

STUDENT PERSPECTIVES OF THE NATURE, EFFECTIVENESS, AND VALUE OF THE MINNESOTA FARM BUSINESS MANAGEMENT EDUCATION PROGRAM

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Abstract

The Minnesota Farm Business Management Education Program provides business management education to farmers. Over 100 instructors currently provide instruction that assists 4,000 to 4,350 farmers annually in meeting their financial, family, and personal goals. This evaluation study sought to determine how the contemporary students viewed selected instructional activities, elements, and program outcomes. The results show that individualized instruction and telephone communications were the highest-ranking instructional methods and instructional media, respectively. Instruction relating to the practice of keeping and analyzing records, and making management decisions were highly desired. The effectiveness of the FBM program in delivering selected instructional topics, activities and/or benefits was highly related to the level of importance placed upon each topic, activity, and benefit by the students. The students were very satisfied with the program as evident by the positive nature of their recommendations to potential students and their belief that they receive an annual improvement in net farm income of nearly \$5,000.

Introduction

Since the establishment of the Minnesota Farm Business Management Education (FBM) program in 1952, an average of over 100 adult education instructors have annually used a variety of management education curricula and instructional methods, media, and aids to teach and assist farm operators in meeting their farm business, family, and personal goals. Incorporating a large amount of individualized instruction that focuses upon keeping, analyzing, and using information from business records to make management decisions, the Minnesota FBM model of delivering management education to farm families gained widespread adoption across the United States for nearly 50 years (Joerger & Murray, 1999). Changes in environmental concerns, technology, eating habits of consumers, and the economy have created dynamic business conditions for the farmer. As a result, the FBM program has attempted to understand and keep pace with the educational needs and desires of the farmer through student input from periodic

program evaluations (Brookfield, 1986; Seaman & Fellenz, 1989; Mael, 2000).

Researchers conducted statewide FBM program evaluations during the late 1970s and 1980s (Richardson, 1979; Persons, Lehto, Casey, & Wittenberg, 1987) for the purposes of assessing the impact and further understanding and improving selected aspects of the program (Bennett, 1975; Birkenholz, Harbstreet, & Law, 1990; Worthen & Sanders, 1987; Trede & Whitaker, 2000; Worthen, Sanders, & Fitzpatrick, 2001). Though the results of the initial studies resulted in favorable assessments of selected aspects of the evolving FBM program, an additional evaluation of the program was deemed necessary in order to identify how participants viewed the program at the beginning of the rapidly changing 21st century.

Elements of an evaluation model developed by Bennett (1975) provided the framework for this study. The model consists of seven hierarchical interconnected steps that are used to systematically assess the nature and impact of inputs/resources; activities; participation; reactions; changes

in knowledge, skills, attitudes and aspirations; changes in practice; and the end results. The initial four levels of the model are designed to evaluate the process involved in the program and the three final levels address the nature of the program outcomes.

Components, activities, processes, and outcomes of the FBM program selected for evaluation by this study and the studies conducted by Richardson (1979) and Persons et al. (1987) corresponded to levels of the Bennett framework. *Inputs* within the FBM program included the time, expertise and value of the instructors and program. *Activities* provided by the FBM program included the curricula and instruction and alternate forms of instructional methods, media and aids. Farmers at all stages of business development with a need for farm business management education comprised the *people involvement* level. Acceptance of the FBM program approaches to instruction, instructional media and aids, and program objections were indicators of the *reactions* of students to the FBM program. Results of *changes in knowledge, attitudes, skills, and aspirations* were reflected in participant priorities for instruction, program activities, and desired benefits. *Changes in practice* were reflected through levels of improvement in the financial condition of the farm business and levels of personal management skills as perceived to occur by the students. The *end or ultimate results* of participation were reflected by the annual financial value placed upon the program and the appropriateness of the program objectives. What has the literature revealed about some of the components of the farm business management education components of adult programming in agriculture?

Effective record keeping and analysis skills learned through participation in the FBM program, self study, and previous education experiences are needed for effectively managing farm businesses. Richardson (1979) and Persons et al. (1987) found that assistance in keeping complete and accurate farm records and assistance in interpreting and analyzing farm records were considered the most important objectives of and benefits received from the Minnesota FBM program. Individualized

instruction was the type of instruction that participants gained the most benefit from for better managing their farm businesses. Classroom discussion lectures with visuals also ranked high as a preferred method of instruction. Persons et al. (1987) also reported individual instruction using computers, and consultation with the instructor via telephone were other types of instruction ranked very high by students. Farmers ranked improved management skills, better knowledge of personal capabilities and increased earnings as the three most important benefits of the FBM program.

An earlier study also revealed that farmers enrolled in the FBM program received a variety of financial benefits. Persons, Swanson, Kittleson and Leske (1968) tested the cost-benefit analysis concept on 3,518 records of students enrolled in the Minnesota FBM program. They concluded that the cost-benefit ratio for the FBM program, including opportunity costs of foregone earnings and all public costs, was 1:2.1. Equally important, they found that farmers were often enrolled in the program for four or five years before making substantive changes in their farming operations. They concluded it took an average of four years of well-kept records and carefully conducted whole business analyses to provide the knowledge and foundation for making major changes in the farm business.

Other researchers investigated the overall benefits of the FBM program. Probasco (1961), for example, asserted benefits were not restricted to participants. He noted that the benefits received by each farmer are small compared to the aggregate benefits to the community and to the school. He concluded that, in the long run, the school and community are the biggest beneficiaries of a good adult FBM program. The return on student investment has been an important concern of students who pay tuition to help offset program costs. Richardson (1979) reported the average annual monetary benefits for students enrolled from one to three years was \$3,473; from four to six years, \$3,073; and more than six years, \$4,962. Persons et al. reported that the farmers and agricultural

lenders perceived an annual monetary benefit of \$4,381 and \$4,900, respectively. Joerger, Ipe and Persons (2000) reported that agricultural lenders and farm business management instructors believed farmers enrolled in the program received an annual increase in net farm income of \$4,880 and \$6,333, respectively.

For many decades, agriculture has been a dynamic industry that has included the introduction and expansion of a variety of farm business opportunities. Accessible markets and changes in the characteristics of the farmers and the agricultural economy have led to different types and sizes of Minnesota farm businesses (Hunst, 1997). These changes require new management skills and understandings that can be provided by the Minnesota FBM program. The State Director and Regional Deans of Management Education responded to the changing agricultural and educational environments by using local and regional information for making changes in the local programming for the Farm Business Management Education Program. Opinions of students, instructors, and agricultural lenders have been an important and constant source of invaluable information for strengthening the FBM program over the past 30 years.

No findings from a statewide investigation concerning the views of the students have been published and available to policy makers, students, teachers, and administrators since the completion of the Persons et al. (1987) study. As a result, this study, which was part of a larger study that also involved agricultural lenders, was commissioned to obtain information from students to be used to inform policy-makers, administrators, and instructors about current FBM student views and needs.

Purpose and Objectives

The purpose of this study was to determine the importance and value of selected features and activities of the Minnesota Farm Business Management Education (FBM) Program as perceived by FBM students. The objectives of the study were to describe: (a) characteristics of

students enrolled in the FBM program; (b) student perceptions of the effectiveness of selected instructional methods, media and activities; (c) student perceptions of the level of importance placed upon selected instructional topics, activities and benefits; (d) student views concerning the effectiveness of the FBM program in developing and delivering instruction, activities and benefits of the program; and (e) student perceptions of the overall value of the FBM program.

Methods and Procedures

This evaluation study sought to describe the perceptions of the Minnesota Farm Business Management Education (FBM) Program students regarding selected aspects of the program. The student population consisted of all students of the FBM Program who had completed a minimum of three years of enrollment, and had been students of instructors with three or more years of experience teaching in their current program. Cochran's (1963) formula for determining sample size of was used to determine the sample size for the population of 2,503 students. The sample size was increased from 384 to 671 to allow for comparison of sub-groups of participants (Sudman, 1976). Up to eight students were systematically selected at random by each of the six Regional Deans of Management Education for each of 88 participating instructors who were teaching in 1999.

The *Minnesota Farm Business Management Education Program Assessment Questionnaire—Version S* was developed by the author with input from the State Director and the Regional Deans of Management Education, practicing FBM instructors and from earlier instruments developed by Richardson (1979) and Persons, Wittenberg, Casey and Lehto (1987). The questionnaire consisted of seven sections including: (a) methods of instruction; (b) type of instructional activities and media; (c) FBM education program objectives; (d) improved farm practices, behaviors and attitudes; (e) FBM education program instructional topics, activities, and benefits; (f) program

management; and (g) participant profile. Likert-type questions were developed for the first five sections of the questionnaire. The two final sections consisted primarily of open-ended and forced-response questions. The face and content validity of the questionnaire was established by a panel of experts consisting of the State Director and Regional Deans of Management Education, selected researchers from the Department of Work, Community and Family Education at the University of Minnesota, and FBM instructors. The student questionnaires were field-tested to enhance readability and establish face validity with a group of seven farmers. Suggestions from the farmers for improvement were integrated into the final version of the instrument. Reliability of the questionnaire was established using analysis procedures that yielded Cronbach's coefficient of internal consistency (Minium, 1978). The coefficients of internal consistency for the first four sections of the questionnaire were .60, .90, .88, and .90, respectively. The coefficients for program effectiveness and the importance of selected program topics, activities, and benefits for section five were .97 and .95, respectively.

FBM instructors delivered coded questionnaires to 671 systematically randomly selected student participants during January, February and March of 2000 after receiving instructions for administration from the project director. Instructors and the Regional Deans of Management Education maintained the records of the names of participants. Questionnaires were completed by student participants, sealed, and given to their FBM instructors. Participants completed and returned 569 (84.6%) usable questionnaires. Since the regional deans maintained the list of participants who were unknown to the author, and the percentage of non-respondents was less than 20% (Gall, Borg, & Gall, 1996), the author elected not to conduct further follow-up efforts of non-respondents. Instructors submitted their completed instruments to their Regional Deans of Management Education in the sealed envelopes. Instruments were forwarded to the author. The data were analyzed using Version 10 of SPSS (Norusis, 2000). Descriptive and

correlational statistics were generated from the data. Alpha was established a priori at .05.

Results

Information summarized from the demographic section of the questionnaire revealed similarities among students in age, educational background, type of farm enterprise, and how they operate their farms. Having completed at least three years in the program, the typical FBM student was a 54 year old male with a high school diploma or a post-high school associate's degree, and operated his farm as a sole proprietorship either by himself or with the help of a spouse. More specifically, 88% of the students were between the ages of 30 and 60, with 83% of them being male. Forty-five percent of the students were high school graduates and nearly 51% of the high school graduates completed post-high school degrees. The majority of farm businesses (78.9%) were operated as sole proprietorships with the farms being managed predominantly by the students and their spouses (57.5%), the student (26.5%), or in conjunction with a business partner (6.9%).

Eighty-one and one-half percent of the farmers enrolled in the Minnesota FBM programs who completed annual analyses in 1999 produced yearly sales of over \$100,000. Slightly more than 53% of the farmers generated sales of \$200,000 or more in 1999. Comparatively, 25% (20,000) of all Minnesota farmers had annual sales of \$100,000 or more (Hunst, 2000). The respective annual net farm incomes for all Minnesota farmers for 1996, 1997, 1998, and 1999 were \$26,720, \$12,268, \$18,733, and \$15,522. Respective annual net farm income for students enrolled in the FBM program who completed annual analyses for the same years were \$42,691, \$32,149, \$27,255, and \$48,268.

The data in Table 1 reveal that 69% of the students have been in the program for more than six years. Forty-five percent of students intend to continue in the program for over 10 more years while 36% intend to continue for four to 10 years. The data also reveal that 71.5% of the FBM students

maintained computerized records for their farming operations. An estimated 26% of all Minnesota farmers reportedly used

computers for farm business in 1999 (Farm Computer Usage and Ownership, NASS, 1999).

Table 1
Enrollment Tenure and Methods for Maintaining Farm Business Records (n=569)

Descriptors	<i>f</i>	%
Years of enrollment in the FBM program		
3 – 6 years	168	29.5
> 6 years	380	66.8
Missing Data	21	3.7
Intended additional years of enrollment		
1-3 years	105	18.5
4-6 years	111	19.5
7-10 years	84	14.8
> 10 years	245	43.1
Missing data	24	4.2
Methods used by FBM students for maintaining farm business records		
Computerized	378	66.4
MN farm account book	138	24.3
Accountant	11	1.9
Other	2	.4
Missing Data	40	7.0

The methods of instruction, and instructional approaches, methods, media and aids preferred by the 21st century student were unknown to the Regional Deans and State Director of Management Education prior to the study. The findings in Table 2 indicate that individualized instruction is perceived to be the most

effective instructional method for students. Question-answer sessions and use of a guest speaker and demonstrations were the other highly rated instructional approaches and methods. The students rated classroom instruction with groups of students and panel discussions as the least effective.

Table 2

Ratings and Rankings of the Perceived Effectiveness of Selected Instructional Approaches and Methods, and Instructional Media and Aids in Helping FBM Students Learn to Better Manage Their Business (n=569)

Nature of Instruction and Media	<i>f</i>	%	<i>M</i>	<i>SD</i>	Rank
Instructional Approaches and Methods					
Individualized instruction	539 ¹	94.7 ²	5.44 ³	0.74	1
Question and answer sessions	459	80.7	4.48	1.03	2
Demonstrations	421	74.0	4.46	1.06	3
Guest speakers	442	77.7	4.42	1.10	4
Field trips or tours	359	63.1	4.39	1.17	5
Large seminars with featured speaker	422	74.2	4.20	1.23	6
Case studies	323	56.8	4.14	1.07	7
Classroom instruction with groups of students	415	72.9	4.11	1.12	8
Panel discussions	354	62.2	3.95	1.18	9
Instructional Media and Aids					
Communication with the instructor by telephone	537	94.4	4.93	1.09	1
Monthly newsletter	479	84.2	4.62	1.12	2
Use of quality worksheets & handouts	508	89.3	4.51	.95	3
Farm demonstration plots	396	69.3	4.51	1.12	3
Use of computer-generated presentation	455	80.0	4.36	1.18	5
Sample problems/simulations	426	74.9	4.39	1.07	6
Use of the Internet	322	56.6	4.12	1.31	7
Communication with instructor by e-mail and/or Internet	262	46.0	4.05	1.42	8
Newspaper articles prepared by instructor	434	76.3	4.03	1.20	9
Viewing videos, films, and/or slides	355	62.4	3.85	1.22	10
Multimedia presentations	319	56.1	3.71	1.16	11

Note: ¹ Number and ² percentage of students who experienced the type of instructional approaches, methods, instructional media, or instructional aids. ³ Scale: 6 = Extremely Effective to 1 = Extremely Ineffective.

Among instructional media and aids, communication with the instructor by telephone was the most preferred for assisting students in meeting their individual needs. The findings in Table 2 show that use of a monthly newsletter and quality worksheets and handouts were perceived to be highly effective. Use of videos, films, and/or slides and multimedia presentations were the least effective instructional media. A further review of the findings reveals from 56-95% of the students experienced

the selected instructional approaches, methods, media and aids.

Program objectives guide the programming priorities and curricular efforts of the Minnesota FBM program. Respondents indicated their level of agreement regarding the importance of each objective. As shown in Table 3, the two objectives that were rated the highest were keeping accurate and complete business records and the analysis and interpretation of business records.

Table 3
Student Ratings of the Level of Agreement Regarding the Importance of the Program Objectives of the Minnesota Farm Business Management Education Program (n = 569)

Program Objective	<i>f</i>	%	<i>M</i>	<i>SD</i>	Rank
Keep accurate and complete business records	551 ¹	96.8 ²	5.76 ³	.49	1
Analyze and interpret business records	549	96.5	5.55	.63	2
Understand the functions of management	549	96.5	5.40	.66	3
Improve business organization and efficiency	550	96.7	5.36	.74	4
Establish business and personal goals	551	96.8	5.30	.70	5
Apply economic principles to management of a business	548	96.3	5.18	.79	6
Appreciate effects of decisions on the business	543	95.4	5.14	.81	7
Appreciate the relationship between individual business entity and all factors impacting agriculture	525	92.3	4.88	.98	8
Understand human resource management fundamentals	519	91.2	4.68	.97	9

Note. ¹ Number and ² Percentage of students with an opinion and rating. ³ Scale: 6 = Strongly Agree to 1 = Strongly Disagree.

The findings in Table 4 show that the management practice that students perceived improved the most from their enrollment in the FBM program was the keeping of accurate business records. Involvement in income tax planning, constructing periodic cash flow projections, using farm records for decision making, improved relationships

with lenders and the improved use of technology were other farm practices, behaviors, and attitudes that improved. Items rated as resulting in the least improvement were reading more farm publications, more involvement in the community, and more enjoyment of leisure time.

Table 4
Perceived Amount of Student Improvement in Farm Practices, Behaviors, and Attitudes Due to Enrollment in the FBM Program (n=569)

Farm Practices, Behaviors and Attitudes	<i>f</i>	%	<i>M</i>	<i>SD</i>
Keeping an accurate set of business records	544 ¹	95.6 ²	5.15 ³	0.93
Involved with income tax planning	527	92.6	4.86	1.10
Using farm records as the basis for decision-making	535	94.0	4.75	1.05
Constructing periodic cash flow projections	526	92.4	4.67	1.18
Improved relationship with lenders	518	91.0	4.60	1.17
More satisfied with the farm business	541	95.1	4.39	1.31
Improved or increased use of technology	532	93.5	4.35	1.22
Increased net worth	541	95.5	4.32	1.23
The attitude of their families and selves toward education	524	92.1	4.18	1.31
Using improved marketing methods	512	90.0	3.98	1.13
Greater income for family living	53	93.3	3.68	1.39
Subscribe to and read more farm publications	498	87.5	3.39	1.36
More involved in community as a member and leader	451	79.3	3.27	1.27
Enjoying more leisure time	505	88.8	3.04	1.47

Note. ¹ Number and ² Percentage of students who experienced the farm practice, behavior or attitude. ³ Amount of Improvement: 6=Extreme Improvement to 1= No Improvement.

Students who had experienced 31 instructional topics, activities, and FBM program benefits initially rated the importance of each on a scale from not important (1) to extremely important (6) as displayed in Table 5. Once finished they rated each question on how effective the FBM program was in providing for the stated program benefits or activities for meeting their business, family, or personal goals. The most important outcome desired by the students was the desire for increased earnings or reduced costs. However, the students ranked the program's effectiveness in delivering this benefit 13th highest. The students subsequently rated instruction in keeping accurate farm records (2), interpretation and understanding of farm analysis reports (3), and instruction in the development and use of financial statements

(4) very highly with further acknowledgement that the FBM program was very effective in delivering the stated instructional topics, activities and benefits. The three least important and less effectively delivered topics, benefits, and/or activities were instruction regarding environmental issues; instruction in the legal and tax aspects of foreclosures, bankruptcy and other financial crisis situations; and providing social activities. A Pearson product-moment correlation coefficient of $r(29) = .95, p < .05$ was calculated using the mean importance and effectiveness scores displayed in Table 5. The significant and high (Davis, 1971) correlation coefficient suggests the FBM program was effective in delivering what was important to the students and not effective in what was viewed unimportant.

Table 5
Student Ratings of the Importance of the Farm Business Management Instructional Topics, Activities, and Benefits and the Effectiveness of FBM Instructors and Program in Developing and Addressing the Topics (n=569)

Instructional Topics, Activities and Program Benefits	%	Importance <u>Rating & Rank</u>			Effectiveness <u>Rating & Rank</u>		
		<i>M</i>	<i>SD</i>	Rank	<i>M</i>	<i>SD</i>	Rank
Enrollment leads to increased earnings or reduced losses	95 ₁	5.60 ²	.95	1	4.58 ³	1.09	13
Instruction in keeping accurate farm records	96	5.56	.69	2	5.47	0.69	1
Interpretation and understanding of farm analysis reports	96	5.24	.83	3	5.21	0.84	2
Instruction in the development and use of cash flows, balance sheets, and income statements	96	5.23	.89	4	5.15	0.93	3
Promotes the idea that the farm is a business	95	5.22	.97	5	5.19	0.90	4
Improved management skills	94	4.98	.93	6	4.71	1.02	8
Provides an impartial perspective of the farm business	93	4.91	.99	7	4.95	1.01	5
Instruction in managing crop enterprises	93	4.91	.95	8	4.70	1.02	9
Instruction in developing farm business plans	94	4.88	1.02	9	4.74	1.08	6
Creates feelings and beliefs of greater security in the business decisions made by the farmer	94	4.87	1.02	10	4.73	1.05	7
Instruction in credit use in the farm business	94	4.84	1.05	11	4.60	1.14	11
Farmers are better informed than their non-enrolled cohorts about farming business opportunities	92	4.80	1.02	12	4.50	1.08	17
Instruction in managing livestock enterprises	74	4.77	1.10	13	4.52	1.11	16
Provides settings for client exchange of ideas, skills, and techniques	93	4.77	1.03	14	4.61	1.08	10
Instruction in effectively using government farm programs	92	4.74	1.16	15	4.55	1.18	14
Better knowledge of personal and business capabilities	93	4.74	1.04	16	4.58	1.04	12
Promotes the belief that the farmer can accomplish greater goals	93	4.64	1.13	17	4.53	1.12	15
Instruction in establishing family and business goals	94	4.61	1.04	18	4.37	1.11	19
Instruction in risk management	89	4.61	1.10	19	4.32	1.13	20
Development and effective use of marketing plans	90	4.55	1.19	20	4.23	1.15	21
Instruction in the organization and management of the farm office	87	4.52	1.34	21	4.47	1.30	18
An increase in the use of marketing options	90	4.48	1.26	22	4.13	1.21	23
Instruction in personal expenditures and budgeting	86	4.34	1.25	23	4.13	1.21	24
Communication among and between family members	83	4.23	1.38	24	3.84	1.25	27
Instruction in personnel management	78	4.23	1.30	25	4.18	1.28	22
Instruction in farm transfer and operating agreements	79	4.18	1.20	26	3.91	1.22	26
Instruction in estate planning	77	4.10	1.30	27	3.72	1.28	29

Table Continues

Table 5 Continued

Instructional Topics, Activities and Program Benefits	%	Importance Rating & Rank			Effectiveness Rating & Rank		
		M	SD	Rank	M	SD	Rank
Strategies for coping with mental stress and pressure	78	4.04	1.36	28	3.55	1.30	30
Instruction regarding environmental issues	80	3.90	1.29	29	3.76	1.23	28
Instruction in the legal and tax aspects of foreclosures, bankruptcy, and other financial crisis situations	63	3.83	1.42	30	3.53	1.37	31
Provides social activities within the program and course activities	80	3.68	1.32	31	3.94	1.20	25

Note. ¹ Percentage of students who experienced instructional topic, activity, or benefit. ² Scale: 6 = Extremely Important to 1 = Not Important. ³ Scale: 6 = Extremely Effective to 1 = Extremely Ineffective.

Modern farmers are astute and insightful business people who must receive a good rate of return on their investment of time and money. Increases in net farm income and enrollment recommendations to others were two measures used to assess the opinions of the students regarding the perceived financial value and overall satisfaction with the FBM program. The average annual out-of-pocket investment for the FBM program for a student ranged from

\$600 to \$650. The findings in Table 6 indicate that over 80% of the students reported an average increase in annual net farm income of \$2,000 or more per year, 57.7% an increase of \$4,000 or more per year, and 35.1% an increase of \$6,000 or more per year. Over 25% of the farmers indicated they believed they received an annual increase in net farm income of over \$8,000 per year. The mean gain in annual net farm income was \$4,996.

Table 6
Student Perceptions of the Annual Average Increase in Net Farm Income as a Result of Enrollment in the FBM Program (n=536)

Interval	f	%
\$0 – 2,000	104	19.4
\$2,001 – 4,000	123	22.9
\$4,001 – 6,000	122	22.8
\$6,001 – 8,000	52	9.7
>\$8,000	135	25.2
Mean ¹		\$4,966

Note: ¹ Calculated by taking the midpoint of each interval and a value of \$9,000 as a midpoint for the highest interval midpoint.

An additional measure used to assess participant satisfaction with the program was the nature of their recommendations to neighbors, relatives, and/or friends who may consider enrollment in the program. The data presented in Table 7 suggest the

students were very satisfied with the program. Ninety percent of the farmers indicated they would encourage or strongly encourage other farmers to enroll in the FBM program. Forty-four percent of the students said they would strongly encourage

other farmers to enroll. One of ten students was neither encouraging nor discouraging.

Table 7
Student Recommendations to Neighbors, Relatives, &/or Friends Concerning Enrollment in the FBM Program (n=547)

Recommendations	<i>f</i>	%
1 Strongly Discourage Enrollment	11	2.0
2	10	1.8
3	5	.9
4 Neither Discourage or Encourage Enrollment	29	5.3
5	73	13.3
6	178	32.5
7 Strongly Encourage Enrollment	241	44.1
Mean	6.00	
<i>SD</i>	1.29	

Conclusions and Recommendations

The Minnesota Farm Business Management Education (FBM) program is an adult education program for farmers that combines individualized and small group instruction for teaching students how to maintain and analyze business records for making timely management decisions. Program objectives provide the foundation for a program that involves over 100 instructors who each teach an average of 40 farmers how to make evidence-based decisions that help them experience personal and business goals. The findings of this evaluation study, which addressed a number of the aspects of the FBM program as framed by the Bennett (1975) evaluation framework, provided the foundation for a number of conclusions.

First, students enrolled in the FBM program addressed in this study receive sufficient value from the program to warrant continued enrollment beyond the initial six-year diploma program. For over 20 years, farmers have believed there is real value in staying in the program beyond the initial six-year period (Persons et al., 1987; Richardson 1979). Persons et al. reported that FBM students were enrolled for an

average of 9.1 years. Richardson (1979) found that the participants, FBM instructors, and program administrators in his study believed they added value to their ability to manage their operation from instruction and activities from more than six years of enrollment. Second, there continues to be a strong demand for the program from the current FBM students just as there was from FBM students in the late 1970s (Richardson, 1979) and mid-1980s (Persons et al., 1987). Over 60% of the students intend to participate in the program for seven or more additional years. Third, a larger share of the Minnesota FBM students used computers to keep farm business records than the general population of United States and Minnesota farmers. It is likely due to easier access to and familiarity with computers. The farm business management instructors use laptops for individualized instruction as well as to teach the FBM students how to keep accurate records. Fourth, FBM students agree that keeping accurate farm records; analyzing, interpreting and using records; and establishing business and personal goals; understanding the functions of management; and improving business organization and efficiency are the foremost program objectives that should be met by

the FBM program. Fifth, individualized instruction continues to be perceived by the students to be the most important and effective form of instruction. On-site instructional visits that are individualized in nature provide students with a useful balance of information and instruction for current and upcoming needs. Sixth, the current students indicated that the traditional forms of instructional media and aids are the most effective in helping them learn so that they can meet their business and personal needs. Seventh, FBM students indicate that learning to keep farm records is the practice that has improved the most during their enrollment in the FBM program. This is expected, given the importance of creating quality records for analysis and decision-making purposes. Eighth, instruction relating to record keeping practices, interpretation, and use of analyses and financial statements are very important instructional topics addressed in the FBM program. These topics reflect the core of the instructional program as well as the primary program objectives promoted by the instructors when recruiting and teaching satisfied students. Ninth, the least important FBM program instructional topics, activities or benefits include environmental issues and practices, stress management, and personnel management strategies. Tenth, instructors are highly effective in teaching record keeping skills, the interpretation and use of annual analyses, development and use of financial statements, and treating the farm as a business. Moreover, further analysis reveals they are effective in teaching instructional topics that are viewed to be important by the students. Eleventh, the evidence suggests there may be a direct annual impact of over \$20-22 million for the 4,000-4,350 farmers enrolled in the Minnesota FBM program. The students enrolled in the FBM program indicated they experience an average annual increase in net farm income of \$4,966. FBM students have acclaimed the value of the program for over 20 years. Farmers and lenders in the Persons et al. 1987 study, for example, perceived the annual monetary benefit from participation to be \$3,000 and \$5,000, respectively. Richardson (1979) reported FBM students, instructors, and program

administrators estimated an average increase of \$3,073 to \$4,962, \$4,769, and \$5,400, respectively. And finally, the findings suggest that the FBM students are highly satisfied with the FBM program as evident by their intent to continue enrollment and highly recommend the program to family, friends, and neighbors.

The findings and conclusions provide the basis for several recommendations. First, since students are satisfied with what they learn and gain from the program, and desire to continue their enrollment for additional years beyond the time needed to earn the diploma and advanced marketing certificates, FBM programs should offer other advanced certificate options. Second, since learning how to keep and use quality records and financial statements for making enterprise and whole business decisions are valued by students, resources need to be available to continually upgrade the skills of students and instructors relating to traditional and emerging record keeping and analysis technologies. Third, instructors need to model skillful use of digital-based technologies (e.g., Internet, CD-ROMS, computer-generated multimedia presentations) as well as traditional instructional media and aids. Fourth, given that evidence from this study exists concerning the value of the program, FBM program leaders should inform the public of the value of public program investments and expand marketing and recruiting strategies of the program that focus on the benefits farmers receive from participation. Fifth, though the FBM students agree that the current program objectives are useful, on-going efforts must be made to keep goals and objectives relevant to and focused upon the needs of the intended farm audience. Sixth, program leaders and policy-makers need to maintain an on-going program of inquiry concerning teaching, learning, curriculum and policy issues that can be used to understand and improve the FBM program.

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