In recognition of the importance of futures information in planning efforts and continued staff development in achieving institutional goals, Lincoln Land Community College (LLCC), in Springfield, Illinois, undertook a project to develop and validate a strategic planning process for human resource development of faculty and staff in a radiologic technology program operated with a local hospital. The first step of the project involved a review of the literature, which emphasized the importance of incorporating a vision of the future in planning and highlighted models of strategic planning that matched organizational needs to the development needs of individuals. A vision statement of the future of radiography was developed from the review and was approved by a committee of experts in the field. In the second step, a human resource development plan was formulated based on the strategies found in the literature. The plan integrated futurism into organizational planning and involved an analysis of the institution's major assumptions, goals, and priorities. The third step involved the validation of the LLCC plan by members of the advisory committee, who found it broad enough to meet the needs of the institution, yet focused enough to be translated into specific action strategies. The final evaluation of the strategy will involve the implementation of the plan over a period of many years, providing continuous internal and external assessment as the program grows. Nineteen references and the program evaluation instrument are appended. (MAB)
HUMAN RESOURCE DEVELOPMENT PLANNING IN A COMMUNITY COLLEGE
PROGRAM BASED ON A VIEW OF THE FUTURE

Steven B. Dowd
Introduction

Hammons (1987, p.7) identified continued development of personnel as one of his "five potholes in the road to Excellence." He estimated that fewer than one hundred colleges have human resource development programs that are "genuinely helpful in achieving institutional goals." This is strange, he noted, in an organization whose primary business is the development of human resources. Similarly, Bryant (1988) identified personnel resources as the most important of all resources in the community college process of planning for change. He also identified a vision of the future as the prime motivator for change and planning for the future, with frameworks and processes one of six other key elements necessary for planned change.

The need for improved human resource planning is evident throughout the public and private sectors. Jack Welch, Chief Executive Officer of General Electric and the 1991 winner of the American Management Association's CEO of the Year Award, feels that the early 80's were a "hardware decade" (USA Today, July 15, 1991). Now we are in what he calls a "software" decade, where "everything is in place" and "soft" issues such as the development of human resources are of primary importance. Hammons (p.8) noted that "it is doubtful if those community colleges unwilling to give maintenance of staff the same priority as to maintenance of equipment (word processors, lawnmowers, vehicles) will be able to complete the journey to Excellence."
Groff (1979) has noted that strategic planning should serve both the institution and the individual. Groff (1983) has defined strategic planning as a process of matching results of an assessment of an external environment as well as a way to audit colleges' internal strengths and weaknesses. By combining an external assessment (such as future roles of practitioners) with the human resource needs of faculty the combined resources of the institution are best utilized. In 1982 Groff stated that institutions and individuals need a way to anticipate the future in terms of a conceptual framework that assesses opportunities and threats in the external environment and internal strengths and weaknesses. The mission of vocational education is to provide a skilled workforce for society (Groff, 1986). This planning involves devising scenarios for preferred alternative futures.

Schein (1978) has developed a model matching organizational needs and issues to the needs of the individual. This occurs through a variety of matching processes which diagnose areas for improvement, leading to the formulation of strategic plans. Groff (1990) has related this matching process to human resource development, in which the diagnostic/developmental level of the individual is matched with the diagnostic/developmental level of the institution. Herrscher (1991) also has noted that frameworks of this type are necessary in today's information society due to the large amount of information that must be processed, and dealt with in a usable manner. Bryant (1988), as previously noted, and Pinchot (1991), have also spoken of the need for frameworks in futures planning.
Toffler (1980) stated that all education springs from some image of the future. Imagination and creativity are of the essence in planning for the alternative future. To plan or study the future requires forecasting what can be (possible futures); what is likely to be (probable futures); and what should be (preferable futures). Thus a human resource plan that 1). meets institutional and personal/professional goals; and 2). is based on a vision of the future, has a good probability of meeting the needs of the college and faculty member (internal environment) as well as societal needs (external environment).

Purpose of the Study

The purpose of this investigation was to develop and validate strategic planning for human resource development of the faculty and staff associated with the program in radiologic technology sponsored by Lincoln Land Community College and St. John's Hospital. Groff (1982) has noted that futurism can be integrated into strategic planning of an institution. This planning process integrated a view of the radiographer of the future into the current human resource plan of the program.

The radiography program sponsored by Lincoln Land Community College, a comprehensive community college in Springfield, Illinois, is offered in conjunction with St. John's Hospital, an 800-bed teaching hospital also located in Springfield. It is a slightly unusual program in that it is offered in co-sponsorship with a hospital, contracting for various hospital resources, including personnel. However, as the primary sponsor, Lincoln Land has responsibility for human
resource development of faculty and staff (eg., hospital radiographers) pertinent to the program. This is evaluated by the Joint Review Committee on Education in Radiologic Technology (JRC-ERT), the accrediting body for programs in radiography. A program Master Plan must be in place, which contains the goals, objectives, curriculum, and evaluation strategies for the program. Thus, there is a need to develop a human resource plan that is broad and holistic that meets the needs of the institutions and community. It also must be, however, described in sufficient detail to allow for development of individualized plans, can be evaluated and makes the best use of the limited resources available.

Such a plan must meet the needs of full-time, part-time, and even "no-time" (individuals that are associated with the program in an official, yet unpaid capacity such as clinical instructors and evaluators) personnel. It must also be descriptive rather than prescriptive. In allied health, Conine (1989) has noted that development of faculty should adopt a preventive rather than remediative model. That is, analysis and planning for the future are superior to remediating perceived shortcomings.

Methods

Lincoln Land has developed a similar matching strategy for its professional development programs as presented by Schein (1978) and Groff (1990) in a previous section. All professional development must meet stated goals and program/instructional needs (Lincoln Land Professional Development Program Handbook,
1990). The process involves five steps, and includes the use of a committee and dean to determine the applicability of professional development to institutional goals.

Groff's (1982; 1989) view of planning for the future by forecasting possible and probable futures (the future radiographer) in relation to the preferable future (an HRD plan designed to meet this challenge) was the conceptual basis for the specific human resource plan developed by the radiography program. The steps in the process were:

1. A review of the related literature, and the development of a "Vision of the Future Radiographer" from that review of literature;
2. Validation of this vision of the future by a formative committee, a selected panel of experts in the field;
3. The development of a human resource development plan based on this vision; and
4. The validation of the plan by a small sub-group (three members) of the program advisory committee.

Results

Vision of the Future Radiographer

Step one of the process consisted of a review of the literature in five areas. The first four were used to come to a vision of the future radiographer: 1). a general vision of the future (eg., futurists such as Toffler); 2). a vision of the future in health care based on articles appearing in professional journals and other sources; 3). a review of topics (articles) appearing in the radiologic technology literature (all articles
of the last five years from Radiologic Technology, Administrative Radiology, Radiology Management, and a variety of other sources such as meetings of the Association of Educators in the Radiologic Sciences and professional newsweeklies for a total of over 850 articles); and 4). a vision of the future of education.

Topics explored in the literature included technology (eg., MRI scanners) and health care, including new technologies; the added need to provide humanistic care in a "high-tech" environment; the manpower shortage currently found in many health care fields; information technology; the increased age of the student population; and the changes seen in the patient population. No article could be found that had previously attempted to synthesize this type of information.

The use of futures information in planning, especially human resource development planning as proposed by Dr. Warren H. Groff, a consultant in vocational-technical education and strategic planning from Memphis, TN, was used to develop the plan. This was the fifth area reviewed in the literature.

Human Resource Plan

Step two of the process, the development of the human resource plan, was based on Groff's method of integrating futurism into human resource planning. This involves the development of 1). major assumptions; 2). major goals; and 3). priorities. Though Groff identified the four highest priorities in an annual plan, there is no attempt here to limit the plan to four priorities as it is a multi-year, open-ended
plan. Also, a final section describing the use of the plan to increase institutional effectiveness was included.

Groff's definition of assumption is a "proposition describing future conditions, some of which the institution has little control over." He feels that specifying assumptions "helps to clarify the fuzzy images of alternative scenarios of the future and helps to sharpen the focus of goals and objectives." Thus, the methodology used in the development of this plan uses assumptions as diagnosis. These assumptions lead to major goals common to the institution and individual, allowing a program or institution to prioritize those goals in the form of a long or short term plan.

The following is the human resource plan developed based on Groff's methods and the review of the literature.

**Major Assumptions**

1. Computer skills related to imaging and information systems will continue to take increasing importance.

2. The patient population will continue to shift toward the very old, very young, and very frail/sick.

3. The manpower shortage will continue.

4. Multicompetency will be a major selling point for graduates.

5. Radiographers will be expected to be skilled in the application of technology.

6. "Soft," "caring," or "customer satisfaction" issues will increase in importance.

7. Radiography students will be female, predominantly white, and older.
Major Goals

1. Vitalize the computer literacy portion of the curriculum.
2. Ensure that the curriculum focuses on basic skills/technology application.
3. Revise curriculum to focus on "newer" aspects of patient population.
4. Institute multicompetency options in curriculum.
5. Review program to ensure that needs of adult learners are being met.

Human Resource Priorities

1. Train faculty toward multicompetency.
2. Ensure that computer skills of all faculty meet the needs of imaging and information systems. Professional development in the accreditation category of "Imaging" should fit in this category, as well as priority #4.
3. Ensure faculty sensitivity to adult student needs (Counseling course mandated in previous human resource plan will fulfill this requirement).
4. Ensure that faculty understand and implement basic skills/competency based education philosophy (Accreditation category of "Evaluation" and "Instruction").
5. Develop faculty skills toward meeting needs of "new" patient population.
6. Train clinical staff in program policy on a regular basis (three times per year).
Evaluation/Validation of the Plan

The plan was validated by members of the advisory committee using a Likert-type instrument (Table I). This gave good use to a committee that is sometimes seen as not really performing useful work for the program (a common critique of advisory committees; see Boyle (1981) for a good discussion of the positive and negative aspects of advisory committees). These local experts found the plan to possess valid assumptions, goals and priorities. It was also felt by these experts that the plan was broad enough to meet the needs of the faculty, institution, and community, yet also could be translated into specific action strategies that could be evaluated (although this was also perceived as the weakest section of the plan). Holistically, the plan was considered by this panel of experts to represent a valid human resource plan for moving the program into the 21st century.

The final evaluation of the plan will involve the implementation of the plan over a period of many years. This continuous evaluation, based on internal and external assessment, will ensure that the plan remains a holistic human resource plan for moving the program into the 21st century. Hammons (1987) noted that the lack of evaluation of planning was another weakness of community colleges. He felt (p.6) that performance appraisal in the community college was a "disaster area."

Discussion/Conclusion

of the future (Toffler, 1980), and this study attempted to come to a view of this future in order to bring about purposeful change. The review of the literature showed tremendous, perhaps even violent change on the horizon for the country, healthcare, education, and the relatively small discipline of radiologic technology. Such change will be best managed by institutions able to analyze trends and look to the future with confidence in their abilities to meet the challenge of change.

Groff's (1982, 1989) methods of human resource planning and planning for the future by forecasting possible and probable futures in relation to the preferable future has proven to be of value in a preliminary manner. Based on the opinions of knowledgeable judges, the vision and plan were valid.

The ability of the plan to translate into action strategies was seen as the weakest aspect of the plan. It was expected, due to the broad nature of the plan, that this would be perceived as a weakness. All evaluators agreed that the plan had a broad basis and was holistic in nature, with valid assumptions and goals. The long-term follow-up of staff development will indicate if this really is a weakness.

Human resources, as Norris (1989) and Bryant (1988) noted, are the most important resource of a college. Human resources are the business of a community college, and they should be expert in all forms of human resource development. It is imperative that human resources not be seen as "complete" or in need of remediation in the community college.
For example, it would have been difficult for a faculty member to request additional training in the area of ultrasonography, which requires additional training. However, with multicompetency identified as a means of increasing the employability of graduates, if the program can offer additional training in this area through a trained faculty member, then the cost to the college may be worthwhile. Also, the identification of the manpower shortage, validated by local expert opinion, may encourage the program to increase student capacity. Such synergism, noted as necessary by Parnell (1990), has been brought about by matching organizational development with human resource development (Groff, 1990).

This information will also be made available to students and the community, another synergistic benefit of the plan. Current students will learn from this: 1). their future roles as radiographers, and 2). how the program is preparing them for this role. Prospective students and the community will be informed of the forward-looking nature of the program through the program brochure.

The implications of this study to the administration and faculty are clear - instead of engaging in enforced, unplanned, reactive "planning" (or as Conine (1989) would describe it, remediative planning), the opportunity now exists to use a vision of the future to plan in advance. Proactive planning makes the best use of the limited resources - human and fiscal - available to an institution.
References


Table 1

Validation Instrument

Please evaluate the "Integrated Human Resource Plan" based on the following criteria. Circle a "5" if you strongly agree, a "4" if you agree, a "3" if you are neutral, a "2" if you disagree, and a "1" if you strongly disagree.

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<th>SA</th>
<th>A</th>
<th>N</th>
<th>D</th>
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<tbody>
<tr>
<td>1. The major assumptions set forth in the plan are valid.</td>
<td>5</td>
<td>4</td>
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<td>2. The major goals set forth are valid, and based on the assumptions.</td>
<td>5</td>
<td>4</td>
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<td>3. The human resource priorities set forth in the plan are valid, and based on the goals.</td>
<td>5</td>
<td>4</td>
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<td>4. The human resource priorities can be translated into specific action strategies.</td>
<td>5</td>
<td>4</td>
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<tr>
<td>5. The plan is broad enough to meet the goals of the institution and individuals, as well as accreditation mandates.</td>
<td>5</td>
<td>4</td>
<td>3</td>
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<td>6. The plan contains a viable evaluation strategy.</td>
<td>5</td>
<td>4</td>
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<td>7. Holistically, the document represents a valid human resource plan for moving the program into the 21st century.</td>
<td>5</td>
<td>4</td>
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8. I recommend the following changes to the plan:

9. I would add or delete the following: