debate the changes needed for the future.

Those involved in resident instruction are faced with the challenge of preparing their students for a future that will be much different than today. It will be essential that students be prepared as creative thinkers and scholars so they can cope with their changing environment.

The future of agricultural instruction in colleges will largely depend upon the nature of agriculture, both on farms and in businesses and industries involved with agricultural products and services. The more realistic estimates of future conditions probably result from projecting some current trends, keeping in mind possible technological breakthroughs or system breaks.

Future Trends in Agriculture

The trend toward fewer, larger, and more specialized commercial farm enterprises is expected to continue in the immediate future. During the 1969-78 period in Iowa, farms of over 500 acres experienced the highest percentage growth, while farms of 70 to 499 acres experienced decline (Cooperative Extension Service, 1982). This trend appears to be typical of a national trend. There is potential for a disappearance of the middle-sized farm. Each large farming unit will be operated as a business with an increasing percentage of the large units taking advantage of incorporation. The managers of these enterprises will, of necessity, need to have a high level of competence in business and managerial skills.

The authors are professors in the Department of Agricultural Education at The Ohio State Columbus. This article is based on the position paper by the authors that is cited in the reference list.