STRATEGIC HUMAN RESOURCES MANAGEMENT OF EMPLOYER COOPERATIVE EDUCATION PROGRAMS*

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In order for employer institutions to realize fully the opportunities and benefits of cooperative education, programs need to be effectively planned, internally marketed, and implemented. This article is concerned with effective strategic planning and management of employer cooperative education programs.

Types of Planning

Distinctions can be made among comprehensive planning, strategic planning, and short run operations planning. In comprehensive plan-

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ning, resources are allocated to all sectors of an organization within the context of a long term model that tries to optimize and integrate nearly all input-output relationships. Toward the other extreme is short run operations planning where an organization responds on a daily or even an hourly basis to changing internal processes and external market conditions. Strategic planning and management is the process of continuously adapting in key decision areas to an organization's evolving environment as well as to changes caused by processes internal to the organization.[1]

In a sense, strategic planning is something of a synthesis between the extremes of comprehensive planning and short run operations planning. Strategic planning is similar to comprehensive planning in that it recognizes the need to order and coordinate long term decision-making. However, strategic planning recognizes that markets and internal processes are continuously, and frequently, changing and evolving. Strategic planning recognizes that key decision responses are much more practical than comprehensive and coordinated changes in every aspect of the organization.

Need for Strategic Human Resource Management of Cooperative Education Programs

> Acquiring and developing the right talents for the business as it changes strategy, technology, and products requires more shrewd, wise, long-range planning than any other corporate endeavor . . .the lack of long-range planning in human resources is frequently disastrous. So the ultimate irony is that the personnel function—which deals with the most fundamental and central corporate competitive resource and that has the longest time horizon of any function—is left with no long-range strategy and allowed to react merely to transient pressures and events.[2]

Four key areas for effective strategic human resources management have been identified as selection, appraisal, rewards, and development. *Selection* refers to finding people who are best able to perform required jobs. *Rewards* are those characteristics associated with a job and job performance that help motivate employees: salary, bonuses, benefits, praise, career opportunities, learning opportunities, responsibility, creativity, etc. *Development* is helping employees realize their work potential as well as helping them improve their potential. *Appraisal* refers to the process of measuring and evaluating employee performance

and potential for selection, reward, and development. Strategic human resources planning and management is concerned with planning and managing these areas so that they are consistent with and helpful to realizing both the organization's strategy and employee needs.[3]

Can strategic human resources management of cooperative education programs in these four areas help an organization realize its overall institutional and relevant lower level planning unit strategies? Yes, but in order to explore this question it can be useful to consider the question in relation to prototype strategies.

The business and economic historian, Alfred Dupont Chandler, and the industrial organization economist, Oliver E. Williamson, coming from different but related research traditions, have independently identified five types of prototype strategies: specialized expansion, related diversification, unrelated diversification, vertical integration, and geographic expansion with and across countries. For those unfamiliar with these strategies a few examples may be of interest. Specialized expansion is *The Boston Globe* expanding its share of the Boston area newspaper market. Related diversification is the *Globe* starting or buying a magazine. Unrelated diversification is the *Globe* buying or starting a hotel business. Vertical integration is the *Globe* buying or starting a paper-making factory. Geographic expansion is the *Globe* buying or starting a newspaper in Kansas or England. An institution can adopt a combination of these strategies simultaneously as well as chronologically.[4]

In order to better understand how strategic human resources management of cooperative education programs can help an organization realize its strategy, several case studies are considered: Dayton-Hudson, IBM, AT&T, Delta Airlines, and Rockwell International. These cases are considered with respect to the human resource functions of selection, development, rewards, and appraisal.

Dayton-Hudson

Dayton-Hudson is a retailer. Its strategy in the 1960s and 1970s was to expand geographically through acquisition while maintaining a high quality image and product line. Dayton-Hudson owns and manages Dayton, Hudson, Target, Mervyn, and B. Dalton Bookseller and several others. An important part of Dayton-Hudson's strategy is to maintain a consistent delivery and image of high quality products and service. Cooperative education plays an important role in this strategy. Since Dayton-Hudson acquired several of its retail stores and store chains through acquisition and plans to continue doing so, it is important for

Dayton-Hudson to develop employees more in the Dayton-Hudson approach relative to the many different approaches of the stores DH acquired.

Through cooperative education programs DH is able to develop employees and employee behavior and attitudes consistent with the DH strategy and philosophy. Dayton-Hudson gives its cooperative education students (as well as other employees) written statements and training programs concerning the company's strategic mission and direction, corporate purpose, merchandising philosophy, etc. The written documents are quite specific. For example with respect to fashion and value DH states that

> Fashion is at the heart of our business. Fashion is change—change with direction. Newness and change can be predicted, however, through Trend Merchandising. Our aim is for each company to be the fashion leader within its markets . . .Our companies seek to provide maximum value to customers by acting aggressively as their buying agent . . .we are sensitive to the expanded meaning of the term value: customer time spent locating products or waiting for service, energy costs incurred in a shopping trip, serviceability of durable goods, and the psychic and emotional value of the shopping experience itself.[5]

When cooperative education students are placed in DH's diverse stores, they help carry this message and philosophy. They help provide a unity and continuity across stores with respect to the central corporate strategy. Again, this is particularly important since many of the stores owned and managed by DH were acquired from previous owners and management systems with different philosophies and strategies.

Not only does the cooperative education program stress the development of employees with the DH approach, it is also used to select, for permanent employment and careers, those employees who have best demonstrated performance consistent with the DH strategy. In the appraisal system used to evaluate cooperative education students, specific inquiry and reference is made to students' performance and potential with respect to the DH strategy and philosophy. Students are rewarded with promotions, salary increases, and offers of permanent positions and careers with DH in large part according to how well they learn and perform in a manner consistent with the DH strategy and philosophy.

IBM

An important part of IBM strategy for the 1970s and 1980s is vertical integration. More specifically, IBM is building robots to help build computers. Cooperative education has an important role to play with respect to this strategy. IBM has recruited more mechanical and industrial engineers, in addition to the electrical engineers in its cooperative education programs. In addition to selection, cooperative education at IBM helps students develop robotics skills that cut across electrical, mechanical, and industrial engineering skills that are needed to help IBM realize its strategy. Students are appraised with respect to how well they can combine such skills as well as on many other dimensions. Students are rewarded in significant part according to how well they can apply their learning and skills in the vertical integration robotics strategic area. This is not to suggest that a good electrical engineer that fits other IBM criteria would be rejected because of difficulty integrating electrical and mechanical engineering skills. Instead and more to the point, the cooperative education program can help locate, develop, and select those students who have particular skills, potential, and interests in the robotics area: that is important for IBM's vertical integration strategy.[6]

AT&T.

An important part of AT&T's strategy in the 1970s and 1980s is related diversification into information processing and telecommunications from a more specialized base in telephone services. This represents an important shift in strategy with important human resource and cooperative education implications. Before the adoption of this strategy, AT&T had to worry less about competition and marketing than it does as it tries to compete and market relative to IBM. Consequently, AT&T is stressing a marketing orientation in its cooperative education training programs and trying to select more cooperative education students who demonstrate that they have potential,talents, and interest in marketing issues and approaches.[7]

Delta Airlines

With respect to its physical product, Delta Airlines is essentially the same as its competition. Yet, over the last twenty years, Delta has been the most consistently profitable of United States airlines. The Chairman of Delta, Thomas Beebe, attributes the great success of Delta in large

part to "the Delta family feeling" which translates in behavioral terms to a highly motivated and friendly work force that provides superior service.

Delta emphasizes its "family feeling" by giving high priority to superior service, friendliness, and motivation in all its training programs. Cooperative Education students and other trainees are also interviewed by psychologists in order to help determine whether students are appropriately cooperative, motivated, and interested in furthering Delta's strategy of superior service in a specialized industry as one of the primary approaches toward increasing and maintaining market share and profitability. A psychologist from Delta, Dr. Sidney Janus, explains: "I try to determine their sense of cooperativeness or sense of teamwork; (At Delta) you don't just join a company, you join an objective."[8]

Cooperative education is an important part of this strategy. Cooperative education gives Delta the time to inculcate the "Delta family" concept in its students. It enables Delta to appraise students and determine who are best suited to continue developing their cooperative education skills and potentials as cooperative education students and as permanent employees and members of the "Delta family."

Rockwell International

Rockwell International is one of the 50 largest U.S. industrial corporations. It owns and operates hundreds of related and unrelated businesses. In a corporation with hundreds of different businesses it is normally very difficult for its thousands of employees to relate to an overall corporate strategy of unrelated or related diversification. Largely because of this, RI has been trying to develop strategic human resources management consistent with corporate and divisional strategies. For example, in its largest division, Automotive Operations, RI concluded:

> In order to maximize our ability to handle rapidly changing market, government, and people complexities, we must continue to modify and develop our culture (beliefs, traditions, values, management systems) in a manner which will provide the overall framework to approach the eighties and nineties. The development, implementation and communication of our culture will provide a key ingredient in promulgating an environment characterized by innovation, prudent risk-taking, value congruence, progressive management styles.[9]

To this end RI has implemented what they call a culture audit whereby for various specific issues such as "individual orientation" and "information sharing," the division identified where it was in the mid-1970s, what it had done to make improvements since then, where the division was now, and what future objectives were needed. This audit has become an important part of all RI's training programs including cooperative education. Cooperative education students are presented with a history of where the division has been, what has been done to make improvements, where the division is now, and what future improvements are planned. Sharing this audit at the training level both helps potential long-term employees understand and act toward the improvements identified in the audit and selects those employees best suited for the culture the division is trying to develop. In addition, the sharing of the audit with students is intended to enable them to adjust their behaviors to the division's strategies and, if they become long-term employees, to continue to use the audit as an effective mechanism for helping socialize newer employees.

The above cases illustrate how strategic human resources management of cooperative education programs can help organizations realize their strategies.

Implementing Strategic Human Resources Management of Cooperative Education Programs

Since it appears that at least in some cases strategic human resources management of cooperative education programs is desirable, then a reasonable next step would be to consider how to implement strategic human resources management of cooperative education programs. Implementation involves at least six key steps.

1. The Director of Cooperative Education needs to discover or be informed about what the organization's overall and lower level planning unit strategies are.

In order to adapt and design the cooperative education program to help realize organization strategies, the Director of Cooperative Education needs to know what those strategies are. While this may seem obvious, it is unfortunately not unusual for managers not to know what the organization's strategies are. Sometimes this is because the human resources managers do not themselves understand how they can help realize strategies. Sometimes it is because higher level corporate management does not understand that human resources managers can play a

positive role in strategic management.[10]

2. The needs and tasks of cooperative education programs in relation to organization strategies need to be identified and articulated.

It is not enough to know what an organization's strategies are. Implication in terms of specific needs and requirements for cooperative education programs and students require articulation. This means that there has to be effective dialogue between cooperative education managers and the line and staff managers in the organizations that are being supplied with cooperative education students.[11]

3. Cooperative education strategies for helping institutions realize their strategies need to be developed.

Cooperative education managers need to develop their own strategies for helping the larger institution realize its strategies. Specific selection, development, reward, and appraisal strategies need to be designed, consistent with and helpful in the achievement of the institution's strategies.[12]

4. Cooperative education operations need to be organized to facilitate the implementation of the cooperative education strategies designed to help realize larger organization strategies.

As the literature on relationships between general strategy and organization suggests, how an institution is organized can facilitate or retard the achievement of strategy. The same is true for cooperative education. How a cooperative education department or division organizes itself can influence how well it is able to implement its strategies for delivering cooperative education programs.[13]

5. Cooperative education staff need to be trained to carry out the strategies for facilitating the organization's strategies.

As an organization's strategies evolve, the needs that cooperative education is trying to serve tend also to evolve. It may seem obvious that as training needs evolve and change, the people doing the training will have to retrain themselves, but this is not always the case. Just as investment analysts may not manage their personal finances well, doctors are frequently overweight and smoke, and long range planners are not able to plan their own lives very well, sometimes trainers forget or postpone their own retraining.[14]

6. Reward and evaluation mechanisms for cooperative education personnel need to be adjusted to reflect newer cooperative education strategies.

Human resource and cooperative education managers are not unlike other managers in that they respond to evaluation and reward mechanisms. If a cooperative education strategy changes, but the rewards and evaluation criteria for cooperative education managers and staff do not also change, there is a natural tendency to behave according to the older criteria.[15]

Conclusion

This article considered how and why there is a need for human resources and cooperative education strategic planning. Several cases were considered in which cooperative education programs helped organizations realize their strategies. Different types of strategies were considered in relation to different ways cooperative education programs helped organizations realize their different strategies. Since strategic human resources management of cooperative education programs can help organizations realize their strategies, implementation was also considered. Six steps for implementing strategic human resources management of cooperative education programs were discussed. Effective general strategic planning and management is facilitated by effective human resources strategic management of cooperative education programs. Organizations should consider adopting a strategic human resources management approach to their cooperative education programs.

Notes

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2 = Limited importance
3 = Important
4 = Extremely important

Four demographic questions not asked on the orginal Utah State University survey were added. These questions and their relevance to the study are discussed when examining the null hypotheses.

The reliability of the survey instrument, mailed to approximately 187 faculty members and 190 employers, was established at .791, using the test-retest method. An overall return rate of 70.03 percent was realized.

In constructing this study, the null hypothesis method was chosen as the most efficient means of examining several questions. The four null hypotheses were tested at the .05 level using the Chi Square Test of Independence. The degrees of freedom (df) varies throughout this study, since cells were collapsed in accordance with recognized practice (Siegel, 1956).

Results & Findings

Null Hypothesis One

The first hypothesis dealt with the question, "Do faculty members and employers differ on their ratings of the 30 non-technical employment qualities?" Since the cooperative education method stresses the importance of faculty-employer interaction, it would be helpful to know to what extent faculty and employers are in agreement regarding the importance of these employment qualities. As pointed out above, this is an important question to have answered because it deals with the expectation level each party assumes in the education of co-op students.

The first null reads as follows:

The ratings of non-technical employment qualities are independent of employer or faculty affiliation.

Employers consistently rated the qualities found significant as extremely important (4) while faculty members consistently rated those found significant as of limited importance (2) or important (3). For example; five times as many employers rated "having a positive self-concept"as extremely important than did faculty members. Similarly, twice as many employers as faculty felt "using the telephone in a businesslike manner" was an extremely important non-technical employment quality. Similar discrepancies in ratings were found, with the other qualities found statistically significant.

When individually examined, the characteristics found significant raise some questions that co-op educators should seek to answer. For example, with the virtual plethora of information published in higher education

on the subject of "the self-concept" and its importance to success, why would co-op educators in such large numbers consider this characteristic of no importance or of limited importance? Similarly, given the importance attached to coping with change and flexibility of career options in career placement circles (out of which many co-op educators operate), why are employers rating this characteristic so much differently from co-op educators?

Finally, if one views these characteristics with an eye toward commonality, it is obvious that employers continue to attach importance to employee performance based on motivation, enthusiasm and initiative. Faculty uniformly attached less importance to these characteristics. In addition, the more functional aspects of job performance such as using the telephone effectively and interacting with customers in a constructive way is viewed as more important to employers than faculty members.

Table I shows the qualities that were found to be significant at .05 level (indicating that one's affiliation *does* affect how a faculty member or employer rates these employment qualities).

Table I

Quality	*Affiliation*	*Not Impt./ Limited Impt.*	*Impt.*	*Extremely Impt.*	*DF*	*Chi-Square*
Demonstrate motivation to achieve on the job.	*Employer*	33	61	30		
	Faculty	43	58	11	2	9.610
Cope with change and new procedures on job.	*Employer*	41	59	28		
	Faculty	34	72	11	2	8.877
React constructively to conflict situations with customer/clients or other employees.	*Employer*	10	56	67		
	Faculty	4	71	44	2	8.356
Create a positive first impression when meeting others.	*Employer*	17	68	47		
	Faculty	26	68	25	2	7.953
Use the telephone in a businesslike manner.	*Employer*	32	63	29		
	Faculty	28	75	13	2	7.146
Have a positive self-concept and be self-confident.	*Employer*	57	41	14		
	Faculty	61	36	3	2	6.920
Show enthusiasm for the tasks to be performed.	*Employer*	24	74	34		
	Faculty	33	69	17	2	6.616
Show initiative to perform on the job.	*Employer*	58	48	17		
	Faculty	53	42	11	2	6.525

Null Hypothesis Two

The second hypothesis dealt with the question, "Is there a difference in the ratings of non-technical employment qualities between employers and faculty members who have been working with co-op students and programs 0-2 years, 3-5 years, 6-8 years and 9 years or longer?" In the event that significant differences were discovered in the study, it was reasoned that perhaps the differences in ratings could be traced to the length of time a participant had been working with co-op programs. If that were the case, then there would be implications for training needs to bring all of the participants (in different time spans) into harmony as to their non-technical employment skills level expectation.

The rating of non-technical employment qualities by faculty members and employers is independent of time affiliated with the co-op program.

It is interesting to note that in 26 of the 30 qualities (85%), faculty members and employers were in agreement as to the relative importance. The length of time either group has been affiliated with the co-op program is not a strong overall determining factor in their ratings of 85% of non-technical employment qualities.

However, three of the 30 faculty ratings of non-technical employment qualities were significant at the .05 level, indicating a relationship with the length of time affiliated with the program. Those faculty members who had been with the co-op program 0-2 years generally rated those qualities found significant of "Limited Importance" or "Important," while those faculty affiliated with co-op 3-5 years rated the qualities "Extremely Important." Evidently, the longer faculty members have been involved with co-op, the more important they view supporting the free enterprise system, following instructions and accepting criticism.

Lack of support for the free enterprise system is not a unique situation in higher education. The private sector has frequently taken university educators to task in this area. What is surprising, however, is that in the very field which stresses the integration of work experience and academic theory, one would find this characteristic significant. Equally surprising, if not enlightening, is the observation that the longer a faculty member are involved with co-op, the more importance they attach to free enterprise. Could it be that a new rationale for sustaining co-op over the long haul has been uncovered here?

Following instructions and taking criticism are two characteristics that could be closely linked, even though the first reflects a more authoritarian criterion on the part of an employer than the second. That distinction aside, it is interesting to note that regardless of the length of time a faculty

member has been affiliated with co-op, these two attributes are regarded as important or extremely important. In addition, the longer a faculty member is affiliated, the more important these attributes become. Note in particular the difference in ratings between those affiliated 0-2 years compared to those affiliated 6-8 years.

Table II shows the qualities rated by employers that were found to be significant at the level .05 level (indicating that there is a relationship between the way an employer rates this quality and the amount of time he/she has been affiliated with the program.)

Table II

Quality	*Not Impt.*	*Limited Impt.*	*Impt.*	*Ext. Impt.*	*DF*	*Chi-Square*
Use the telephone in a businesslike manner.						
0-2 years		3	43	16		
3-5 years		5	17	14	6	18.125
6-8 years		1	3	6		
9 + years		0	7	4		

The following qualities rated by faculty were found significant at the .05 level (indicating a relationship between faculty rating and time affiliated with the program).

Quality	**Not Impt.*	*Limited Impt.*	*Impt.*	*Ext. Impt.*	*DF*	*Chi-Square*
Support the concept of the free enterprise system.						
0-2 years	16	21	10	7	9	23.848*
3-5 years	4	11	16	8		
6-8 years	1	5	8	3		
9 + years	3	1	6	7		
Follow instructions which are given.						
0-2 years	0	0	12	45		
3-5 years	0	0	6	33	3	11.583
6-8 years	0	0	1	14		
9 + years	0	0	4	13		
Take criticism when shown what has been done incorrectly.						
0-2 years	0	1	28	27		
3-5 years	0	2	13	23	6	8.379
6-8 years	0	1	7	8		
9 + years	0	2	9	8		

*The "Not Important" cell was collapsed in all values except this one due to the presence of zeros.

Null Hypothesis Three

The third hypothesis dealt with the question, "Is there a difference in the ratings of non-technical employment qualities between faculty members who teach and coordinate in social sciences, sciences, business, and humanities?" Finding a significant difference in the ratings between these groups of faculty members would mean that students in different disciplines may be getting conflicting signals about the relative importance attached to non-technical employment skills.

The ratings of non-technical employment qualities by faculty members is independent of affiliation with the social sciences, sciences, business and humanities. Table III shows the qualities that were found significant at .05 level (indicating a relationship between the way faculty members rated the quality and the area in which they teach).

For almost one-third of the non-technical employment qualities, the discipline area in which the faculty member teaches affects the ratings. Nine of the 30 non-technical employment qualities were found significant at the .05 level. Generally speaking, faculty members in the social sciences rated all those found significant as "Extremely Important," except "Support the Concept of the Free Enterprise System" and "Have a Positive Self-Concept" which were rated of less importance. Business faculty ratings were similar to the social sciences, except "Accept the changing role of men and women," "Coping with change," and "Possessing basic math skills," all of which were considered of lesser importance. The sciences, however, rated very few of the qualities as "Extremely Important." The two exceptions were "Cooperate with supervisor" and "Use time for the benefit of the company." The science faculty considered these "Extremely Important." The humanities faculty was fairly well split in the ratings of the 30 qualities.

Since students often take courses outside of their major field, it is possible that co-op students may receive conflicting evaluations of the relative importance of these non-technical employment qualities. If, for example, a large percentage of science faculty attach less importance to cooperating with fellow workers than do social science faculty, which one is to be believed? If employers are placing a certain importance on these qualities, while faculty vary depending on the area in which they teach, students may not be forming an accurate estimate of employer expectations.

While some may argue that the findings outlined above were fairly predictable, several findings are surprising. For example, more business and science faculty rated the performance of mathematical skills "Im-

portant" than "Extremely important." One would have expected the reverse in these two areas, giving the critical nature of mathematical skills in these two disciplines. Indeed, a cursory glance at the respective curricula of these two areas would find a heavy emphasis on mathematics. In addition, business faculty are fairly split on support for the free enterprise system.

Social scientists lead the way in attaching importance to demonstrating initiative, accepting the changing role of men and women, coping with change and new procedures, and showing enthusiasm for the tasks to be performed. These ratings may signal an invigorating breath of air for the co-op movement nationally and could increase the sensitivity of faculty members in other disciplines to these vitally important attributes.

Table III

Quality	*Not Impt.*	*Limited Impt.*	*Impt.*	*Ext. Impt.*	*DF*	*Chi-Square*
Support the concept of the free enterprise system.						
Social Sciences	8	5	6	8	12	27.693*
Sciences	5	14	17	0		
Business	2	9	9	8		
Humanities	5	3	2	2		
Other	3	4	9	7		
Perform basic mathematical skills.						
Social Sciences		0	10	9	8	18.723
Sciences		4	21	12		
Business		2	15	11		
Humanities		7	3	2		
Other		5	8	10		
Show initiative to perform on the job.						
Social Sciences		1	5	22		
Sciences		2	25	12	4	16.719
Business		1	10	18		
Humanities		1	4	7		
Other		2	7	16		
Accept changing role of men/women in business.						
Social Sciences		5	9	14		
Sciences		5	25	5	8	16.550
Business		7	14	7		
Humanities		2	6	3		
Other		5	7	11		

Table III (cont.)

Quality	*Not Impt.*	*Limited Impt.*	*Impt.*	*Ext. Impt.*	*DF*	*Chi-Square*
Create a positive first impression when meeting others.						
Social Sciences		2	12	13		
Sciences		7	30	7	4	13.329
Business		3	12	16		
Humanities		0	4	7		
Other		4	8	11		
Cope with change and new procedures on the job.						
Social Sciences		2	9	17		
Sciences		3	28	8	4	12.795
Business		2	16	12		
Humanities		3	7	5		
Other		1	9	14		
Show enthusiam for the tasks to be performed.						
Social Sciences		0	10	19		
Sciences		3	24	10	4	11.924
Business		1	12	15		
Humanities		0	5	6		
Other		1	9	14		
Cooperate with fellow workers.						
Social Sciences		0	9	19		
Sciences		3	19	15	4	10.549
Humanities		0	4	7		
Other		0	6	17		
Cooperate with supervisor/manager/ owner.						
Social Sciences		0	9	19		
Sciences		2	15	20	4	9.669
Business		0	6	22		
Humanities		0	1	10		
Other		0	4	19		

*The "Not Important" cell was collapsed in all values except one due to the presence of zeros.

Null Hypothesis Four

The fourth hypothesis dealt with the question, "Is there a difference in the ratings of non-technical employment qualities between faculty members and employers in those institutions which have had a co-op program in existence 0-2 years, 3-5 years, 6-8 years and 9 years or longer?" In other words, are co-op program participants likely to rate the characteristics differently from those whose programs have been in existence a longer period of time? Implications regarding training for newer programs or more established ones may appear if significant differences are found.

The ratings of non-technical employment qualities by faculty members and employers is independent of the length of time the co-op program has been in existence. Table IV shows the qualities rated by faculty members found to be significant at the .05 level (indicating a relationship between the way a faculty member rates the quality and the length of time the program has been in existence.

Employers, it would seem, are less affected by the length of time a program has been in existence than faculty members are. This is evident from the number of qualities found significant in each group. There could be various reasons for this, but undoubtedly a major share of the difference could be attributed to a difference in orientation based on the reality of the job market. Employers, in daily contact with the difficult job of pleasing customers and satisfying wants and needs, see the importance of enthusiasm, cooperation, motivation, flexibility in conflict situations, and tact in a different light from faculty members. Perhaps many faculty have not been recently involved on a long-term basis in the business enterprise marketplace, for time and distance have a way of changing one's perspective on the reality of the non-academic marketplace. Bringing these two groups into closer congruence would seem to be a job particularly well-suited to cooperative education.

In analyzing the ratings by category, a substantial difference is also found in the ratings between the 0-2 year group and the 3-5 year group. The latter group (representing faculty who are at an institution where co-op has been in existence 3-5 years) consistently rates the qualities as more important than does the former group. Evidently, the mighty leaven of time and experience is at work again in co-op programs with longevity. It is interesting to note, however, that in rating the qualities, the 9 + year grouping moves back toward the way the first grouping (0-2 years) rated the importance of these non-technical employment qualities. In fact, the 9 + year grouping consistently has more individuals rating the quality impor-

tant rather than extremely important.

Finally, it is worth noting the spread of ratings in the quality of "support the concept of the free enterprise system." As pointed out earlier, it is quite surprising to find those identified as supportive of co-op and recently involved with supervising students not in closer agreement concerning the importance of the free enterprise system. Is it possible that a key restraining factor in nationwide expansion of co-op education is to be found here? Are business people picking up mixed signals from co-op professionals in this vitally important area? How trusting would we as business people be if we suspected that the university professor, in our establishment to supervise a co-op student, was in basic philosophical disagreement with our reason for existing?

Put in overall perspective, it is apparent that the longer a co-op program is in existence the more difference there is between the ratings of faculty members on the non-technical employment qualities. Implications for co-op programs in various stages of development are first, that training needs are particularly keen in the programs that have been in existence 0-2 years and 9 + years and second, that training should seek to integrate employers and faculty since there is some discrepancy between the ratings of the two groups.

Table IV

Quality	*Not Impt.*	*Limited Impt.*	*Impt.*	*Ext. Impt.*	*DF*	*Chi-Square*
Have positive self-concept and be self-confident.						
0-2 years		5	15	11		
3-5 years		2	25	17	6	14.775
6-8 years		2	16	17		
9 + years		0	17	11		
Support the concept of the free enterprise system.						
0-2 years		10	11	74		
3-5 years		10	9	149	9	14.531
6-8 years		1	10	77		
9 + years		2	8	125		
Show enthusiam for the task to be performed.						
0-2 years		2	17	13		
3-5 years		1	20	23	3	12.954
6-8 years		1	4	19		
9 + years		1	18	9		

Table IV (cont.)

Quality	*Not Impt.*	*Limited Impt.*	*Impt.*	*Ext. Impt.*	*DF*	*Chi-Square*
Demonstrate motivation to achieve on the job.						
0-2 years		3	15	14		
3-5 years		4	14	25	3	12.953
6-8 years		0	3	20		
9 + years		1	16	12		
React constructively to conflict situations with customers/clients or other employees.						
0-2 years		2	17	12		
3-5 years		2	20	20	3	10.406
6-8 years		1	4	19		
9 + years		0	16	12		
Show tact in relationships with others.						
0-2 years		2	21	8		
3-5 years		1	20	22	3	9.987
6-8 years		0	8	16		
9 + years		2	16	12		
Cooperate with fellow workers.						
0-2 years		2	21	8		
3-5 years		1	20	22	3	8.176
6-8 years		0	8	16		
9 + years		2	14	12		
The following quality was found significant at the .05 level in the ratings of employers.						
Cope with change and new procedures on the job.						
0-2		1	23	18		
3-5 years		4	13	19	3	9.658
6-8 years		2	7	4		
9 + years		2	14	10		

Recommendations

Based on the findings of this study, it is recommended that the following actions be taken:

1. Coordinate co-op placement procedures between students and employers to ensure that employers' concerns are matched with students'

abilities. Obviously employers feel strongly about the importance of certain non-technical employment qualities. If students placed with employers do not reflect those concerns, there will be unnecessary strain on both parties.

2. Encourage closer interaction between employers and faculty members in order to minimize areas of disagreement. Only through communication can disagreements be resolved. Faculty/employer workshops addressing these areas could substantially affect these areas.

3. Emphasize to faculty involved with co-op education that coursework should emphasize the non-technical qualities deemed important by employers. In some cases this will require a restructuring of curricula to achieve this objective.

4. Research the areas of disagreement outlined in this study in order to determine *why* the discrepancy exists in the ratings of faculty members and employers.

5. Replicate this study in other geographic areas or nationwide to determine if other regions of the country would rate these qualities similarly.

6. More study should be made of the particular demographics that affected employer and faculty ratings. For example, the length of time a co-op program has been in existence affects faculty ratings of seven of the thirty non-technical employment qualities. In examining the data, the researcher found that the longer a program has been in existence, the more important these seven qualities were considered. This was true for the time spans 0-2 years, 3-5 years, and 6-8 years. However, in the category of 9 year + the relative importance of these qualities shows a decline in faculty ratings.

7. Replicate this study utilizing a different set of demographic characteristics. For example, the demographic characteristic of male/female could be used. Other demographics could include the length of time the faculty member has been in the teaching field, the specific background of the faculty member and employment experience outside of the field of higher education. Demographics of employers, such as number of years in business, educational training, etc., could be related to ratings of non-technical employment qualities.

8. Replicate this study utilizing the ratings of students on non-technical employment qualities and attitudinal characteristics. Since the ratings of faculty members and employers have now been examined, it would be helpful to know how students rate the same qualities and characteristics.

APPENDIX I

Identification No. _____
(for follow-up purposes only)

Non-Technical Employment Qualities
For Cooperative Education Students

I. Faculty members complete numbers 1 through 4. Employers complete numbers 1, 2 and 4. Answer by placing the appropriate letter in the space next to the number.

____1. I am currently a:

a. Faculty member
b. Employer

____2. I have been involved in cooperative education for:

a. 0-2 years
b. 3-5 years
c. 6-8 years
d. 9 years or longer

____3. I teach in:

a. Social Sciences
b. Sciences
c. Business
d. Humanities

____4. Our co-op program has been in existence:

a. 0-2 years
b. 3-5 years
c. 6-8 years
d. 9 years or longer

II. Please rate by circling the level of importance for each item stated below and on the following pages as you review its necessity for students seeking employment through cooperative education programs. All items are non-technical employment qualities.

1. No Importance 2. Limited Importance
3. Important 4. Extremely Important

How important is it for a cooperative education student to:

1.	Arrive for work and appointments on time.	1	2	3	4
2.	Follow instructions which are given.	1	2	3	4
3.	Show enthusiam for the tasks to be performed.	1	2	3	4
4.	Have positive self-concept and be self-confident.	1	2	3	4
5.	Have a personal appearance suitable for the job.	1	2	3	4
6.	Cooperate with fellow workers.	1	2	3	4
7.	Use time to the best advantage of the company.	1	2	3	4
8.	Show tact in relationships with others.	1	2	3	4
9.	Demonstrate motivation to achieve on the job.	1	2	3	4
10.	Perform responsibilities in a thorough manner.	1	2	3	4

(cont.)

1. No Importance 2. Limited Importance
3. Important 4. Extremely Important

11.	Take criticism when shown what has been done incorrectly.	1	2	3	4
12.	Show initiative to perform on the job.	1	2	3	4
13.	Cooperate with supervisor/manager/owner.	1	2	3	4
14.	Display social skills and conduct acceptable to others.	1	2	3	4
15.	Communicate effectively with others.	1	2	3	4
16.	Demonstrate a pleasant personality.	1	2	3	4
17.	Use correct English skills such as good grammar.	1	2	3	4
18.	React constructively to conflict situations with customers/clients or other employees.	1	2	3	4
19.	Use the telephone in a businesslike manner.	1	2	3	4
20.	Create a positive first impression when meeting others.	1	2	3	4
21.	Participate in constructive self-disclosure.	1	2	3	4
22.	Adapt to many varying types of personality styles when communicating.	1	2	3	4
23.	Work in harmony with those whose values and beliefs differ.	1	2	3	4
24.	Accept changing role of men/women in business.	1	2	3	4
25.	Deal with prejudice in business.	1	2	3	4
26.	Maintain good health for the job.	1	2	3	4
27.	Participate as a team member in the organization.	1	2	3	4
28.	Cope with change and new procedures on the job.	1	2	3	4
29.	Perform basic mathematical skills.	1	2	3	4
30.	Support the concept of the free enterprise system.	1	2	3	4

Reference

Seigel, Sidney. *Nonparametric Statistics for the Behavioral Sciences.* New York: McGraw Hill, 1956.