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ABSTRACT

The international vocational education research collaboration between the University of Jyvaskyla (UJ) and Virginia Polytechnic Institute and State University (VPISU), which began in 1993, was studied. Information for the case study was gathered from questionnaire and interview data from linkage participants from VPISU, seven UJ researchers, and four administrators. When asked which cultural collaboration competencies were most important, the Finnish respondents emphasized professional expertise and language skills, whereas the U.S. researchers emphasized people-oriented skills. Several major differences between the Finnish and U.S. researchers' working styles were observed; however, all of the respondents stated that they would recommend similar collaborations to others as ways of making international contacts, providing new theoretical perspectives, developing language perspectives, empowering people, and growing professionally. When asked about the extent to which it has served as a catalyst for international communication and research collaboration, the respondents agreed that the highest levels of impact were in the areas of practice change and end results. Recommendations regarding developing/improving international research linkages included the following: assign one person at each institution to coordinate the linkage; assess the linkage regularly; and identify the financial and human resource costs of establishing linkages in advance. (Contains 19 references.) (MN)

Creating an International Vocational Education Research Linkage: A Case Study in Communication and Collaboration[1]

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CREATING AN INTERNATIONAL VOCATIONAL EDUCATION RESEARCH LINKAGE: A CASE STUDY IN COMMUNICATION AND COLLABORATION

Johanna Lasonen and Curtis R. Finch

ABSTRACT

Higher educational policy and the implications of policy decisions has focused on promoting internationalisation of study and research programmes in the United States and Finland. International collaboration and contacts among universities are not new, but there are unique ways to conduct these linkage programmes. A case of an international research collaboration linkage between the University of Jyväskylä and Virginia Polytechnic Institute and State University is described. The purpose of this international collaborative linkage programme has been to encourage the process of a genuine partnership, to build mutual trust and flexible procedures to solve joint problems, and to provide professional development opportunities among the two universities' vocational education researchers. The case study research revealed that a strongly decentralized organisation of internationalisation was beneficial in terms of efficiency, involvement, and commitment generation within the university organisation. The linkage programme had impact at both institutional and individual levels.

OVERVIEW

Vocational education research has traditionally tended to insular; focusing on local, state, and national issues and problems. However, recent developments such as establishment of the European Union and the North American Free Trade Agreement have reinforced the long held notion that vocational education research involvement must expand beyond individual country boundaries. Other developments support the need for vocational education research to become more internationalized. Of note are the close ties that vocational education has with the global marketplace. The expansion of multinational businesses and markets has caused companies to seek employees who can function successfully in international cultures and contexts. This demand for new types of workers, in turn, creates a need for research on the initial preparation

and continuing development of persons who can demonstrate multicultural skills in the workplace (Finch, 1993). Research is also needed to determine ways teachers who prepare students for employment can provide them with the best possible set of internationally-based learning experiences (Lasonen & Rousi, 1994).

One means by which vocational education research may become more internationalized is through the establishment of international linkages. Finch and Crunkilton (1991) have indicated that many benefits may accrue through international linkages. Benefits include expanding institutions' international horizons, enriching faculty, and establishing international learning environments. This presentation builds on the notion of international linking, by presenting a case study of an international vocational education research linkage that was established between a university in Finland and a university in the United States.

The purpose of the study was to determine the extent to which this long-term linkage has been successful. More specifically, we sought answers to the following questions: (a) What perceptions do participants have about cultural collaboration competencies and their development? (b) What impact has the linkage program had on participants? (c) To what extent has the linkage program served as a catalyst for international communication and research collaboration? First, some thoughts are presented about how international linkages are situated within countries' cultures. Next, the process used to establish the linkage is described. Third, the linkage evaluation process and results are detailed. And finally, what has been learned from this linkage experience is offered.

INTERNATIONALIZING EDUCATION IN FINLAND AND THE UNITED STATES

Since the linkage discussed in this paper has the potential to connect two countries and cultures as well as two different institutions, it may be useful to describe the emphasis that Finland and the United States each place on internationalizing education. Brief comments related to involvement in this area are provided below.

Education for international understanding has been an important part of ethical education in the official curricula since the Second World War in Finland. General educational aims consist of education for international understanding, respect for human rights, peace, acceptance of diversity, positive attitudes towards foreign languages and their speakers,

appreciation of language as mediator of culture, and international collaboration. Collaboration refers to responsibility, trust, flexibility, ability to compromise, and willingness to use a foreign language in communication (Porter & Samovar, 1988). International communication refers to interaction and communication between members of different nations and governments with different languages and cultural backgrounds. The agenda of the University of Jyväskylä in 1995-1998 emphasizes creating and implementing students' international exchange programs, establishing research linkage programs among European and other countries, and promoting the role of the University in internationalizing the County of Central Finland.

Although many people in the United States describe the great need to internationalize education, several factors have contributed to the lack of action in this area. First, the decentralization of control over public K-12 education in the United States has, in some respects, created 50 different state education systems that, depending on the particular issue, may or may not relate to one another. This situation, coupled with great emphasis on local control over public education, make it virtually impossible to create and maintain a national focus on internationalizing education. Second, localities tend to see local education needs and concerns as very high priority areas; often of a much higher priority than internationalizing education. And third, curricular emphasis continues to be placed on preparation for insular work life in the United States as contrasted with preparation to live and work in a global community with a global marketplace and economy (Bikson & Law, 1994). One of the few exceptions to this situation may be found at certain universities where emphasis on internationalization has become a very high priority. At these universities, students are actively recruited from other countries, curriculum content includes a broad range of international foci, and opportunities are available for students to experience living and learning in different countries and cultures. Examples of some internationalization efforts that are underway at more progressive universities include operating an international center to meet the needs of all students and faculty, providing students with a wide range of language study and study abroad opportunities, and maintaining active linkages with universities in other countries.

INTERNATIONAL LINKAGES AND CULTURES

What are linkages? In a basic sense, a linkage is a connection or bond. However, as applied to education in general and higher education in particular, a linkage may be viewed as a formal association between two or more institutions for the mutual benefit of linkage members. Typically, a linkage is initiated based on some mutual concern or interest (Finch & Crunkilton, 1991). In the case of international linkages, this concern or interest might include international dialogue, information sharing, and other forms of collaboration. The linking institutions may have different reasons for collaborating. However, this does not appear to be a problem as each institution obtains what it wants from the linkage.

In order for international linkages to be successful, they must align with and function in harmony with countries' cultures. This symbiotic relationship can be both a potential opportunity and a potential problem. In affect, successful international linkages are conduits for the flow of country cultures. Linkages can assist people to develop more positive feelings about cultural differences and help them build skills that contribute to the acceptance of these differences.

According to Pedersen and Pedersen (1985), culture is within every person and it combines individual features with collective variables. Culture broadly defined includes (a) social system variables consisting of demographic factors (age, gender, place of residence, and others), status factors (social, economic, educational, and others); (b) affiliation factors (formal and informal); and (c) ethnographic categories such as nationality, ethnicity, language, and religion. Culture is described as an interaction of personal and cultural variables that are constantly changing. Pedersen and Pedersen describe their Cultural Grid as a model that matches social system variables with patterns of behaviour, expectation, and value in a personal-cultural orientation to each event (1985, 67). Culture is so dynamic that for each individual it changes from one situation to another. During periods of international collaboration, the ability to identify individuals' personal-cultural orientations in particular situations can be developed through assessments of various behaviours and their meanings. This is where the Cultural Grid has been found to be useful.

Singer (1987) indicated the collective nature of the culture. He stated that each person belongs to many groups at the same time and each of these groups has a different identity. The person adopts to their identity something from each group. As a result, each person represents a unique culture. Additionally, every culture has its own language or code to communicate.

Because cultures are constantly changing, people's perceptions of the world around them are also changing. Language is the manifestation of the perceptions, attitudes, values and beliefs that the group holds. According to Oksaar (1988), language is, on one hand, culture-specific and a part of the culture, and, on the other hand, the means of observation and description of culture. Language has two functions: it is a means of communication, and it is a factor that unites a group and separates it from other groups.

Attitudes are judgments of new stimuli that might be right or wrong, good or bad, beautiful or ugly. The groups into which persons have been socialized teach them their attitudes toward those stimuli (Singer, 1988). A value refers to a desired event or situation. Values can belong to two categories: institutional values that concern "desirable modes of conduct" and terminal values, that concern "desirable end-states of existence". Singer (1988) determined perceptions as processes "by which an individual selects, evaluates, and organizes stimuli from the external environment" (p.9). A belief system is the totality of expectancies, attitudes, values, perceptions and identities. Based on personal beliefs, persons at certain times accept as true the worlds they live in. Learned perceptions include verbal and nonverbal codes, attitudes, values, belief systems and accepted and expected codes of behaviours. When taught by and learned from the groups with which persons identify, this is what constitutes culture.

International research collaboration settings include direct interaction with colleagues whose culture, language and values are different. The research area name, for instance vocational education, is called the same in both countries but the content of the area might be completely different. Persons who act and think in diversified ways are going to learn to understand each other. Achieving coordination between counterparts is necessary in order to complete tasks together as collaborative efforts. Coordination is gained at a minimum level when counterparts consider their mutual communication styles and working habits relevant and logical to work together. Mutual commitment on becoming familiar with and adopting to the contexts of cooperation contributes to gain coordination (Cronen & Shuter, 1983). Meanings, with which persons state arguments for their choices to work, are indicated by contextual levels as follows:

1. Context: the verbal and nonverbal behaviour available to senses.
2. Speech acts: the relational level of meaning.
3. Episodes: patterns of reciprocal acts perceived as meaningful sequences.
4. Relationship: the nature of social bonds between persons.

5. Life-scripting: the concept of self in action.
6. Cultural pattern: the essential ways of knowing, acting and working that define a larger collectivity (Cronen & Shuter, 1983, p. 100).

Perceptions of cultural competencies are the ways in which a person experiences the international world and behaves toward it. The 'international world' includes symbols, things, people, groups of people, ideas, events, ideologies, and working styles. The international world is experienced according to individual ways to perceive it.

Attitudes and stereotypes create expectations that often lead persons to misinterpret the messages they receive from people who are different. This can lead people who are different to misinterpret the messages they receive. The expectations regarding how people from other cultures and ethnic groups will behave are based on how these messages are categorized (Gudykunst, 1991). The use of social categories is not limited to communication with people from different cultures and ethnic groups. People from one's own culture or ethnic group are also categorized, but the categories are different. By developing cross-cultural awareness, individuals may become conscious of their categorization patterns.

As a result of committed cross-cultural communication and collaboration a person may develop a multicultural identity. A synthesis of the personal and social system variables described by the Cultural Grid contributes to a framework for multicultural identity (Pedersen and Pedersen, 1985). The Cultural Grid (see Figure 1) integrates the cognitive variables of behaviour, expectations, and value with the social system variables that have shaped an individual's cultural identity. There are at least two essential aspects of the multicultural identity related to contexts: (a) integrating one's own multicultural identity with the identity of others and (b) managing culturally learned behaviours and expectations. The Cultural Grid may need further development before it will be able to describe the process of developing multicultural identity.

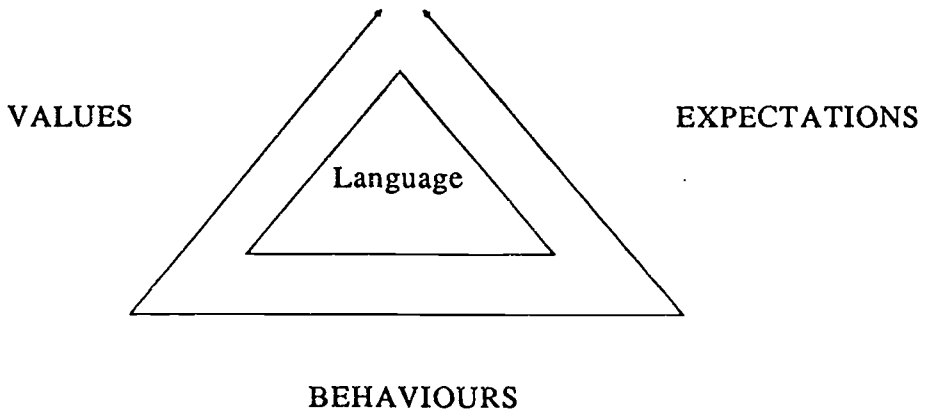

Figure 1. Cultural Grid in International Collaboration

CULTURAL COLLABORATION COMPETENCE

Cultural collaboration competence consists of the skills that help persons to cope with and work effectively in international circumstances. Cultural competencies consist of professional expertise, adaptation, intercultural interaction, and communication. According to Kealy (1990) the following communication skills predict successful adjustment to another culture: empathy, respect, role behaviour, openness, tolerance of ambiguity, non-judgmentalness, and interaction management. For example, learning other than the Finnish language mother-tongue is a dramatic way for Finnish counterparts to communicate with foreigners. Research on vocational education does not exist without writing. This is perhaps one of the most important outcomes of an international research collaboration. The outcomes of writing are related to national schooling systems and cultural and educational goals. For Finns, writing in Finnish, English, German, and Swedish requires persons to learn four different academic discourses and cultures. Yli-Renko (1993) indicated that the theoretical concept of communicative competence consists of four areas of knowledge and skills: grammatical competence, sociolinguistic competence, discourse competence and strategic competence.

ESTABLISHING THE LINKAGE

It is easy to discuss international collaboration, but establishing a formal linkage between universities in two different countries requires much more than talk. Linking means that both institutions must make major time and resource commitments, not only to establish a successful linkage but to maintain it. In order to describe how international linkages may be established, an example of a linkage between the Department of Research on Vocational Education located in the Institute for Educational Research at the University of Jyväskylä (UJ) and the Division of Vocational and Technical Education, College of Education, the Virginia Polytechnic Institute and State University (VPI&SU) is presented.

The idea of establishing a linkage between the two institutions began to emerge during Johanna Lasonen's extended stay at VPI&SU while she completed a doctoral degree in Vocational and Technical Education. During this time period, she and Curtis Finch (her doctoral co-advisor) discussed on several occasions the benefits of international linkages. These general discussions and a mutual interest in international collaboration did not result in movement beyond general discussion until Lasonen returned to Finland and began employment at UJ's Institute for Educational Research. Fortunately, Finch had been previously involved in establishing and/or operating international linkages between VPI&SU and institutions in Chile, England, Venezuela, and the Dominican Republic. Based on his work in this area he and John Crunkilton, a colleague at VIP&SU, had established a framework for approaching the linkage process in a more systematic fashion (Finch and Crunkilton, 1991). This framework organizes the linkage development process into five components:

1. Identifying basic linkage considerations.
2. Examining linkage options,
3. Selecting a partner,
4. Establishing a formal linkage agreement, and
5. Maintaining the linkage (Finch and Crunkilton, 1991, 66).

Initial considerations with the UJ/VPI&SU linkage centred on potential institutional benefits and obligations that might be incurred. These items did not surface during early discussions but became significant topics of conversation when Lasonen and Finch shared information about the potential linkage with colleagues and administrators at their respective institutions. Representative of the questions raised at this point in the linkage process included:

What will the linkage cost our institution in the long term? Which people from our institution will be involved in the linkage? What will our institution gain from the linkage? These and other questions were discussed and documented for future consideration.

Next, various linkage options were considered. Typically, this involves giving consideration to country and institution selection with emphasis on potential compatibility. Since a linkage between UJ and VPI&SU was actually being considered at the time, there was no felt need to examine options in relation to other universities in other countries. Essentially, the task was made easier since UJ could view VPI&SU in relation to its needs and VPI&SU could do likewise. Additionally, the Vocational Teacher Education College of Jyväskylä could be considered for inclusion in the linkage program.

Selecting a partner was also made easier since Lasonen and Finch had a reasonable knowledge of each other's institution. However, since VPI&SU officials wanted to gather first hand information about UJ, a fact finding visit was certainly in order. This visit occurred during the Fall of 1991 when Finch and Nevin Frantz (who was then the Vocational and Technical Education Division Director) were invited to Finland to make presentations at a national conference and at UJ. Based on information gathered during this visit, it was decided to move ahead with the preparation of a draft linkage agreement and have officials at each institution provide their reactions.

With input from both institutions, a draft agreement was prepared. Linkage agreement content paralleled the areas suggested by Finch and Crunkilton (1989) which included (a) specification of linkage activities to be completed; (b) institutions' responsibilities for resources, facilities, health care, and participant housing and transportation; (c) provision for periodic mutual review and evaluation of activities established under the agreement, and (d) opportunities for consideration of additional agreements and mutual collaboration. This arrangement was chosen because it would enable the two institutions to move forward rapidly with implementing the agreement and stated activities but keep the linkage agreement open to possible amendments at a later date. In other words, it was felt the agreement must be sufficiently specific to set a framework for linking but also sufficiently flexible to add new joint activities as needed. A formal linkage between the UJ Institute for Education Research and the VPI&SU College of Education was established during the spring of 1992.

During the linkage's first two years of operation, UJ researchers were fortunate enough to secure resources that supported bringing persons from VPI&SU to work at the Institute for

extended periods of time. By the time this evaluation began, four VPI&SU vocational and technical education faculty members and two doctoral students had each spent at least five to six weeks at the institute. Unfortunately, due to an extended fiscal crisis for higher education in Virginia, and more specifically at VPI&SU, no money was available during this time in support of UJ researcher visits to the United States.

THE LINKAGE EVALUATION

Evaluation Model and Method

Evaluation Model

The identification of a model or framework flexible enough to encompass our evaluation turned out to be a difficult task. After much searching and discussion, it was agreed that the impact evaluation model devised by Bennett (1979) would best suit our needs. Bennett's model has been used since 1980 to evaluate the impact of hundreds of extension programs in a number of different states and in a variety of settings. According to the impact evaluation model, a program is viewed in relation to seven levels of objectives and evidence: (1) inputs, (2) activities, (3) people involvement, (4) reactions, (5) change of knowledge, attitudes, skills, and/or aspirations (KASA), (6) practice change, and (7) end results. Each level varies in terms of both the extent to which evidence of program impact may be provided and the resources needed to obtain that evidence. The levels of evidence selected for a program may vary depending on evaluation needs and available resources (Bennett,1979). In order to conserve evaluation time, a reflective approach that may be used to gather information from clients has been detailed (Bennett, 1982). For our particular evaluation, we decided to focus on five levels of impact people involvement, reactions, KASA change, practice change, and end results.

Method

The case study method was an integral part of the program evaluation process. Our decision to use the case study method was based on several factors. First, the program we planned to evaluate was one-of-a-kind. In other words, it would be impossible to evaluate a number of linkage programs since only one program with these characteristics exists. Second, the case study method has had a rich history of success in applied research and evaluation (see for example: Stufflebeam & Webster, 1980; Syrjälä & Numminen, 1988; Walker, 1982; Yin,

1983). It is a particularly powerful approach in situations where depth and richness of evaluation information are needed. And third, the case study method is quite compatible with the impact evaluation model. In fact, the impact evaluation model was developed so that programs could be evaluated on an individual, stand-alone basis.

The information gathering part of the evaluation included face-to-face and questionnaire interviews with the most active linkage participants. In preparation for these interviews, an interview protocol was developed that included questions focusing on the various levels of objectives and evidence. For example, in the area of participant reactions (impact level 4), persons were asked to state three things they liked best about their experience with the linkage as well as three things they felt should be changed or improved. Additionally, polytechnic and teacher training college faculty members in Jyväskylä area who attended presentations and/or workshops conducted by persons visiting from the United States and thus may have received value from the linkage, were asked to complete a brief questionnaire. The questionnaire focused on determining what impact the linkage had on persons outside the two linking institutions.

Face-to-face and questionnaire interviews were conducted during the Spring and early Summer of 1994 with five linkage participants from VPI&SU, seven UJ researchers, and four administrators (including two administrators at the UJ Institute for Educational Research and two deans of teacher training colleges located in Jyväskylä). Additionally, questionnaire were gathered from the polytechnic and teachers college faculty members.

Evaluation Results

1. What perceptions do participants have about cultural collaboration competencies and their development?

Based on an analysis of participants' responses, the most important interpersonal skills related to international collaboration included

- people-oriented competencies and tolerance of cultural diversity (open mind, respect, positive feelings toward people, empathy, acceptance of differences and diversity, appreciation of other cultures, understanding other's views and values, openness, friendliness, recognizing and dealing with cultural differences, and interest in people and differences)
- language skills (including listening skills)
- communication and negotiation skills (awareness of verbal and nonverbal

communication, discussion skills)

- professional expertise (openness and courage to introduce one's own work and products, common research interest, skills in telecommunication and computing, social skills and free appearance, aspiration to collaboration, courage, and genuine curiosity)
- other important factors mentioned were knowledge of visitors' background and culture, flexibility, patience, and fairness.

American researchers seemed to prefer people-oriented skills whereas Finnish counterparts emphasized professional expertise and language skills. Researchers from both countries considered flexibility as an important competence.

Differences Between Finnish And American Academic Working Styles

Differences in vocational education researchers' working styles were noted. These differences centred on the focus of work, team work, type of research, personality, and collegial ethics. American researchers interviewed organized their work assignments into three components: teaching, research, and service to community and state, whereas, and Finnish researchers focus primarily on research. American colleagues are more output-oriented and competitive compared with Finns. Americans are more effective time utilizers and better organized as compared to Finnish researchers who have tendency to finalize their work precisely, thoroughly, and endlessly. Finns work more independently, even isolated, and less in teams and are less social in the workplace than their American counterparts. However, Finnish researchers are able to communicate in multilingual research forums. In Finland, educational studies are oriented toward more basic research whereas in the United States, they are oriented toward more applied research. Finns are more intensely interested in theoretical bases of the educational enterprise than are American professors. American researchers were considered by some Finns as being spontaneous, social, non-academic, and involved. Finns were regarded by some Americans as being inflexible, stubborn, and non-involved. Optimism and positive encouragement appeared to characterize American professionals. High ethical standards of collegiate collaboration, mutual mentoring and tutoring, and gender equity are more visible and more emphasized among American researchers than among Finnish researchers. Researchers in both countries are perceived to be very dedicated to their work.

The perceptions such as "Finnish working style is more thorough and deeper compared to American working style", or "Americans are shallow in writing and research, and Finns are

reserved, but they have deep and thorough touch on few issues" might be considered stereotypes. The statements do not differentiate individual varieties but offer a collective image concerning all people in the American or Finnish culture.

Work Opportunities Favourable To Competence Development

Researchers who participated in the international linkage program were asked to indicate what they liked best about their experience. Experiencing a different culture, diversified professional perspectives, or comparisons between two country's educational systems were mentioned most often (12 of 46 respondents). Counterparts' positive traits, making good professional and personal friendships, and people involvement were also mentioned twelve times. Nine persons indicated that professional development was felt to be meaningful. Comments made included working with a group of outstanding researchers, " mutual training", "exciting and productive discussions", "expertise", and so forth. Development of language skills was mentioned four times, and personal growth three times. The linkage program provided opportunities for people to be stimulated, to add stimulation, aspiration and excitement to every day life, and to break and question routines.

Circumstances Less Favourable to Competence Development

The main concerns expressed by researchers related to changing or improving the linkage program in terms of mutuality and research. The most frequently mentioned concern was that there were no opportunities for Finnish researchers to travel to Virginia Polytechnic Institute and State University and conduct collaborative research. Additionally, linkage participants would have liked to have been involved in real international research endeavors and collaboration including collaboration between senior and junior researchers. Coordination of finding mutual research interests could also be improved. Commenting about the six weeks stay in Finland, an American researcher said: "It took five weeks to understand what was going on".

2. What impact has the linkage program had on participants?

The second question focused directly on the three of the five impact levels selected for examination. It should be noted, however, that portions of the information collected for impact levels 3 (people involvement) and 4 (reactions) were used to answer question 1.

People Involvement

Regarding people involvement (impact level 3), four VPI&SU and four UJ researchers described their direct involvement with counterparts in collaborative research. Research focus was a function of each counterpart's research interests. Prior to the time that VPI&SU researchers arrived at UJ, action was taken to identify UJ researchers who had similar research interests. This planning appeared to contribute greatly to successful collaboration among counterparts. Other UJ researchers who had less contact with VPI&SU researchers during their visits did not feel as a group that they had a great deal of involvement in collaborative research. It was noted from comments made by both UJ and VPI&SU administrators that a great deal of "behind the scenes" activity had gone on so the linkage program could operate. Thus, administrator involvement with the linkage centred on planning for visits by VPI&SU researchers and insuring that everything went smoothly for the visitors during their stays at UJ. Activities ranged from dealing with expenses to organizing programs of work and coordinating a wide variety of administrative details. Deans of the teacher training colleges were primarily involved with arranging for VPI&SU researchers to make presentations at their institutions.

Reactions

Impact Level 4 focused on persons' reactions to the linkage program. VPI&SU researchers noted several things they liked best about their involvement with the linkage. These included experiencing a different country, culture, and educational system, having opportunities to learn more about research and work with researchers in another country, and making new friends and working with new colleagues. UJ researchers felt that they liked studying and learning about another culture and educational system, developing English language skills, expanding international contacts, obtaining information about ongoing research, and having opportunities for mutual collaboration.

Polytechnic and teacher education college faculty members also had an opportunity to comment about the linkage. Thirteen faculty members completed a questionnaire and provided their reactions to presentations made by VPI&SU faculty members. The group felt that presentations were not difficult to follow, even though they were made in English language. Additionally, faculty members felt the presentations contributed to their making comparisons between the American and Finnish vocational education and that presentation context was

applicable to their teaching settings. The visiting scholars' contribution was mentioned to have impacts on curriculum development, subject matter and teachers' English language skills.

In terms of what was felt should be changed or improved in the linkage program, VPI&SU researchers felt very strongly that VPI&SU should identify sources of money so that UJ researchers could be brought to VPI&SU. Individual comments included wanting more time to organize a research endeavour, receiving better personal utilization, and arranging more linkages for others. Several UJ researchers commented on the need for Finnish researchers to conduct studies in the United States. Individual comments included the need to improve the research collaboration process, to involve new researchers in the collaboration, to better coordinate and integrate research interests, and to emphasize intercultural comparative research.

Interestingly, all researchers who responded felt they would recommend this type of experience to others. Reasons given for recommending the experience to others included making international contacts, expanding the mind, providing new theoretical perspectives, developing language skills, extending perspectives, empowering people, growing professionally, learning about one's self and strengths, and being exposed to new perspectives.

Knowledge, Attitude, Skill, Aspiration (KASA) Change

KASA change (impact level 5) focused on participants' perceived personal knowledge, attitude, skill, and aspiration change resulting from their involvement in the program. Persons were asked to react to various statements of possible KASA gains by selecting one of three choices: yes, much; yes, some; or no, none.

Statements related to knowledge focused on international and cultural understanding. All VPI&SU researchers felt they had obtained much greater international and cultural understanding as a result of their experience with the program. UJ counterpart researchers who worked closely with VPI&SU researchers all felt they had developed much greater cultural understanding and had developed much or some greater international understanding. Ratings made by administrators, other researchers, and teacher training college deans tended to fall mainly in the "some" category in terms of developing greater international and cultural understanding.

Attitude change focused on cultural sensitivity, feelings about cross-cultural research and feelings about persons from another country and culture. For the most part, VPI&SU researchers felt they had undergone much change in the attitude area; whereas, UJ counterpart researchers felt they had collectively developed between "some" and "much" sensitivity and

feelings. Ratings from other UJ researchers as well as administrators and teacher training college deans tended to fall in the "some" change category.

Skill change included personal research skills, cross-cultural research skills, cross-cultural communication skills, and cross-cultural cooperation skills. VPI&SU researcher ratings revealed that they had changed the most in terms of cross-cultural communication and cooperation skills. In the cooperation skills area, all five persons indicated much improvement; whereas, in the communication and research skills areas, these researchers were almost evenly split between much and some improvement. Overall, personal research skills were perceived as improving to some degree. Of the three UJ counterpart researchers, two felt they had gained much in terms of cross-cultural research, communication, and cooperation skills. Two of the three felt they had developed some improved personal research skills. Other UJ researchers, institute administrators, and teacher training college deans tended to indicate that they had experienced some improvement in their personal research, cross-cultural research, communication, and cooperation skills.

Items in the aspiration area were linked to a statement asking persons what they planned to do in the future as a result of their experience. Possible future activities included seeking out additional international opportunities in the future and continuing to work with a counterpart. As a group, VPI&SU researchers indicated that they planned to pursue these two activities in the future. A majority of the UJ counterpart researchers, likewise, planned to pursue these activities in the future. As a group, administrators, other researchers and teacher training college deans felt that they either might or did not plan to seek out other international opportunities nor to work with a counterpart.

In sum, the linkage program appeared to have greater KASA impact on VPI&SU researchers and their UJ researcher counterparts and less impact on others involved with the linkage program. Perceptions of personal impact seemed to parallel involvement in the program. That is, persons who had greater involvement in the program appeared to undergo greater change in their knowledge, attitudes, skills, and aspirations.

3. To What Extent has the Linkage Program Served as a Catalyst for International Communication and Collaboration?

The answers to question three are imbedded in the two highest impact levels: practice change (level 6) and end results (level 7). It is at these levels that individual and collaborative

innovation and the ultimate payoff of the program are assessed. Clearly, a key objective of the linkage program has been to serve as a catalyst for international communication and collaboration. Information about the extent to which this objective has been met is presented below.

Practice Change

Practice change (impact level 6) focused on the consequences of KASA change. Thus, at the practice change level, individual innovation and adoption can occur. Although less likely, collective or structural change can also occur. Items focusing on this level were designed to examine the extent to which personal expectations and goals were met, whether or not collaboration between persons at the two institutions was currently going on, what sort of collaborative work was taking place, and the extent to which administrative unit changes had occurred that were influenced by linkage collaboration and communication. Four of the five VPI&SU researchers felt that their personal expectations and goals were met. The person whose expectations were not met had not been able to get a collaborative research project going with a UJ counterpart. UJ counterpart researcher responses to this item ranged from expectations and goals being met to being partially met. A person whose expectations and goals were only partially met felt that research goals and expectations were not met, but that goals and expectations in the area of making contacts were met. Three of the four other UJ researchers indicated that their personal expectations and goals were not met. Of these three persons, one was disappointed, another indicated that goals were not set in writing and that collaboration was shallow, while a third person stated that goals and expectations were not met at all. Reactions from three of the four UJ administrators and teacher training college deans (one person did not respond) was uniformly positive. One person, who felt expectations were met to a high degree, indicated that expectations were not set very high at the onset of the program.

Four of the five VPI&SU researchers indicated they were currently collaborating with one or more persons at UJ while two of the three UJ counterpart researchers indicated that they were collaborating with VPI&SU researchers. Types of collaboration included writing a refereed article, proposing a paper for joint presentation at a national conference, preparing an evaluation of the international linkage program, writing an article, working on a study of educational reform, and examining care-giving occupations. These responses provided some

evidence that the linkage program has and continues to serve as a catalyst for international communication and research collaboration.

There were a variety of responses to the request for information about changes in administrative units that had been influenced by international collaboration. Several responses did not exactly focus on structural changes but most of the responses are worth noting since they reflected practice change. Included in the responses are: greater faculty appreciation for crosscultural linkages, more appreciation for exchange opportunities, the linkage provided a model for exchange, research agenda has improved, collaboration has increased interaction between researchers, researchers have developed international skills, strengthened communication in English among the faculty and staff, visitors are considered natural phenomena at the institute, it is easier to go abroad, fear of meeting foreigners was reduced, and refreshing and stimulating breath of winds from outside the institution. Virtually every person interviewed had something positive and meaningful to say about change. The extent to which lasting change has occurred is unknown. However, the quantity and variety of reported change lends additional evidence to the notion that the program serves as a catalyst for a change.

End Results

The focus of end results (impact level 7) was on scholarship-related outcomes of the program. Although continued collaboration could have been classed as an end result, it was recognized that certain research articles, publications, papers, and presentations are the "platinum" of the academic research profession. Persons were, therefore, asked to provide details about (a) research paper, reports, and chapters that have been prepared in conjunction with counterparts, (b) presentations made in Finland and the United States that were a direct result of contacts made through the linkage program, (c) research articles in journals produced in collaboration with a counterpart, and (d) other items produced through collaboration. The joint articles, chapters and presentations dealt with the following themes: gender equity related to vocational education and work force, subject matter of home economics curriculum, certification of occupational skills and standards, cultural awareness, youth education reform, and integration of academic and vocational education. It should be noted that these end results could not occur without assistance from international communication and research collaboration.

Respondents provided a very long list of writing and presentation items. To summarize the magnitude of these scholarly efforts, the number of items by category include:

- 8 research papers, reports, and chapters
- 34 presentations, 25 in Finland and 9 in the United States
- 3 research articles in journal
- 2 journal article manuscripts in preparation
- 2 presentations in preparation

Several other items are worthy of mention.

- Utilizing linkage program contacts and collaboration, a VPI&SU researcher competed for and obtained a Fulbright grant with support to conduct a study focusing on educational reform in Finland. The research, which was conducted in cooperation with a UJ researcher, was conducted during the spring of 1994.
- Three of the VPI&SU researchers that were involved in the linkage program returned to UJ the year after their first visits to work on collaborative activities with UJ researchers. One returned in 1993 and two returned in 1994.

In summary, it appears that the linkage program has served both institutions well as a catalyst for international communication and collaboration. Given the short time the linkage has existed, it seems that the program in its current configuration has done a credible job of stimulating and sustaining international communication and research collaboration between the two universities.

LEARNING FROM THE LINKAGE EXPERIENCE

Successes

In what ways has the linkage been successful? In brief, since 1992, four different VPI&SU faculty members have each spent five to six weeks in Finland serving as visiting researchers and lecturers at the University of Jyväskylä. Additionally, two VPI&SU doctoral students each spent five weeks as research assistants at UJ. And three UJ faculty have made brief visits to the United States to make presentations at national conferences and at VPI&SU.

Our evaluation revealed that the linkage had a positive and enduring impact on people associated with the two universities. Successes included the following:

. A number of participants made gains in the cultural collaboration competence area.

. Many people from the two universities became involved in the linkage, with their involvement ranging from collaborative research activities to organizing and operating the linkage, and providing supporting services.

. Many people provided positive reactions to the linkage and offered suggestions for improvement.

. The linkage had positive impact on some of the participants' collaborative research knowledge, attitudes, skills, and aspirations. The supporting staff considered the opportunities to speak English beneficial for improving language and communication skills.

. As a result of the linkage, changes were noted in the ways some of the linkage participants practiced research.

. The linkage served as a catalyst for international communication, collaborative research, and the creation of research-related documents such as scholarly papers, reports, and articles. Not all person-to-person linkages were productive; but for most links that were made, some joint research occurred.

. The linkage promoted the internatiolisation process of occupational college programmes in the Central Finland through the American scholars' presentations, curriculum reviews and tutoring in the national, Scandinavian and European conferences and workshops.

However, perhaps more significant has been the opportunity provided for faculty and students to collaborate with counterpart researchers. For example, a UJ faculty member and VPI&SU faculty member with a mutual research interest in gender equity related to vocational education collaborated on a research study, presented their findings at conferences in Finland and the United States, and had their research published in several international journals. Other benefits derived from the linkage included an increase in cultural awareness. Several participants commented that they had a greater understanding of and appreciation for different cultures. Others indicated that they had developed a much better understanding of how culture and context impact on the design and conduct of research. And finally, several persons commented that they had developed a greater sensitivity to persons from other cultures.

Lessons Learned

In addition to the benefits derived from this exchange experience, several lessons have been learned about what can be done in the future to make linkages more successful. First, it is important to have a person at each institution assigned to coordinate the linkage. This person could be appointed early in the linkage process when basic linkage considerations are being identified or later in the process after the linkage has been established. If a person is not assigned to this task, communication and coordination between the institutions may become dysfunctional and the linkage may not survive.

Second, assessment of the linkage program must be conducted on a regular basis. If the linkage program is not assessed, there is no way to tell what has been successful and what should to be changed. A thorough assessment can also help collaborating institutions to rethink current efforts and even redirect the linkage.

Third, successes associated with the linkage were at least partially attributed to financial and human resources support. Financial resources that were most visible consisted of UJ's travel and living support provided to visiting Virginia Tech researchers. Without this support, the linkage would not have been very successful. Human resources support included personal contribution to the linkage. This consisted of the time that administrators, researchers, and support staff at both universities spend dealing with all the details that made the linkage successful. Also associated with this area was the time spent by researchers from both universities who collaborated with others on various research projects. Time contributions that people made were extensive, perhaps so extensive that cost of these contributions cannot be determined. What we have learned from the experience is there are a variety of costs and these costs are sometimes difficult to track. Persons who are interested in establishing linkages should be sure to consider the various financial and human resources costs that might be incurred.

Fourth, it was noted that the process used to select counterpart researchers was satisfactory but certainly not perfect. This result was anticipated since experience to date has been largely trial and error. Fortunately for all involved with the linkage, less error occurred. Criteria of matching two or more persons to work together are based on willingness, and mutual interest in research topic and perhaps in life style. In the future, it will be very important to align various researchers from two universities with those who clearly have similar research interests. If this process is not improved, some future participants will probably be

disappointed with their collaborative research experiences. Closely related to the selection process is the amount of time that counterpart researchers should have to become reasonably productive as a team. Evidently, five to six weeks is a satisfactory time for some persons but is too short for others. Since information about to this area is quite limited, persons responsible for coordinating linkage programs should pay close attention to selecting researchers and providing them with enough time so they will be productive.

And finally, it is important to involve as many people as possible in the linkage. This does not mean all faculty members need to travel to another country. Involvement may be done via e-mail or fax. Persons may share articles or research reports with each other. The opportunities for involvement are virtually limitless and the potential for positive payoff is great.

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