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Universities in the Market for Continuing Higher Education

by

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Abstract

The purpose of the paper is to explain why and how American universities have taken the lead in continuing education compared to their European counterparts. In a first step we will discuss different notions of continuing education and develop an analytical framework to handle its various forms. In a second step, we will develop a theoretical typology in the form of a morphography in order to scrutinize the basic structures of a system of continuing higher education. Third, using our morphography, we will introduce some empirical insight from a case study that was pursued at the Pennsylvania State University in July and August 2001. We conclude with our assessments as to which elements from the American system of higher and continuing education may be transferable to the European tradition.

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I. The Increasing Importance of Continuing Higher Education

Since the „Inquiry into the Wealth of Nations“ of Adam Smith (1776) it has been well known that growth and prosperity of a country depends on the knowledge and education of its work force. The worldwide connection of knowledge-based institutions (libraries, universities, specific databases and more) has further intensified the necessity to invest in education. At the same time, information is produced and made accessible more quickly. Selecting information essential for a specific purpose is therefore becoming more important. Achieving a university degree might be a sufficient condition to find employment, but it is not enough to deliver the required professional abilities for the coming decade. Therefore, the question of *continuing* education is at the center of scholarly interest.

The main provider of higher education is the university system, at least with regard to basic qualifications to enter the labor market. By extension one could assume that universities are also directly involved in providing and offering continuing education. A look into the European reality provides a different view: While many universities in the United States have already developed systems of continuing education and are promoting Internet-based new forms of distance education, the European universities are trailing behind. This brings us to the purpose of our paper: to explain why and how American universities have taken the lead in continuing education compared to their European counterparts and to offer some challenging questions.

In a first step we will discuss different notions of continuing education and develop an analytical framework to handle its various forms. In a second step, we will briefly outline the value of an economic point of view to analyze questions of higher education and then will develop a theoretical typology in the form of a morphography in order to scrutinize the basic structures of a system of continuing higher education. Third, using our morphography, we will introduce some empirical insight from a case study that was pursued at the Pennsylvania State University in July and August 2001¹. The analysis illustrates the success-related preconditions for the effectiveness of such a system. The paper concludes with our assessments as to which elements from the American system of higher and continuing education may be transferable to the European tradition.

II. Different Features of Continuing Education

Continuing education, adult education, life long learning, and independent learning: Are all these terms just different expressions for the same concept? Or is it appropriate to distinguish between these terms? Looking at the literature substantial differences can be observed.

Sauter, Grünewald and Weiss (1996, 30) and Kuwan, Gnahn and Seidel (2000, 10) define **continuing education** as the continuation or the resumption of organized learning after the end of a first learning-period and a limited period of work experience. The National Center for Education Statistics (NCES) (Kwang and Creighton, 2000, 125) considers **adult education** to be

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any enrollment of the civilian non-institutional population 16 years old and over in any educational activity at any time in the prior 12 months, except full-time enrollment in elementary or secondary school or in a higher education credential program. The Organization for Economic Cooperation and Development (OECD 2000, 93) defines **adult education** as general education in formal settings, including vocational education, basic skills education and self-improvement or leisure education. Labor market training for the unemployed and other special groups as well as formal and informal enterprise-based education is also included. The American Public Works Association (APWA 2001) characterizes **continuing education** as follows: Continuing education is structured educational and/or training experiences or personal or professional development in which participants are assumed to have previously attained a basic level of education, training or experience. The term **life long learning** is usually used as a general term to address the ongoing need to expand personal and/or professional knowledge. The term **independent learning** represents educational programs that are taught one on one (student-teacher ratio) in an individualized setting (concerning time and place) and at an individualized pace.

The above mentioned definitions focus on different aspects of continuing higher education. Nevertheless, we have to acknowledge that a precise description appears to be difficult to achieve. The following questions remain ambiguous:

- Are *leisure education* and self-improvement included?
- Can a *full time* college or university education be considered continuing education?
- Is the *age* of the person taking the class a distinct criterion?
- Which *basic level of education* precedes continuing education?
- Which *form of structure* or organization generates continuing education?

There is no right or wrong answer to any of these questions. But for practical and statistical reasons, it is often important how these questions are answered. Definitions are neither true nor false. Rather they are useful or not useful and that depends on the problem analyzed. We therefore avoid giving another specific definition to continuing education, but refer to specific characteristics that indicate how we use the term in our analysis. Concerning a person's educational life cycle, we distinguish between college education as primary higher education and college education as continuing education. Therefore, the age of the student is not important but the timing is. For our purpose continuing education presupposes a previous education, albeit one that did not necessarily result in the completion of a degree, followed by a period without organized educational activities. The emphasis is on the resumption or continuation of education after a period of time without organized educational activities. An aspect concerning the formal organization is also important for our interpretation of continuing education. We presuppose the involvement of a tutor. Reading books, searching the Internet, and listening to speeches or watching educational television programs are not included in our analysis of continuing education due to the lack of tutorial involvement.

In order to provide a terminological background and to specify the area of our interest, we now introduce a classification that illustrates **four** criteria relevant for our analysis. The classi-

fication helps to describe the different notions of continuing education and also shows the segments of continuing education that are not analyzed in this paper.

1. Purpose: We differentiate between the following purposes of continuing education:
 - a) Enhancement: Continuing education is used to improve a current level of knowledge and abilities. A person *wants* to enhance his/her academic, professional or personal qualifications. Leisure education and education for self-improvement would therefore be one type of education for enhancement.
 - b) Additional training: Continuing education is necessary due to a changing level of knowledge, information or technology. A person *has to* get additional qualification in his or her profession.
 - c) Retraining: A person *wants* or *has to* change to another field or profession.
2. Involvement of a third party (organization): A participant in continuing education programs may be supported directly or indirectly by an organization (a company, a foundation or the government).
3. Relation to time and place: Continuing education can be provided in a face to face setting. Using different media, it can also be independent of time and place. Distant education is here a specific type of continuing education.
4. Level of student advancement: We differentiate between a spectrum from elementary to advanced education. The advanced level is especially interesting for universities as providers of continuing education.

Table 1: Categories of Continuing Education

| Third party support ⇒ Medium ⇒ Purpose ↓ Level ↓ | | Directly supported | | Indirectly supported | | Not supported | |
|---|------------|--------------------|---------|----------------------|---------|---------------|---------|
| | | Face-to-face | Distant | Face-to-face | Distant | face-to-face | Distant |
| Enhancement | Advanced | | | | A | | B |
| | ⇕ | C | | | | D | |
| | Elementary | | E | F | | | |
| Additional Training | Advanced | | G | H | | | |
| | ⇕ | I | | J | | | |
| | Elementary | | | | | | K |
| Retraining | Advanced | L | | | | M | |
| | ⇕ | | | N | | | O |
| | Elementary | | | | | | |

The following examples reveal different types in continuing education, concerning the four criteria of the classification.

- A: A company supports an employee financially to prepare online for advanced professional responsibilities.
- B: A manager takes an online class to gain additional know-how that he can use in his job.
- C: A company offers to an employee on-site-training to enhance his qualification.
- D: A senior citizen decides to take a weekly art history class.
- E: A person is unsuccessful in gaining employment with minimal educational credentials and therefore participates in an online program provided by the government.
- F: The government supports a working adult to achieve a high school diploma.
- G: An employee asks a professor for advice in a developing area of research. His company has a consulting agreement with the university.
- H: A company supports an employee to attend conferences to stay abreast of developments in his field.
- I: An employee takes part in his or her company's educational program to adjust to changing standards and demands.
- J: Due to technological progress a person must adjust his level of knowledge and a governmental program financially supports the necessary training.
- K: An unemployed person takes an online course to learn about a newly developed computer software.
- L: An employee wants to switch to another job within the same company. The company pays the tuition for acquiring the needed degree.
- M: A highly educated employee decides to attend a seminar to gain knowledge in another field.
- N: A person is financially supported by the government to train for a completely new profession due to changes in technology.
- O: A person fears the loss of his job and decides to start a distant education program to enter a new profession.

Our analysis is mainly concerned with the role of American *universities* as providers of continuing education. Therefore we will not analyze continuing education on the elementary level, for example in the field of active governmental labor market activities. Although we focus here on the aspect of continuing *higher* education, our general categorization is also applicable to analyze different aspects in the field of continuing education.

III. An Analytical Classification of Continuing Higher Education Systems

From an economic standpoint, continuing education can be understood as a *scarce good* that is *supplied* (by universities or companies) and *demande*d (by students or professionals). When-

ever we deal with scarcity, decisions have to be made that effect the costs and benefits of an activity. How the problem of scarcity is solved effectively depends on different economic systems and their institutions. The effectiveness of continuing education depends therefore on the structures and institutions of the system of continuing higher education. The system of continuing higher education can be interpreted as a subsystem of the higher education system. When we look at different systems of higher education worldwide we realize that the supply and demand structures of higher education have developed very differently (see Wentzel 2000). Those differences are also observable in the subsystem of *continuing* higher education, reflecting the interdependencies of both levels. Those interdependencies will help to explain the differences of American and European systems of continuing higher education. In order to analyze different systems² it is helpful to use a theoretical framework, which classifies general elements of the supply and demand of continuing education. Such a classification should identify the elements that determine the organizational structure and influence the development of a system of continuing higher education.

III.1. A General Morphography to Classify Systems of Continuing Higher Education

A morphography is an analytical-descriptive tool that has been used successfully in the tradition of German ORDO-liberalism. That concept was introduced by Walter Eucken (1940, 1952) and has been further developed by Karl P. Hensel (1972). The idea was to find patterns of ideal types and their distinctive forms that help to analyze concrete expressions in the real world. The types and forms are general elements of an ideal (opposed to a real) system. The single elements can have different expressions in the real world. Different real systems can therefore be described in referring to those elements. The advantage of a morphography is that it offers a frame to structure a system without losing the interdependencies of single elements. It also serves as a frame to compare single elements of different programs and different systems of continuing higher education. Empirical structures, which can be found on different levels, can be analyzed as follows:

- The morphography may be used to describe *a system* of continuing higher education³.
- It also can be used to analyze the structure of continuing education at a *specific university*.
- Finally, it can be used to describe a *single class, course* or *degree* that is offered.

We distinguish between eight elements of continuing higher education: **subject, purpose, quality, object, duration, medium, time-intensity** and **achievement-intensity**. The categories of the first three elements differ according to supply and demand. The analysis of the last five elements does not require differentiating between supply and demand. The precise specifications of the elements give an illustration of a particular system of continuing higher education, a particular university's program, a degree, or a particular course.

² Even though we understand continuing higher education to be a subsystem of the (supra)system of higher education, we will refer to it as a system.

³ The morphography has a descriptive-analytical function, it does not offer a decisive explanation.

Table 2: A Morphography of Continuing Higher Education

| Elements | Supply | | Demand |
|----------------|-----------------------|--|---|
| Subject | University | Faculty | Individuals (Students) |
| | | External tutor | |
| | University-Group | Close ties within the group | Corporations (Employers and Employees) |
| | | Loose ties within the group | |
| | External Organization | Close connection between organization and university | Government (Politicians and Civil Servants) |
| | | Loose connection between organization and university | |
| Purpose | Monetary | Direct (Tuition) | Qualification for Enhancement |
| | | Indirect (Donations) | |
| | Non-Monetary | Reputation | Additional Training |
| | | Public Interest | |
| | | Connections | Retraining |
| Quality | Monitored | Internally | Certification |
| | | Externally | Reputation |
| | Not-monitored | | Experience |

| | Supply and Demand | |
|-----------------|---|--|
| Object | Academic programs (with intention to achieve credits or degree) | |
| | Vocational programs (mainly intended to develop or improve professional skills) | |
| | Service-oriented programs (to serve a specific interest) | |
| Duration | Several semester, degree-oriented, comprehensive content | one field of study, different classes and topics |
| | One semester or a few month, module or class oriented, intermediate content | Class oriented: one field of study, different aspects of a topic |
| | | Module-oriented: one topic, different fields of study |
| | Hours, days or a few weeks, problem oriented, limited content | One field of study, different topics |

| Supply and Demand | | |
|------------------------------|---|---|
| Medium | Classroom setting (group of students with a teacher) | |
| | Online (group of students or individual with a teacher) | Internet |
| | | Video-Conference |
| | Mail | Printed class materials |
| | | Video |
| | | Audio |
| Time-Intensity | High: continuing over a period of time | Cohort based Learning (group of students, with specific start and end of class) |
| | | Rolling Enrollment (independent learning without specific starting date) |
| | Low: on demand (information about a specific topic at a specific point of time) | |
| Achievement-Intensity | High: with exams and with certifications (credit and degree oriented) | |
| | Low: without exams (self-improvement or leisure education) | With Certification (proving attendance) |
| | | Without Certification |

III.2. Elements of Continuing Higher Education at the Pennsylvania State University: An Application of the Morphography

The introduced morphography will be the reference to analyze the system of continuing higher education at the Pennsylvania State University. Penn State serves as a case study to explore how American universities have become providers of continuing and distance education. The spectrum of difference between small colleges and universities (see Wentzel 2000) is reflected in their respective involvement in continuing education.

With 24 campuses and more than 80,000 enrolled students, the Pennsylvania State University is one of the ten largest public American universities. Penn State offers more than 160 undergraduate and 150 graduate fields (PSU 2001a, 3). As a large public land grant university with a long tradition in continuing education engagement and an active development in distance education Penn State offers many examples for activities in continuing education.

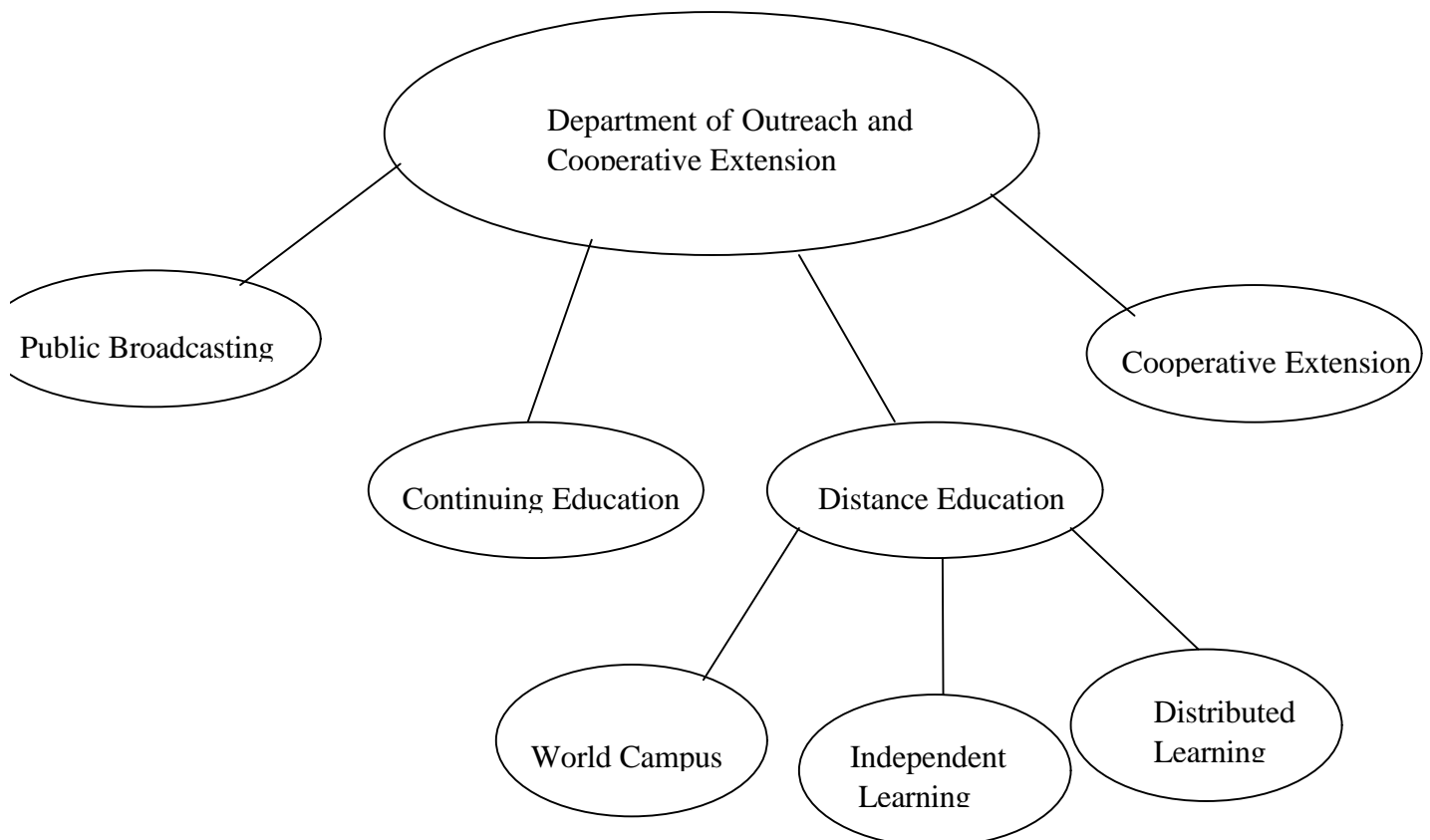
University size appears to be one of the most significant factors affecting continuing education. There exists a clear correlation between the size of a particular university and its involvement in continuing and distance education. A study for the National Center for Education Statistics (Lewis et al. 2000, 119) reveals that in 1997-98 only 19 percent of those organizations with less than 3,000 students did offer distance education classes. In contrast 87% of those universities with more than 10,000 students offered distance education classes.

III.2.1. The Subject

As providers of continuing higher education one can distinguish between three main **subjects**: the *university* itself, the university as a member of a *group* of universities or the university through *external organizations*. Even though the university is the institutional provider, the factual provider for classes and courses are individuals. *Faculty* members of one or more departments often provide the content of the classes on a contract basis. *Tutors* from outside the university are also hired to provide that content.

At Penn State the main provider of continuing higher education is the university's department of Outreach and Cooperative Extension. The structure of the department with its units is shown in the following picture:

Fig. 3: The structure of Penn State's Department of Outreach and Cooperative Extension



The department and its sub-units are supported by and cooperate with experts from the central departments of client development, marketing communication, marketing research and program planning. This support assures that existing demand for programs is met. Cooperation with centralized support units is a means of efficient cost containment.

Unlike other American universities and colleges, the department and its units do not have its own faculty, but offer classes and courses that are taught by faculty members of the university and some tutors from outside the university. Cooperation and communication among the different colleges within the university is therefore essential to a successful program. Due to the

fact that professors can not be forced to offer certain continuing education programs the reward system is especially important. A faculty member's decision is influenced by monetary rewards, by the offered organizational and technological support and, last but not least, by positive effects on their future academic career. For Penn State the first two are already in place. Web-Designers help to set up online courses and technological help desks offer assistance. An attempt is made to create awareness and to increase appreciation for web-based teaching (UniSCOPE 2000). A decentralized organizational structure and the involvement of numerous departments will support autonomy in decision-making processes and generate flexibility and diversity in the content and structure of programs.

The Coordinating Council for Outreach and Cooperative Extension at Penn State is an administrative body which supports interaction. Fourty five percent of all faculty members (in total: 1,500 out of 3,200 members) are engaged in outreach initiatives. Seventy five percent of those involved are considered to be very active in these activities (Benedetti 2000, 10). Furthermore, around 800 staff members are involved in producing and delivering programs (PSU 2000a, 4). Some of the courses and degrees are jointly offered by faculty of different Penn State campuses. The iMBA program, for example, is an intercollegiate effort run by six different Penn State branches (Penn State World Campus 2001, 6). Penn State can therefore be categorized as an organization, which runs their continuing and distance education programs mainly with their own faculty and some external tutors.

A university can also cooperate with other universities and jointly market and offer continuing education as an alliance. The cooperation of those universities can involve *close* or *loose ties*. Even though Penn State provides most of the continuing education programs itself, there exist cooperation between Penn State and other universities. The alliance between Penn State, the University of California at Berkeley, the University of Washington and the University of Wisconsin (Penn State Outreach & Cooperative Extension 2001a) can be used as an example of cooperation with loose ties. The universities in the alliance are planning to jointly market courses nationally and internationally, develop collaborative programs, or benchmark institutional practices and standards. To earn additional revenues through patenting successful practices, the development of standards is of specific interest for universities. The cooperation between Penn State and the University of Iowa is an example of a closer connection. The two universities have jointly developed an online bachelor's degree program called „Lion Hawk“⁴ (Penn State Distance Education 2000, 18). The students do not have to be on-campus at Penn State or at Iowa. Even though the program mainly addresses first-degree students, it could be also used as a course in continuing education.

When a university uses external organizations to offer continuing education, the connection between that organization and the university can be loose, e.g. a large network of different providers of continuing education, or close, e.g. an alumni association that offers their members exclusively the university's programs of continuing education. An example of an external organization with loose ties is the Western Governors University (Edelson 2000, 53). It is a virtual university, which was founded in 1995 and does not offer courses on its own. The main public state universities of 18 mostly western U.S. states and some private organizations pro-

⁴ That name is derived from the names of the collegiate sport teams, the Nittany Lions (PSU) and the Hawkeyes (Iowa).

vide the content. It seems that the courses and degrees within the network are not well coordinated and little controlled. Due to a lack of structure and transparency, it has not been a successful network. More successful approaches within that category are the examples of Sylvan Learning Systems and MCI Worldcom, which have founded Caliber Learning Network, Inc. (Cranch 1999, 5).

Penn State's Alumni Association could serve as an example of an external organization with close ties to the university. The independent Alumni Association with its 145,000 fee-paying members is the largest in the United States. Already established connections and the close relationship to the university characterize alumni as promising targets for intensive marketing efforts in continuing education. The Association's alumni education department is working on a plan to increase their activities in offering specialized continuing education classes for their alumni. A cooperation between the Alumni Association and the Department of Outreach and Cooperative Extension promises to be a successful endeavor.

The question which level of involvement suits a specific university best depends on their goals as well as their preconditions. The size and the financial background of the university are important factors, as well as the purpose of involvement (see III.2.2.). A university that is evolved in providing programs on all three levels: on its own, within a group and in cooperation with external organizations will probably develop some kind of division of labor between those levels. This will lead to a large variety and diversity of programs and to an efficient organizational structure of the individual units as well as the whole system.

Who demands continuing higher education? The **subjects** on the demand side can be *individuals* (the students), *corporations* (for employers and employees) and *government* agencies (for politicians and public servants).

Penn State's Department of Outreach and Cooperative Extension serves more than five million individuals annually. 187,000 individuals attend Continuing Education classes. 6,500 students account for 23,000 Distance Education enrollments. About 50 percent of these participants are enrolled in World Campus Programs. By the end of next year World Campus wants to serve 10,000 individuals (PSU 2000a, 4; Penn State Distance Education 2000, 1, 4). In its first two years, the growth in enrollments exceeded 400 percent.

The involvement of corporations and the government can be two-fold. They can finance the continuing education programs of their employees or they can directly offer continuing education through a provider of continuing education. Employers pay fifty five percent of the classes taken in continuing education at Penn State. This exceeds the DETC organization's average, which states that only 31 percent of the continuing education demand is financed by employers. (Distance Education and Training Council 1998). Many examples exist where Penn State cooperates with companies directly.⁵ Corporations and government agencies will increasingly demand continuing higher education as evidenced by the fact that many customized programs between universities and business schools have been developed in the recent past. According to Cervero (2001, 22), 70 percent of the total continuing education revenue of Duke University

⁵ For example Penn State DuBois Continuing Education provided a yearlong management development program for 73 employees of Willamette Industries in Johnsonburg, PA (Moyer, 2001, 15).

or Indiana State University results from these activities. There exist many examples where universities try to establish long range strategic partnerships with corporations (Johnson and Cooper 1999, 8). Due to high set up and development costs, corporations have a great interest in outsourcing their continuing education activities.

The structure of demand is an important feature for the success of a system. Whether students, corporations or governmental agencies are the main subjects on the demand side will influence the content of the offered programs (see III.2.4.), the marketing strategies and the development efforts of the used media (see III.2.6.). Research about the structure and the needs of the demand are necessary preconditions for an effective organization. Further needs are the willingness to invest into promising areas and an innovation oriented management. A university has to be demand oriented in order to provide a successful program in continuing higher education.

III.2.2. The Purpose

Why do universities and other organizations offer continuing education? The **purpose** of supply can be *monetary* as well as *non-monetary*. When, for example, additional revenues via tuition for continuing higher education classes is one main goal, the *monetary* purpose would be *directly* connected to the offered educational programs. An *indirect* monetary goal could be a higher chance of getting donations or public or private grants due to an appreciation of the educational outreach. *Non-monetary* purposes could be the *reputation* of the university, the willingness to serve the *public interest* and building *connections* outside the university.

Looking at the monetary aspect of Penn State's involvement in outreach activities, one realizes that with the exception of Cooperative Extension the other three units are all largely self-supporting and have an annual operating budget of \$40 million (Ryan 2001). The start-up costs for establishing the World Campus, a platform for distance education programs, were financed by a \$1.3 Million grant from the Sloan Foundation (PSU 1997). The future of the World Campus is confident and investments in the World Campus are therefore seen as a strategy to accumulate large revenues. Since state and federal funding have consistently decreased (Anderson 2001, 231) additional revenues are an important motivation for engaging in continuing education. Even though Penn State is a public university, only 20 percent of its annual income is derived from state legislative appropriations (PSU, 2001a, 19).

Summing up, one can state that a precondition to serve the monetary purpose is the university's financial autonomy. The willingness and ability to get involved in different methods of funding is a challenge as well as an opportunity. A system of higher education whose private and public institutions have developed a tradition of working with several funding sources will be much better prepared for the future investment needs that are connected with technology developments.

Besides monetary purpose, there exists other important non-monetary reason why Penn State is involved in its Outreach activities. As a state university, it fulfills its public obligations. Penn State became a land-grant institution in 1863. Besides promoting a liberal arts education its duty became to foster the economic development of Pennsylvania. Penn State was supposed to promote applied education, primarily in agriculture and engineering (Alter and Book 2001, 1). This obligation is still virulent. In the definition of the term outreach we find: „Outreach is the

process of extending the intellectual expertise and resources of the University through teaching, research, and service to address the social, civic, economic, and environmental issues and opportunities of our Commonwealth, nation, and world“ (PSU 2000a, 2). Recent studies reveal that this obligation is still being put into practice. One in every four Pennsylvanians has been a participant in a Penn State program within the passed year (Kellogg Commission, 1999, 6). Around \$ 30 million is needed to finance these outreach activities (PSU 2001b, 15).

A second important non-monetary purpose is to increase and maintain Penn State’s reputation. Since 1892, Penn State has been involved in continuing education. As one of the first universities, it started to develop a program of correspondence study (DEAC 1996). This original model has evolved into the Independent Learning program, which reaches approximately 17,000 course participants annually. This traditional involvement in distance and continuing education was the foundation for Penn State’s leadership in the development of virtual learning communities, which will become increasingly important (Miller 2000, 2).

In order to respond to the needs of future generations of students any institution of higher education will have to get involved in distance education. It will not be sufficient to offer the content of regular classes online. The development of distance education works as a catalyst for creating a new teaching and learning environment (IDE 1998, 14). Even though regular classes will not disappear, the technological developments will put pressure on the organizational structure of universities. We agree with Moore (2000, 4) that it is not likely that faculty will continue living in the 2000s as they did in the 1990s once the online courses are staffed. Experiences at the University of California at Berkeley can serve as an example, of how distance education can transform curricula of other universities. In 1999 UC Berkeley Extension started a project with the University of Hong Kong and the Berkeley certificate program was offered online to Hong Kong business students (Brewer 2000, 33). The vision of Penn State reveals that kind of dynamic development. In addition to the extension of Penn State’s outreach mission, the new technological possibilities can enhance programs offered at all Penn State campuses through intercampus sharing. Furthermore, the Internet helps to expand the possibilities of cooperation with external experts and increases competition between experts. A professor who once was a monopolist for his field within his or her university is now competing with other experts in that field.

Distance education will increasingly become the driving force in the development of continuing education. Online programs in continuing distance education do not have time and place restrictions. Being entrepreneurs in that field, U.S. Organizations will experience an increasing demand for first-degree education by European students. This development shows the necessity for universities to respond to the expanding knowledge needs of society. „If we are not supportive of the learning needs of people of all ages,“ Graham Spanier (2000, 4) states, „other educational enterprises will surely supersede us.“ This development supports Chodorow’s (2000) argument that the system is developing from a faculty-centered to a learner-centered-regime.

The analysis shows that next to monetary purposes the non-monetary purposes play an immense role in the creation of continuing higher education in American universities. The non-monetary purpose has shown to be closely connected to the tradition and mission of the individual institutions. Whereas the public and land grant universities often become involved in

outreach activities to serve their obligations to the state, the private universities are often concerned with developing and keeping high standards of reputation.

What is the **purpose** for a subject to **demand** continuing higher education? The motivation for continuing higher education can be the wish to *enhance* professional and personal *qualification or knowledge*, the need to get *additional training* in order to adjust to new developments within its profession or the need or wish to *retrain*, that is to qualify in another field or profession.

At Penn State, qualification for enhancement and receiving additional training seem to be the main motivations for the individuals to enroll in continuing education. The different courses offered through the World Campus are mostly parts of different certificate and degree programs (PSU 2000a, 4). Most of them are marketed in cooperation with the main associations of specific industries. Many programs prepare students for exams offered by associations (Noise Control Engineering e.g.) Some of the different programs are interrelated: the undergraduate program in Logistics and Chain Management for example can serve as a preparatory program for advanced degrees in this field. The graduate program credits in Logistics and Chain Management are applicable for Penn State's master or doctoral programs (Penn State Distance Education 2000, 10). The noncredit courses, which are offered as enrichment opportunities, serve the purpose of self-improvement or leisure. Many of Penn State's courses are eligible for Continuing Education Units (CEU) which are nationally recognized units to record the participation in continuing education activities. They can be used by employees whose employers require a certain number of continuing education hours annually (Johnson and Cooper 1999, 4). Another reason to enroll in continuing education courses may be personal and professional networking opportunities, which may generate development prospects.

If it is a goal of a university to provide the largest amount of programs and classes in higher education, the supplied content should be varied. If it is a goal to serve specific interests, or develop a specific reputation, the content should be related to that particular goal. How well the expectations of the demand are met will influence the success of the system.

III.2.3. The Quality

How can the **quality** of the education offered be *monitored*? Monitoring can be performed *internally* or *externally*. We speak of internal monitoring when the university itself has an evaluation system to monitor the course's quality, through data collection, including student evaluations, comparison of regular and continuing education programs etc. The programs that are part of a degree where exams are regularly absolved are usually highly monitored internally, because to achieve reputation and prestige it is in the university's interest to offer high quality continuing education.

Especially in a competitive system, a university will not deliberately offer low quality courses. This is why all credits earned at Penn State (classroom and online) are transferable. This policy functions as an instrument of internal monitoring. Since transferability always includes comparability, a professor who teaches classroom courses will probably teach online classes with an equivalent level of quality.

A second means of internal monitoring at Penn State is student evaluations of the courses. The student's experience in distance education classes can exceed these of traditional students (Gabor and Yearkes 1999, 62, see in general: Navarro and Shoemaker 2000). The student evaluations of the World Campus reveal a 94 percent satisfaction rate (Penn State World Campus 2001, 5). Around 86 percent students responded that the Distance Learning programs accomplished their educational and professional objectives (Penn State Distance Education 2000, 1). The question as to whether exams imply a certain standard and therefore can internally secure the program's quality is ambiguous. A high standard of difficulty on exams might be an indicator of the quality of a class. Yet, when it is difficult to control who actually takes the exam, the result of the test does not always reflect the actual knowledge of the enrolled person. Since it is nearly impossible to monitor who takes an online exam, monitoring is especially difficult for distance education classes. Arrangements to avoid shirking are not completely reliable (Penn State Distance Education 2000, 30-31). Therefore, exams are only partly usable indicators for the quality of education.

A third means of internal monitoring is the simple fact as to whether new students are signing up for the next class. This is especially important for those classes, which are not part of a degree program but mainly respond to a pure leisure demand.

Programs can also be monitored externally. This is usually pursued through state agencies, which give accreditation to programs. Private agencies and interest groups also have monitoring functions by surveying the market and the competition among providers of continuing higher education. The American accreditation system is an example of external monitoring. Since Penn State is an accredited institution its classes and credits are accepted for degrees at other universities and Penn State accepts credits from other accredited institutions (Penn State Distance Education 2000, 17). The requirements for courses and degrees are the same for continuing and distance education program as for classroom programs. This includes, for example, the necessity for foreign students, to pass the Test of English as a Foreign Language (TOEFL) in order to enroll in Penn State World Campus courses. The associations of specific branches also play an important role in external monitoring. Penn State will only be able to market its programs successfully if the associations approve them. By answering to its members these organizations contribute to the control of the program's quality.

How can the **quality** of the offered continuing higher education be judged from the **demand** side? A *degree*, a *credit* or *certification* is already a criterion for quality. In trying to apply a niche strategy or in establishing a „specialty store“ (Moore 1999, 2), Penn State is highly concerned about the quality of the certifications. The reputation of the university in general and its engagement in continuing education serves as an important indicator of the quality of the programs. Personal experiences with the university can also be used as a signal for quality. Penn State's World Campus markets its programs to associations as a means to create a positive reputation.

From an economic point of view, it is important to stress that educational quality is a crucial factor in competitive systems. Only a university with a monopoly will be able to supply low quality content without loosing much demand. Furthermore, providing high quality education will be used as a strategy factor within highly competitive systems. The importance of quality will increase with *distance* education. The new technologies of the Internet and World Wide

Web break down the existing monopolies in the educational sector and strongly increase competition, nationally as well as internationally. Even though external monitoring through state agencies and the approval of programs through associations is a second useful pillar for securing quality in a complex system, a central institution is neither needed nor effective in setting, approving and measuring quality standards.

III.2.4. The Object

The criteria **object, duration, medium, time- and achievement-intensity** require an integrated view of the supply and demand side.

What kind of programs in continuing higher education are **offered and demanded**? The **object** of continuing education can be *academic, vocational* or *service-oriented*. Especially in the American system of higher education it is not always easy to distinguish between vocational programs and academic programs in applied sciences. For example, is a program in nursing a vocational or academic object?

At Penn State academic, vocational and service-oriented classes are offered through the units of the Department of Outreach and Cooperative Extension. Public Broadcasting and Cooperative Extension provide mostly service-oriented and vocational programs due to Penn State's history as a land-grant university whose mission is to serve the Commonwealth and its people. Public Broadcasting provides television and radio programs and reaches 500,000 viewers and 430,000 listeners annually (PSU 2000a, 4). The Cooperative Extension unit is an educational network, which offers agriculture, family and consumer services, youth, volunteer and community development, environmental management as well as nutrition, diet and health classes. Seminars, workshops, conferences, short courses, computer-assisted learning, learn-at-home programs and other activities are provided in all of the 67 Pennsylvanian counties. More than two million Pennsylvanian citizens participate annually in the different programs. Public Broadcasting and Cooperative Extension, however, are not directly connected to our outlined understanding of continuing *higher* education (see II.).

The programs provided by Continuing Education and Distance Education are predominantly vocational and academic. Only some serve personal or recreational purposes. Continuing Education offers seminars, conferences as well as classroom teaching. The classes are mainly held at lunchtime, in the evenings, or on Saturdays and are tailored to Pennsylvanians. Continuing Education is also part of the university's land-grant obligations as shown by the Go-60 program, which gives retired or part-time working Pennsylvanians over 60 years the opportunity to participate free of charge in the college's regular classes (Penn State Continuing Education 2001, 32). Some Continuing Education programs are service-oriented. Examples are PENNTAP (Pennsylvania Technical Assistance Program) or the SBDC (Penn State Small Business Development Center). They offer a variety of programs in management development, continuing education for law enforcement professionals, biotechnology and bio processing, intensive English, labor education and power engineering.

Distance Education serves more than 23,000 enrollments from Pennsylvania, United States and around the world. Distance Education at Penn State includes the programs of Independent Learning, World Campus and Distributed Learning. Independent Learning programs are taught one on one and are personalized concerning pace, time and place. Through Independent

Learning more than 150 credit and noncredit courses are offered. The subjects range from nuclear engineering to dietetic food systems management. The World Campus (established in 1998) offers more than 250 courses through the World Wide Web to help students from all over the nation and the world advance professionally and remain competitive. Many programs are academic and some are vocational (Turfgrass-Management or Webmaster). Distributed Learning programs offer on-site training and professional development for corporations, associations and organizations. The Colleges of Liberal Arts, Business Administration and Health and Human Development (Penn State Distance Education 2000) offer most of the classes in Distance Education. Some courses also serve personal and recreational purposes.

The orientation and mission of the specific university usually influences the program content of the university's continuing higher education. In order to capitalize a specific reputation, a purely academic oriented university will concentrate on providing academic content. That is an efficient strategy to decrease marginal costs and increase the benefits of specialization. Another strategy could be the utilization of programs in continuing education to diversify a university's educational agenda and therefore to implement vocational and/or service and leisure oriented courses. Universities that want to increase the demand will apply this strategy. The costs and benefits of either strategy will depend on the financial and other resources as well as on competitors strategies.

In contrast to Europe, the American system of continuing higher education as well as the system of higher education in general encompasses variety and diversity of programs and courses. Almost any demand will find its supply as the result of a service-orientation, strong competition, and the diversification and specialization of each university.

III.2.5. The Duration

The duration of a program often corresponds to the amount of content that is taught. One can distinguish between *comprehensive*, *intermediate* and *limited* programs: A comprehensive program takes a longer time and covers a large amount of content, it will go over several semesters or years and is usually *degree-oriented*. In an intermediate program the content is usually covered during the duration of one semester or a few months. Those programs are either *class-oriented* or *module-oriented*. A class-oriented program will engage in one field of study and concern different aspects of one topic. A module-oriented program will engage one topic from different fields of study. Modules offer different points of view on a topic and are the result of the combination of elements from different courses. An example: An American employee of an international company has to be able to work in Japan with a Japanese team. He probably could perform better if he was educated in some basic aspects of Japanese culture, language and work style. A module-oriented program could combine relevant elements from the regular curriculum in the fields of economics, business administration, anthropology, history, Japanese language etc. The length of the module-oriented programs differs depending on the task.

A brief program will cover *limited* content, is taught over a few days or weeks and is usually *problem-oriented*. Problem-oriented education is often a form of education on-demand. A specific topic is applied to a specific field of study. It is offered „just in time“ to solve concrete academic or vocational problems in the professional's world. Returning to the example: the

employee would contact the continuing education department with a specific question or problem, e.g. about specifics of the Japanese system of accounting. Problem-oriented education is relevant for tasks that occur sporadically.

At Penn State programs in Continuing Education are intermediate, sometimes short term and include credit and non-credit classes as well as problem-oriented services. Programs in Distance Education are intermediate and comprehensive and mainly class and degree-oriented. On average a Distance Education course consists of 16 lessons, which takes eight months to complete. Most of these degree-programs constitute a baccalaureate degree, an associate degree, or a credit certificate degree. In 2001 Penn State's World Campus offered 20 certificate and degree programs. By the end of 2002 the number of programs will increase to 25 to 30 programs and consist of more than 300 online courses (Penn State Distance Education 2000, 4; Penn State Outreach & Cooperative Extension 2001b).

It depends on the mission and purpose of continuing education, the given resources and possible investments, which of the above described programs a university offers. Offering complete degrees in continuing education will require more financial, personnel and organizational resources than holding single classes and courses. The problem-oriented programs require high flexibility and professional expertise from the faculty and close connections to corporations. Large universities with extensive experience in continuing higher education provide the greatest variety of programs. Universities that are starting to implement a curriculum in continuing higher education often develop their programs according to their „regular“ curriculum.

III.2.6. The Medium

Which **medium** is used in continuing higher education? The most common media are *personal classes, online* or *mail*. The most common online media are the Internet and videoconferences. Interaction between student and tutor over the Internet can happen at the same time or time delayed. Printed, video and audio material can be sent via mail. The mailing of class materials to a student without further assistance and without any possibility for interaction is not considered continuing higher education from our point of view.

Most of the programs of Penn State's Continuing Education seminars, conferences, workshops and weekly courses are taught in personal classes. The specific branches of Distance Education use a variety of different media and various technologies. Printed materials, satellite, CD-ROM materials and the World Wide Web are accessible independent of time and place. Most of the World Campus courses are primarily technology based and delivered via the World Wide Web. Out of 290 courses (the new iMBA program is excluded) one third is web-based. Around 75 percent of these courses provide a cohort based learning environment, which is characterized by a group setting, the possibility and necessity for student interaction and a specific time-frame. The second third is web-enhanced and the content of the last third is mailed in a traditional way. Students as well as tutors appreciate Web-based Distance Learning. The Internet is categorized as a learning medium that is in many ways superior to a text and workbook. A vast variety of resources can be provided to the students. The Internet is expected to move up to be the dominating medium of future continuing distance education. Penn State's Independent Learning programs are still predominantly print-based and enhanced electronically. The Dis-

tributed Learning Programs are usually taught in a classroom setting and some are available through interactive Video.

Which medium is used for a specific program depends on the program's content, on the demand as well as on the university's technological, financial and personnel resources. Universities that have the financial resources and understand the need to invest in future technologies will increasingly offer online programs over the Internet and the World Wide Web. Even though the relevance of modern media will increase and probably replace the mail as a medium of providing educational programs, it is not probable that it will replace the classroom as an important medium of higher education. The personal contact between students and tutor will always be an important criterion for many goals and objectives in higher education.

III.2.7. The Time- and Achievement-Intensity

Concerning the question of how **time-intense** single classes or programs are, we differentiate between *high* and *low time-intensity*. High time-intensity concerns ongoing continuing education, taught over a certain amount of time. Low time-intensity refers to education on demand, where information concerning a specific topic is required at a specific point. Ongoing classes either have a specific starting point and completion date or are offered with rolling enrollment. Students usually interact within a group, which is referred to as „cohort based learning“. When rolling enrollment is possible (no specific start and end point) a student can start a class at any time and work with a tutor individually.

Penn State's classes in Continuing Education are mostly cohort-based: the duration of the class is fixed and the participants start and end the class at the same time. Programs in Distance Education are offered in a cohort based learning style (World Campus online classes or Distributed Learning), with rolling enrollment (Independent Learning) or by individual demand. Many of the online or web enhanced World Campus classes such courses in business administration, community and economic development, educational technology integration, logistics and supply chain management, turfgrass management or geographic information systems, have specific start and end dates as well as dates for given assignments. This reduces the student's flexibility, but offers the possibility to interact with other students. The Independent Learning student starts the course whenever he/she wants and is asked to finish the course within eight month, but not within less than 15 weeks. Flexibility is at a maximum, but interaction is only possible with the tutor. The length of an on demand-program differs according to the specific task.

Concerning the **achievement-intensity** of continuing higher education, we again differentiate between *high* and *low achievement-intensity*. The former refers to classes that require exams and offer certification and are often part of programs that imply credits or degrees. Classes, which do not require *exams*, are usually less achievement-intense and offer certifications requiring only the attendance or enrollment of the student.

The intensity differs in that respect not from the regular curriculum. A university's strategy in continuing higher education will strongly influence the time- and the achievement-intensity of the offered programs. Academic, credit and degree-oriented programs will be higher in time- and achievement-intensity than programs that are service- and leisure-oriented. A highly academically oriented university seeks to provide courses that are time- and achievement-intense.

A university providing education and services for a range of different purposes seeks to diversify its curriculum.

With exception of the personal enrichment classes, most of the classes at Penn State's Continuing and Distance Education are high in time- and achievement- intensity. They require exams and, due to the policy of transferability of credits, certifications are regularly provided. The programs of Cooperative Extension and Public Broadcasting, which are strongly service-oriented, do not use measurement and control tools, such as exams and certifications.

IV. Preconditions for Successful Involvement in Continuing Higher Education

Our leading questions of this paper were: Which elements of a system of continuing higher education are crucial for success? How do American universities provide continuing higher education? In which area should a specific university engage in continuing education? Decisions have to be made according to the purpose, the level of qualification, the involvement of third parties and the medium (see table 1, II).

Our analysis reveals the way many American, but very few European universities are engaged in continuing education. The morphography (III) is a tool to describe and analyze elements of continuing higher education. We developed some theses concerning general criteria, which refer to the organizational structure, the mission and orientation, and to the financial structure of a system of continuing higher education. Those criteria illustrate success-related preconditions for developing an effective system of continuing higher education:

1. *Competitive* structures on the *university level* transfer to the level of continuing education:
 - demand, service and innovation orientation
 - diversification and specialization
 - variety in structure and content of courses
 - efficient relation between quality and price of programs
 - high standards that are monitored constantly
2. Diversity in the *organizational structure* of continuing education departments supports a diversity of program content and structure.
3. *Decentralization* and *autonomy* of single continuing education units will increase the efficiency of decision-making processes.
4. The autonomy of faculty contributes to the importance of a *reward system*. A faculty member's decision to participate or not is influenced by monetary rewards, available institutional support and positive effects on their future academic career.
5. *Support units* are necessary to pursue research about the structure and needs of demand, to market the offered programs, and to support the departments and faculty with technological and organizational assistance. Support units will increase the competency,

productivity and cost-effectiveness of providing continuing education and assure a successful strategy.

6. Continuing education should have a strong *connection* to the *tradition* and *mission* of a university:
 - the programs should reflect the specific *reputation* of a university
 - the content should be related to a university's particular *goal*
7. The continuing education department and its single units should have *financial autonomy*, which presupposes the willingness and ability to use different methods of *funding*.
8. The need to *invest* into *future technologies* is especially obvious concerning innovative online continuing education programs.
9. Due to high set-up costs, through investing in future technologies, establishing support units and compensating faculty, different measures of funding become unavoidable.

The preconditions for successful systems of continuing education, which are integrated factors in the American system of higher education, are not yet fully established in the European system of higher education to compete successfully with American universities. The tradition of the European university system caters to a first degree education. A curriculum in continuing higher education has not been integrated or developed. The structure of the university system reveals a shortage of competitive elements in many respects, a lack of efficiency, demand-, service-orientation and diversity is observable. Centralized management and bureaucracy structures repress the development of autonomous and flexible units, which could be organizationally and financially independent. A system that is almost completely financed by state funding lacks the ability to acquire additional revenues that are needed to invest in future development. In order to establish systems of continuing higher education within the European system two possible strategies exist:

First, in order to establish the preconditions mentioned for an effective system of continuing education one could argue that a comprehensive reform of the entire university system is needed. Experiences in Europe with multiple and resistant obstacles to reform on the political as well as on the university level reveal that this option is purely theoretical. *Second*, the establishment of a university related, but organizationally and financially independent, provider of continuing higher education could be a more promising strategy. The advantages of this approach are flexibility concerning the overall design as well as the specific decision-making processes. The need for private funding requires a service and demand orientation that generates profits. The positive aspect of the need to gain revenues is the freedom to invest. Combining strong academic traditions with access to future technology will generate a new demand in higher education. Especially corporations will be valuable targets in marketing a new form of academic knowledge and education. Developments in this area might break down existing obstacles to reform that geared to providing education in a competitive environment. For example: corporations request a university's service. A payment for that service would probably be widely accepted, unlike the introduction of tuition for students, which is not (yet) accepted. The need to find funding resources will lead to engagement in new areas of involvement, such as providing service to communities. In addressing unfulfilled demand, a demand-orientation

could be established, yielding a new form of diversity. Technological knowledge could be acquired to improve the circumstances necessary for the future of distance education.

The extent to which the designed second strategy is a realistic option for policy reform depends on innovative behavior of individuals and/or corporations. They might realize the potential that continuing higher education bears before the American global system becomes a new form of an educational monopoly which is unlikely to dissolve.

Literature

- Alter, Theodore R. and Patricia A. Book (2001), *The Engaged University: Reorganizing to Serve the Public Good*, <http://www.personal.psu.edu/faculty/t/r/tra2/Reorganizing%20to%20Serve%20the%20Public%20Good.htm>.
- Anderson, Melissa S. (2001), *The Complex Relations between the Academy and Industry: Views from the Literature*, in: *The Journal of Higher Education*, March/April 2001, pp. 226-246.
- American Public Work Association (APWA 2001), *Continuing Education Units*, <http://www.apwa.net/Education/CEU/FAQ.asp>
- Benedetti, Deborah A. (2000), *Academic Leaders Discuss How to Make the Engaged Institution a Reality*, in: *The Pennsylvania State University (ed.), Best Practices in Outreach and Public Services, The „Scholarship of Engagement“ for the 21st Century*, pp. 7-10, University Park, PA.
- Brewer, Garry D. (2000), *The Changing World of Continuing and Professional Education*, *Continuing Higher Education Review*, Vol. 64, pp. 23-34.
- Cahoon, Brad (ed.) (1998): *Adult Learning and the Internet, New Directions of Adult Learning and Continuing Education*, No. 78, San Francisco, CA.
- Cervero, Ronald M. (2001), *Continuing Professional Education in Transition, 1986-2000*, in: *International Journal of Lifelong Education*, Vol. 20, No. 1 /2, pp. 16-30.
- Chodorow, Stanley (2000), *Faculty, Intellectual Property, and Online Education*, in: *Continuing Higher Education Review*, Vol. 64, pp. 12-22.
- Cranch, Edmund T. (1999), *Competition or Collaboration: Survival Strategies for Continuing Higher Education*, in: *Journal of Continuing Higher Education*, Vol. 47, No. 2, pp. 2-14.
- Distance Education Advisory Committee (DEAC) (1996), *Distance Education at Penn State – Vision, Principles, and Policies*, A Discussion Paper, August 1, 1996.
- Distance Education and Training Council (DETC) (1998), *1998 Distance Education Survey*, Washington, DC, also: <http://www.detc.org>.
- Edelson, Paul J. (2000), *Weiterbildung in den USA*, München und Mering.
- Eucken, Walter (1940/89), *Grundlagen der Nationalökonomie*, Jena, 9th ed., Berlin, Heidelberg.
- Eucken, Walter (1952/90), *Grundsätze der Wirtschaftspolitik*, 6th ed., Tübingen.
- Gabor, Stanky C. and Amy M. Yearkes (1999), *The University’s Changing Role in Post-Baccalaureate Education*, in: *Continuing Higher Education*, Vol. 63, pp. 56-67.

- Hensel, Karl Paul (1972), *Grundformen der Wirtschaftsordnung*, München.
- Innovations in Distance Education (IDE) (1998), *Distance Education and the University Culture: Creating a Policy Environment for Distance Education*, http://www.worldcampus.psu.edu/ide/docs/full_3_policy_symposia.pdf.
- Institute for Higher Education Policy (2000), *Quality on the Line – Benchmarks for Success in Internet-Based Distance Education*, March 2000 Pre-Publication Copy, <http://www.ihep.com/qualityonline.pdf>.
- Johnson, Joseph E. and Gayle E. Cooper (1999), *Corporate Universities: What are they and how are they Partnering with Traditional Universities?*, in: *The Journal of Continuing Higher Education*, Vol. 48, No. 3, pp. 3-9.
- Kellogg Commission on the Future of State and Land-Grant Universities (Kellogg Commission) (1999), *Returning to Our Roots The Engaged Institution*, Third Report, Washington, DC.
- Kim, Kwang and Sean Creighton (2000), *Participation in Adult Education in the United States: 1998-99*, in: National Center for Education Statistics (eds.), *Education Statistics Quarterly*, Vol. 2, Issue 1, Spring 2000, pp. 123-128.
- Kuwan, Helmut, Dieter Gnahn and Sabine Seidel (2000), *Berichtssystem Weiterbildung VII, Integrierter Gesamtbericht zur Weiterbildungssituation in Deutschland*, Durchgeführt im Auftrag des Bundesministeriums für Bildung und Forschung, Bonn.
- Lewis, Laurie et al. (2000), *Distance Education at Postsecondary Education Institutions: 1997-98*, in: National Center for Education Statistics (eds.), *Education Statistics Quarterly*, Vol. 2, Issue 1, Spring 2000, pp. 118-122.
- Miller, Gary E. (2000), *General Education and Distance Education: Two Channels in the Mainstream*, in: *The Journal of General Education*, Vol. 49, No. 1, pp. 1-9.
- Moore, Michael G. (1999), *Editorial - Institutional Restructuring: Is Distance Education like Retailing?!* in: *The American Journal of Distance Education*, Vol. 13, No. 1-7.
- Moore, Michael G. (2000), *Editorial - Technology-Driven Change: Where Does it Leave the Faculty?*, in: *The American Journal of Distance Education*, Vol. 14, No. 1-6.
- Moyer, Michele (2001), *Company Invests in its Workforce with Training from Penn State DuBois*, in: *Penn State Outreach*, Vol. 3, No. 3, p. 15.
- National Center for Education Statistics (NCES) (2001), *The Condition of Education 2001*, NCES 2001-72, Washington, DC.
- National Education Association (2000), *Confronting the Future of Distance Learning – Placing Quality in Reach*, <http://nea.org/nr/nr000614.html>.
- Navarro, Peter and Judy Shoemaker (2000), *Performance and Perceptions of Distance Learners in Cyberspace*, in: *The American Journal of Distance Education*, Vol. 14, No. 2, pp. 15-35.
- Organization for Economic Co-operation and Development (OECD) (2000), *Where are the Resources for Lifelong Learning?*, Paris.
- Penn State Continuing Education (2001), *Fall 2001 Course Schedule*, University Park, PA.

- Penn State Distance Education (2000), Distance Education Catalog, University Park, PA.
- Penn State Outreach & Cooperative Extension (2001a), Four Major Research Universities Form Alliance for Distance Education, Penn State Outreach News, 16th of January 2001, http://tango.outreach.psu.edu/Tango/OutreachNews/NewsRelease2.taf?function=detail&FullInfo_uid1=33260.
- Penn State Outreach & Cooperative Extension (2001b), Virtual University Milestone: Penn State World Campus Students Log on to Learning, Penn State Outreach News, 1st of February 2001, http://tango.outreach.psu.edu/Tango/OutreachNews/NewsRelease2.taf?function=detail&FullInfo_uid1=33266.
- Penn State World Campus (2001), iMBA Intercollege Master's of Business Administration, University Park, PA.
- Pennsylvania State University (1997), Sloan Foundation Provides \$1.3 Million To Launch Penn State's 'World Campus', 10th of July 1997, http://www.Outreach.psu.edu/de/Programmatic_Vision.html.
- Pennsylvania State University (PSU) (2000a), The Plan for Strengthening Outreach and Cooperative Extension, Third Overview and Update, Fall 2000, University Park, PA.
- Pennsylvania State University (PSU) (2001a), Penn State: An Investment in Quality, University Park, PA.
- Pennsylvania State University (PSU) (2001b), A Grand Destiny: The Penn State Campaign, University Park, PA.
- Ryan, James H. (2001), Using the Balanced Scoreboard in Higher Education, News Outreach, April 11, 2001, <http://www.outreach.psu.edu/news/speeches/speech15.html>.
- Sauter, Edgar, Uwe Grünewald and Reinhold Weiss (1996), Deutschland 1 Politiken beruflicher Weiterbildung, in: Ant, Marc et al. (eds.) (1996), Berufliche Weiterbildung in Europa: Zugang, Qualität und Umfang: synoptischer Überblick, FORCE, Formation Continue en Europe, Neuwied, Krißel, Berlin, pp. 30-33.
- Smith, Adam (1776/1997), *The Wealth of Nations*, Penguin Classics.
- Social and Economic Sciences Research Center (1995), What the Public Wants from Higher Education: Workforce Implications from a 1995 national Survey, Pullman, WA, also available: <http://ag.arizona.edu/extension/reference/perception/highereduc/>.
- Spanier, Graham (2000), „The Engaged University“, in: The Pennsylvania State University (ed.), *Best Practices in Outreach and Public Services, The „Scholarship of Engagement“ for the 21st Century*, pp. 3-6, University Park, PA.
- UniSCOPE (2000), UniSCOPE 2000: A Multidimensional Model of Scholarship for the 21st Century, A UniSCOPE Learning Community Challenge to the Penn State Community of Scholars, University Park, PA
- Wentzel, Bettina (2000), Deutsche und amerikanische Hochschulen: Ein Systemvergleich, in: Wentzel, Bettina und Dirk Wentzel (Hrsg.) (2000): *Wirtschaftlicher Systemvergleich Deutschland/USA*, Stuttgart and New York, p. 223-279.
- Williams, Marcia L.; Papprock, Kenneth; Covington, Barbara (1999): *Distance Learning, The Essential Guide*, Thousand Oaks.