

**The Iowa State University/National Agricultural University of Ukraine
Linkage Project:**

**A Case Study of Reform of an Institution of Higher Agricultural Education in
Ukraine**

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Abstract

This article analyzes the context, processes, and outcomes of a joint American/Ukrainian university linkage project developed to assist the leading Ukrainian agricultural university in adjusting to the economic and political realities of the post-Soviet period. Educational leaders in Ukraine are looking for specific ways to reform education. From 1994 through 1998, the National Agricultural University of Ukraine (NAUU) and Iowa State University (ISU) administrators and faculty worked together to design and implement a university affiliation or “Linkage Project.” The objectives of the project were to: (1) revise and restructure curricula; (2) develop and acquire educational materials; (3) incorporate new teaching methodologies; and (4) modernize NAUU administrative structures. The project assisted in improving curriculum content at the university level, greater public access to higher education, student choice in selecting courses and majors, service to society on problems of special relevance to citizens, active teaching methods that engage learners and go beyond mere provision of information, and integration of teaching and research within the same institution.

Introduction

This article analyzes the context, processes, and outcomes of a joint American/Ukrainian university linkage project developed to assist the leading Ukrainian agricultural university in adjusting to the economic and political realities of the post-Soviet period. The analysis reaffirms a comment made almost a half century ago.

“There is no pat formula for an educational solution which applies everywhere and at all times. It is necessary to study a system of education in its own culture pattern, using a check list or morphology covering philosophy, people, land, historical determinants, and technology in relation to educational development.” (Moehlman, Roucek, 1952, p.1).

Historically, European universities have exerted significant influence worldwide over models of higher education. Examples include the U.S. and Russian systems that borrow heavily from German university traditions. There are some ironic and curious historical parallels in the development of higher education

in Russia and U.S. Both countries have taken from German education what they felt would fit them. Yet, the systems of higher education evolved in both countries as unique and quite different systems. Russian and then Soviet universities have utilized the attributes of German rigorous administrative structure by taking it to the extreme, in the process making it fairly unwieldy. The American higher educational system kept some components of the German system, but changed its essence to reflect the democratic nature of American society.

During the past decade, Russia and its former satellites have been looking for ways to modify their systems of higher education to function under open market conditions. During this period of history, the American model of higher education seems to be more attractive to the nations of the former Soviet Union. Examples of higher education systems patterning reforms after the U.S. system include agricultural universities in Russia, Ukraine, Armenia and several other newly independent countries of the region.

Ukrainian Education from an Historical Perspective

The absolute control of higher education by governments in Eastern Europe has a long tradition. Historically, the system was built on the principles of a rather unwieldy administrative structure based on the German tradition (Eklof and Dneprov, 1993, p.3, Dalichow, 1997). Under the communist regime, the situation deteriorated further because schools and universities had suffered from total political oppression (Zajda, 1980). As Cerych (1991) points out, “The old system gave a central party almost total political control of access, of the curriculum, of academic staff appointments, of institutional management (insofar as it existed), and of resource allocation.” (p. 351). Such heavy centralization has had an adverse impact on all participants of the educational process, depriving instructors and students of the joy of “critical and creative thinking” (Mestenhauser and Ellingboe, 1998, p.25).

In addition to the residue of the past policies of the higher educational institutions in Eastern Europe and Ukraine, there are some present day issues (Watt, 1997):

- 1) the absence of philosophy for reform of higher education;
- 2) the lack of public resources and structural rigidities;

- 3) the need for private funding; and,
- 4) the necessity for the structural reform of higher education.

Ukraine and Higher Education

Ukraine is a country with a population of 52 million people and a territory equal to the territory of France (Hodges and Chumak, 1994 p.1). Because of its strategic location, well-educated human resources, considerable military might, sea ports, and rich soil Ukraine is an influential player in Eastern Europe and beyond.

Changes in the Ukrainian higher education system reflect changes in Ukrainian society, and Ukraine, along with some other parts of the former communist empire, “chose to pursue a decidedly western and democratic course in order to achieve the goals commensurate with their new found status as independent nations.” (Williams, 1998). This democratic course is providing Ukrainian educators with unprecedented chances to explore the world, and to expose its universities to international influence.

With this in mind, educational leaders in Ukraine, along with some of their colleagues in other independent nations are looking for specific ways to reform education, and a number of Ukrainian higher education institutions are working to be more compatible with, but not necessarily identical to, the more democratic and sophisticated systems of higher education in the West. It is important to emphasize that adjustment, alignment, and adaptation are preferred over emulation and wholesale transference of western education systems, an unfortunate trend from the past.

University Linkage Project

From 1994 through 1998, the National Agricultural University of Ukraine (NAUU) and Iowa State University (ISU) administrators and faculty worked together to design and implement a university affiliation or “Linkage Project” sponsored by the United States Information Agency. The project was directed initially by Dr. Harold Crawford and later by Dr. David Acker, Director of International Agriculture Programs at ISU. Dr. Dmytro Melnychuk, Rector, NAUU, served as director on the Ukrainian side. Dr. Victor Udin served in various capacities throughout the project. The objectives of

the project were to: (1) revise and restructure curricula; (2) develop and acquire educational materials; (3) incorporate new teaching methodologies; and (4) modernize NAUU administrative structures.

Ten colleges were identified at NAUU as counterparts to seven departments in the Colleges of Agriculture and Veterinary Medicine at ISU. Partnership teams were developed with representatives from each of the participating departments and faculties. In total, 20 ISU and 33 NAUU faculty and administrators participated directly in the linkage project. Departments at ISU and faculties at NAUU made significant contributions. Faculty and administrative leadership time devoted to the project was provided as cost sharing to the grant. Furthermore, faculty members took on the responsibility of the project in addition to their existing duties (Acker, Melnychuk, 1997).

There were a number of characteristics of U.S. higher education that Ukrainian educators valued and wished to consider for modification of their systems. These included:

1. Freedom to determine curriculum content at the university level
2. Citizen control over public universities through governing boards
3. Greater public access to higher education
4. Student choice in selecting courses and majors
5. Service to society on problems of special relevance to citizens
6. Active teaching methods that engage learners and go beyond mere provision of information
7. Integration of teaching and research within the same institution

Linkage Project and Educational Reforms

Table 1 presents the substantial dissimilarities that exist between American and Ukrainian (during the Soviet period) systems of higher education. These differences did not discourage Ukrainian educators from seeking to integrate their local institutions with western universities. In this process, care is needed to ensure that international assistance does not turn into an attempt to dictate to a foreign partner or to place an alien system into a new environment.

ISU is one of the American higher education institutions that has consciously recognized the local educational traditions in Eastern European countries. ISU international project teams attempt to keep a balance between externally derived innovations and locally established practices. Likewise, the ISU Linkage Project team tried from the beginning to be sensitive to the needs of their colleagues and avoid imposing the ISU system of higher education.

The Educational Reform Process at NAUU

The NAUU celebrated its 100th anniversary in 1998. The University began as the Kiev Polytechnic Institute (KPI) on September 30, 1898, and during its rich history NAUU has gone through a number of substantial reorganizations to become the leading agricultural university in Ukraine. On August 25, 1992, NAUU was accredited as a university by a decision of the Cabinet of Ministers of Ukraine and later was granted the status of a national university which conferred greater status and much greater autonomy. Prior to that, NAUU was an academy and reported directly to the Ministry of Agriculture and Food of Ukraine, which put serious restrictions on the administration and faculty's ability to make decisions in the area of curriculum and teaching methods.

At present, NAUU is one of the main higher education institutions in the field of agriculture among the countries of the former Soviet Union. NAUU is comprised of departments, research stations, educational farms, and a publishing center. The departments (known as faculties) are: Agronomy, Agrochemistry and Soil Science, Plant Protection, Forestry, Animal Science, Veterinary Medicine, Mechanization and Agriculture, Electrification and Automation, Agricultural Economics and Pedagogy.

As of 1998, there were 951 teachers on the teaching staff at NAUU, among them 122 (12.9%) have earned a Doctor of Science degrees and are classified as Professors. There are 14 academicians and associate members of the Ukrainian Academy of Sciences and the Ukrainian Academy of Agricultural Sciences, all distinguished scientists in various fields of science and technology. During 100 years of existence, NAUU has trained more than 80,000 specialists in the field of agriculture and forestry.

The project was designed to focus on a few areas identified by the leadership of NAUU as crucial for the reform of their institution. These were 1) revision of curricula; 2) development and acquisition of educational materials; 3) incorporation of new teaching methodologies; and (4) modernization of NAUU administrative structures.

Curricula Revision

Curricula revision became the centerpiece of the linkage project. This process required a meticulous study of the curriculum at NAUU, conducted by ISU faculty in cooperation with their Ukrainian counterparts. Curricular review at the departmental level was complicated by a need to translate all the materials (and discussions at most meetings) from Ukrainian into English and vice versa. Early in the project, all the curricular revisions had to be approved by the Ministry of Agriculture. The situation changed in 1996 when NAUU gained its independence by obtaining the status of a national university. Even though NAUU received its autonomy, its administration still continued a constructive dialogue with the Ministry of Agriculture's Department of Education. In the long run, this approach led to significant influence over other agricultural universities in the country; these schools followed the pattern taken by the lead national university and reformed their curricula utilizing the NAUU model (Melnychuk, 1998).

As a part of the major changes, NAUU introduced the new degrees of Bachelor of Science degree and Master of Science degree while maintaining the existing Specialist and Candidate of Science degrees. Undergraduate and graduate catalogues were developed and published by NAUU, allowing students to choose their programs of studies for the first time in the history of higher agricultural education in Ukraine (Melnychuk, 1998). The catalogues also included elective courses which was a real innovation and, although the system of electives has not become a common practice yet, it has become a major step forward in democratization of university programs.

The introduction of new degrees also facilitated development of new majors. Now the combination of current courses and introduction of new ones offers students a richer "menu" of majors. These new majors were reviewed for international comparability of credit systems not only in US, but also in Europe

through cooperation with Humboldt University of Berlin. After a number of peer reviews, ISU signed two Memoranda of Agreement in 1997 and 1998 recognizing some programs at NAUU as comparable to those at ISU.

Educational Materials

In the Soviet Union, educational materials and textbooks were generated under the guidance of the Ministry of Education and, after approval, were distributed among universities. Only rarely could students purchase textbooks, and most of the time, they had to check educational materials out from libraries. Faculty members did not have a choice of textbooks for their courses and textbooks were, in some cases, obsolete. Instructors relied heavily on their notes when lecturing.

Today NAUU is free to produce its own textbooks and teaching materials. The textbooks still have to be approved at the departmental level, but in comparison to past practices it is still a significantly more decentralized system. Despite this flexibility, the quality of textbooks is affected by the economic crisis in Ukraine that has caused a substantial decrease in funding for research. This deficiency, though, can be made up for by the new freedom of exchange of scientific information; international faculty exchanges, and use of the Internet. These new methods for enriching teaching materials have improved students' access to current sources of knowledge. In addition, the linkage project also provided opportunities for NAUU faculty members to obtain American course syllabi, videos, and extension and research publications for their own departmental use .

Extensive use of international sources of reference brought about another issue related to the teaching materials at NAUU - knowledge of foreign languages. For example, at the Institute of Agricultural Management English is becoming more and more the language of instruction, since universally much of the terminology in business and information technology is English based (Mason, 1998). The linkage project addressed this issue by establishing the English Language Center within the Institute of Agricultural Management. The faculty at the Center were able to improve English language instruction, and in general, foreign languages became an integral part of the curriculum, not only at the economics departments but at the university as a whole.

New Teaching Methodologies

As a part of the linkage project, a great emphasis has been placed on improvement of teaching methods. The traditional approach of one-way lecturing without feedback from the students was hampering educational reforms at NAUU. Taking advice from the ISU faculty, NAUU has introduced workshops and seminars, and now the students are required to submit papers in more subject areas in order to develop independent research skills.

As a part of teaching methodologies improvement a new Media Resource Center was equipped with modern copy machines and computers. At the Center instructors prepare teaching materials and slide presentations. E-mail access permitted NAUU faculty to communicate with their counterparts at ISU (and elsewhere) when they needed assistance with putting together teaching materials or handouts that reflected the results of the current research.

Administrative Reform

The university modernization could not be fully completed without a substantial revision of administrative structures and practices. The leadership at NAUU drew heavily on the administrative model at ISU in redesigning their administrative structure (Acker and Melnychuk, 1997). As part of administrative restructuring, NAUU has introduced such administrative positions as Provost, Vice Rector for Student Affairs, and Director of Extension. These changes made the administrative setup at NAUU more faculty and student friendly, as well as client oriented. The delegation of some decision-making power to the Provost released the Rector (President) of the responsibility for day-to-day operations and allowed him to focus on development of the university-wide strategies and policies.

The Vice Rector for Student Affairs was made responsible for addressing the daily needs of students at NAUU. The introduction of this administrative position has significantly improved the situation at dormitories and gave new impetus to social activities on campus.

Additionally, colleges were allowed some limited independence in decision making regarding curriculum, and establishing new programs of study. The general trend at NAUU is that colleges are gaining more confidence in their ability to influence the quality of teaching in their areas of study.

In an attempt to strengthen the research component of the teaching process, a number of research institutes, members of the National Academy of Agricultural Sciences, launched joint pilot programs with NAUU. Scientists with many years of research experience became involved in teaching courses to undergraduate and graduate students. The combination of teaching and serious academic research was a real breakthrough in the country where during the Soviet period a division between the academic institutes and teaching universities was a norm (Stone, 1998).

Conclusion

Profound educational reforms will not come easily in the countries of the former Soviet block. As Bollag (1996) stated, “Educational experts say that Eastern Europe’s rapid economic and political transformation has not been accompanied by a remaking of its antiquated university systems, with their outdated approaches to teaching and learning” (p. 59).

Historically, bureaucratic pressures have inflicted serious damage to the universities in the socialist countries of the former Soviet Union. Reform of the university system will require not only sincere efforts of local educators but also long-term external assistance. NAUU, with support from ISU and USIA, has made significant progress through its partnership. The ISU/NAUU linkage project has been a rewarding experience for both institutions as well as the numerous individual faculty, who generously contributed to the success of the project.

Table 1. Comparisons of Ukrainian and American systems of higher education

UKRAINE (during the Soviet period)	USA
Public access is very limited and competition is very high. No tuition is charged. School grades and entrance exams. Age discrimination.	The largest enrollment in the world. Tuition is charged, but subsidized by federal and state government. No age limit.
System-wide uniformity of programs	Diversity of institutions, students, and programs”
The government controls the university and sets all key policies and procedures. No client orientation or external world input.	External influences, originating in society, are important. A client orientation is the key.
State-controlled curriculum: emphasized uniformity. Text books are centrally approved and instructors are limited in terms of the course content.	Curriculum is determined by professors and their understanding of societal needs.
Primary method of teaching – lecture. The students are supposed to learn theory and memorize (Bollag, 1996) Written essays or interpretative class papers are very uncommon. No emphasis on writing skills.	Active methods encourage student participation in the learning process.
Course content has remained unchanged for many years and lags behind the results of current research.	The content of courses is being constantly updated to reflect the changing body of knowledge.
Research is being conducted, but not expected from the faculty members and is not a priority. Funding is equally distributed among departments, no competitive grants.	Research is an integral part of the university. External competitive grants playing a crucial role in funding for research activities. Publishing is of primary importance.

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