

A Comparative Analysis of Higher Education in the US and Sweden

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Introduction

In the following paper, the authors will compare and contrast higher education in the United States and Sweden. To conduct this comparative analysis, the authors took the following factors into consideration to capture an overall perspective, as well as a narrow but detailed view in two areas to exemplify the similarities and differences. For the overall perspective, the team first presents a synopsis of the history of higher education in each country. Secondly, the team compares some demographic details on the organization and operations of educational institutions for each country. To provide a narrow, but detailed perspective, the authors present key elements a student would experience following a degree program in Macro Economics from the Bachelor of Arts through the Doctorate for both the US and Sweden. Finally, a review of online learning in Sweden is presented. This final review yielded many insights into the state of affairs of the practice of teaching and learning through online technologies that place Sweden well behind the United States. The differences were enough that the team elected against including a comparative stance on this final section. The authors wish the reader to note that this comparative study will have a slant due to information being gathered and analyzed using US standards for comparing colleges and universities.

Sweden's History of Higher Education

The first university founded in Sweden was Uppsala University in 1477. The mission was to educate clergy for the church. During the 16th century no other universities were established due to political unrest in the country. In the 17th century, Sweden had its great period of power around Europe, which resulted in the need of government officials that could represent Sweden in other countries within Europe. An expansion of higher education was the answer, and in 1668 Lund University was founded. Lund is located much closer to the other European countries. Lund began to focus its teachings on medicine and natural sciences. The quality of teaching in the university rose steadily and entrance requirements became standardized and enforced. Added to the university acceptance requirements was an entrance examination that all applicants had to pass.

In the 19th century, the need for more universities became clear, and so in the end of the 19th century two new universities were established: Stockholm University was established in 1878 and Gothenburg's University in 1891. The two new university's focus was on the natural sciences.

The need for more educational institutions continued throughout the 19th and 20th centuries. New research greatly expanded the institutions of higher education, especially during the cold war era. Nowadays a large number of higher education institutions have been founded and the population of students witnessed an enormous growth. Regional colleges grew around Sweden to meet government goals to meet the national needs that everybody was entitled to a free and easily accessible education (Högskoleverkets Website, 2008).

US History of Higher Education

Harvard University was the first of the first three universities to be established in the British colonies of America. Harvard was established in 1636 as "...a true product of the Wars of Religion..." (Geiger, 2005, p. 39). The other two institutions that are counted among the first are William and Mary, and Yale. Both institutions were established as adjuncts to their churches.

The first 100 years saw Harvard evolve from controls that were strict Calvinism to Puritanism, which reflected the more secular and mercantile elements of its community. William and Mary held formal ties to the Church of England, and its founder, as well as the successor to the founder, were titular heads of the church in Virginia. William and Mary did not begin offering college instruction until the 1740s. Different from the other two, Yale was the spirit of change as it "...preserved and cultivated the sectarian zeal of the Reformation era into the middle of the eighteenth century" (Geiger, 2005, p. 39). While each of the first three faced difficulties during this period, each received financial support from their respective colonies. Studies at these early versions of the now famous institutions consisted of classical languages and a grounding in the three basic philosophies of Aristotle: ethics, metaphysics, and natural philosophy or science. To be admitted, applicants had to demonstrate some knowledge of Latin, Greek, and arithmetic. To place the proper perspective, almost two-thirds of graduates during the 17th century Harvard entered the ministry upon graduation.

During the first quarter of the 19th century, the evolution of higher education in the United States was chaotic. The period endured another upsurge of religious spirit known as the Second Great Awakening that countered the advances attained by the educated ministers. The Universities of Maryland and North Carolina lost their state support. Princeton and William and Mary entered a period of decline, while Harvard, Yale, Brown, and Union entered a period of growing strength. In the midst of this, college enrollments grew faster than the rate of population growth. During this period, leaders and citizens were asking fundamental questions: Who owns the colleges? What is the mission of the colleges? What should students be taught? How could the colleges be controlled? Student violence was pronounced. The student riots precipitated the decline at Princeton and William and Mary; Harvard endured; and North Carolina forfeited public support (Geiger, 2005). This period saw the beginning of the articulation that strains colleges and universities in the United States to this day: the ambiguous mix of public function and private control. We often hear these arguments today as the choice between accountability and autonomy.

The next hundred years brought many changes to the landscape of higher education in the United States. The westward expansion brought missionaries who founded denominational colleges. Eastern colleges found through hardship that they catered solely to the professional class and left out practitioners of industry and commerce, who were the ones transforming the American economy (Geiger, 2005). The generation following the Civil War created new institutions and studies that complemented education in the classics. Agricultural colleges were founded in the 1850s: Pennsylvania, Michigan, Maryland, and Ohio. Women were finally admitted into the more than forty new women's institutions, and free African Americans were admitted into Lincoln University (Pennsylvania) in 1854 and into Wilberforce University (Ohio) in 1856. The Morrill Land Grant Act of 1862 saw the beginning of a formalized financial connection, where new institutions would see funding first at first from the state and then later from the federal government. Because of the second Morrill Act in 1890, annual federal funding initiated the most dynamic era of growth for American universities (Geiger, 2005).

By 1908, the standard American university could be defined: only high school graduates could enter; students would then receive two years of general education followed by two years of advanced or specialized courses; doctoral training was available in at least five departments, led by Ph.D.s; and professional schools became an alternative educational path (Geiger, 2005). Massachusetts Institute of Technology began offering study units for research and graduate education. In 1915, university faculty organized the American Association of University

Professors "...to champion their professional rights, particularly academic freedom" (Geiger, 2005, p. 56). By 1915, the ten largest universities had approximately 5,000 students.

The period that experienced the great wars saw another transition in higher education: the shift of emphasis from elite education to mass education. To characterize elite education, we have students who are full time residents, with liberal ideas and character, and with destinations in high-status professions. To characterize mass education, we have part-time or commuting students, who seek applicable knowledge to prepare for employment in technical or semiprofessional positions. With the growth of mass education in the United States we have the development of junior colleges, teachers colleges, and urban, service-oriented universities.

For the thirty years following World War II, higher education in America experienced another period of expansion with a focus on standardization. In 1944, the G.I. Bill was enacted to support the "flood" of returning soldiers. During this period, the proportion of young people attending college tripled from 15 to 45 percent; undergraduates increased by five times, and graduate students by nine times (Geiger, 2005, p. 61).

In 1975, enrollment in higher education went over 11 million for the first time, and also seem to stop growing. Over the next 20 years, enrollment growth had grown by only 20%. In 1975, 55% of enrolled students were male; in 1995, 55% of enrolled students were female. The relationship between the federal government and universities also changed: support for graduate research was capped in 1968, and then the funding for infrastructure and graduate education was mostly phased out (Geiger, 2005). Although the last decade of the 20th century saw an increase in public criticism, enrollment remained at a steady increase that likely reflects the increasing acceptance that "...middle-class social destinations [are] made possible by higher education..." (Geiger, 2005, p. 65).

Higher Education Demographics

On the surface, the United States and Sweden have a great deal in common when comparing their education systems. For instance, as shown in Table 1, many of the majors and special programs available for study at institutes of higher education in both the US and Sweden are not only comparable, but the same. Both countries offer public and private institutions with coed, or mixed-sex, instruction. The US, however, also offers single-sexed education institutions.

Although similarities may at first seem apparent, these elements are not always similar when examined more closely. An example of this exists in the *Degree Equivalents/Levels* row of Table 1. Though different names appear in the US column as opposed to the Swedish column, both countries have similar degree levels. A Bachelor of Arts/Sciences in the United States, for instance, is the equivalent of a Filkand in Sweden. This similarity makes for an easier comparison in later sections of this study. However, both education systems are more complicated than the information found in this row. The higher educational system in Sweden is actually divided into three levels: 1) First level, 2) Second level, 3) Third level. See Figure 1 below for a graphical representation of the levels. To be able to move to the next level, all areas of the first level must be completed.

The first level includes two parts: 1) University Diploma two years, 120 higher education credits 2) Degree of Bachelor, three years, 180 higher education credits. The second level is also divided into two levels: 1) Masters Degree, 1 year and 60 higher education credits, 2) Masters

Degree, 2 years and 120 higher education credits. The third level includes two areas; 1) Licenciate, 2 years and 120 higher education credits and 2) PhD's, four years and 240 higher education credits (Högskoleverket, 2008).

The United States has a similar level program, set up with some differences. Students can obtain an Associate of Arts/Science degree after completing 60 credit hours of lower division classes. This typically takes two years to complete. A Bachelor of Arts/Science degree is a total of 120 credit hours (typically four years to complete) with 60 credit hours of lower division classes and 60 credit hours of upper division classes. A Master of Arts/Science degree requires anywhere from 30-49 credit hours, depending on the program, which can take one to two years to complete. The Doctorate or Ph.D. program is 60-80 credit hours with a completion time of two to three years. Table 2 below presents more detail on the requirements of higher education institutions, specifically for a Macro Economics program of study.

As noted in Table 1 below, there are a total of 61 universities, colleges and independent programs providers within the Swedish higher education system (*StudyinSweden*). The United States, on the other hand, has more than 1700 public and over 2400 private institutions of higher education (Yahoo!, 2008). Though this causes for a vast difference between the two countries, some of which are noted in Table 2 below, the educational institutions' main responsibility in both countries is to provide students with an undergraduate and postgraduate education and to interact with the surrounding community.

This being said, there are a number of differences between the education systems in the two countries. For instance, in Sweden a new system of counting credits went into affect in recent years (i.e., the Bologna Process). The new system of full-time studies is forty weeks which counts as sixty credits. Each course individual credit will be determined based on the work load required to fulfill course objectives. The United States actually has two separate measurements of credits. The first, the semester system, allows students to take a 16-week course with credits dependent upon the number of contact hours there are in a week. The second, the quarter system, allows students to take a shorter period (11 weeks), with longer contact hours per week.

The Bologna process started in 1999 in the city of Bologna where Ministers from European countries meet every two years to measure progress and set priorities for action. The aim of the Bologna Process is to create a "European Higher Education Area" by 2010. In this "Area" students may choose from a wide range of high quality courses and programs that are easily recognizable and follow the same standards. The process has made it possible to reform the European higher education and that universities in different countries can have the same standards. The reforms were necessary for universities in Europe to be compatible with the universities in the United States and Asia (The Bologna Process Website, 2008).

There are three main areas of focus of the Bologna Process. The three priorities are as follows; 1) Introduction of the three cycle system (Bachelor/Masters/Doctorate), 2) Quality assurance and recognition of qualifications, 3) Periods of study.

Higher education has three main areas of responsibility: teaching, research, and interaction with the surrounding community. Funding of the higher education institutions are based on the number of students enrolled and the overall performance of the enrolled students. Funding from the government for research is allocated according to the following four areas: 1) The humanities and social sciences; 2) Medicine; 3) the natural sciences; 4) Engineering. The third role of higher education institutions is to interact with the surrounding community.

Högskoleverket or the Swedish National Agency for Higher Education (Sweden)

"Schools have an important duty to make students aware of the fundamental values on which Swedish society is built: the sanctity of human life, the freedom and integrity of the individual, the equal value of all irrespective of gender, race, religion or social background, equality between women and men, and solidarity with the weak and vulnerable." (Högskoleverkets Website, 2008)

In Sweden, Högskoleverket is the central agency that deals with issues affecting universities and higher education institutions. Högskoleverket is responsible for conducting various quality audits of higher education, as well as oversee, review and analyze the entire higher educational system. The agency also evaluates the various qualifications awarded abroad, focuses on innovation and development, and also functions as an information Tsar when it comes to educational questions. The agency is the main center for student recruitment.

Högskoleverket's organization is viewed as follows: The University Chancellor is the person in charge of Högskoleverket. Besides the chancellor, there are eleven other board members. All of these individuals are appointed by the government. The government issues instructions to the agency as regards regulations about various tasks to be researched or enforced, as well as how to organize the overall operation of the higher education system. Every year the government sends a directive to the agency. In the directive are stipulations regarding the overall funding of the agency by the Swedish Riksdag (i.e., government). Also in the directive are different objectives of various operational areas. There are two more areas of responsibility framed in the directive: specific tasks that are required and how to account for the various results.

Högskoleverket's has six different tasks, which are presented as follows: 1) quality audits of higher education, 2) supervision of higher education institutions, 3) review and analysis of the higher education system, 4) evaluation qualifications awarded abroad, 5) educational renewal and development, and 6) information on study programs and encouraging student enrollment.

The following presents a short description of what the six tasks entail.

1. Task One: Audit all the various higher education institutions. All areas of the different subjects and programs are being evaluated every six years. Everything from small vocational schools to post graduate programs is being evaluated once every six years. This process is very similar to the process currently in place from the SACS Accreditation that UCF recently went through.
2. Task Two: Supervision of higher educational institutions and programs. This is done by making sure that institutions of higher educations remain compliant of all legal matters.
3. Task Three: Review all of the higher educational institutions. In this task the aim is to provide the Riksdag feedback as to how to move forward and continuously improve the standards of higher education.
4. Task Four: Evaluate the standards of qualifications awarded abroad. Higher educational programs abroad are evaluated in a comparison style with the Swedish higher education system.

5. Task Five: Continuously renew and develop the Swedish higher education system. Special funds are allocated towards this responsibility. This is done through two distinctly different, yet very similar, tasks.
6. Task Six: Provide information regarding higher education programs and encourage enrollment in these programs.

The institutions decide on their own how to be organized with a few exceptions. Each institution must have a board of governors and a vice-chancellor. The government appoints the board of governors and the chair person. The board of governors makes decisions regarding the important issues to the institution as well as financial matters. The vice-chancellor can only stay on his/her post for six years and no more.

Board of Regents/Board of Governors (United States)

Governance and administration of higher education holds two perspectives: the external governance and control as exemplified by outside policy and decision making bodies, which carry out oversight operations on the system of higher educational institutions over which it has purview; and the internal governance and control as exemplified by the individuals within the university who carry out the operations of a single institution. In this section, the authors first review the external governance structures of higher education followed by a review of the internal governance and the case at the University of Central Florida.

The governance structure of higher education varies by institution and by state. However, the variations are largely in the details of the oversight operations. Oversight is achieved through the appointment of boards or commissions whose responsibilities include coordination of the major segments of higher education in a particular state, the governor, and the state legislature. For purposes of brevity, this section will frame oversight functions as much as possible as they are in the State of Florida, which is not too different from other states. There are admittedly differences, but those differences are sufficient to warrant another review project.

Florida has a multiple coordinating structure that includes a statewide planning commission, a consolidated university system board, a community college board, and a state board of education that has responsibility for pre-school through post-doctoral education (Mingle, 1997). These boards provide coordinating functions that have evolved into four major activities:

1. Planning
2. Budget Review
3. Program Review and Institutional Licensing
4. Policy Analysis (Mingle, 1997, p. 415)

While governance and coordination are different matters, they should be considered together since both must be effective. Effective coordination carries the goal that is synonymous with institutional goals: develop high quality instruction, research, and public service programs that are widely accessible at a reasonable cost. Coordination through state boards is an effort to achieve these goals across institutions of higher education across the state by providing assurances of accountability and efficiency in exchange for continued public support (Mingle, 1997). These coordinating boards are balanced by legislative and governor level power sharing. In the case of Florida, the Board of Governors is a coordinating board that receives direction from the state legislature and the governor, as well as holds no control over the budget of the

system of eleven state sponsored universities, while providing coordinating directions to each of the member universities.

The coordinating board holds a broad scope of authority and an ability to relate to many segments of higher education, including into the private sector. The coordinating board also holds specific powers, such as preparing the state master plan for higher education, the approval and disapproval of new degree programs, and recommending state appropriations for operating and capital budgets. These boards typically identify themselves with the state legislature, while holding no management authority over individual campuses (so as to not become embroiled in campus matters) (Hines, 1997).

The mission of the trustees, or members of the coordinating board, is to protect the campus from improper external intrusion, as well as ensuring that narrow institutional interests are not served at the expense of legitimate public needs (Hines, 1997). Trustees are appointed by the governor in some states, or elected in others. The key tasks board members have are the following:

- Provide the governor and legislature with reliable data
- Articulate higher education's needs to the public
- Ensure quality in academic programs
- Ensure cost-effectiveness on campuses
- Balance competitive aspirations of various campuses

Governors also play a key oversight role for higher education. Governors are becoming increasingly involved in issues of access, quality, system consolidation, and the relations between public and private campuses, as well as on the recent concerns of an economic nature, such as how can higher education help improve the state's economy in areas of technology, industrial development, and job training (Hines, 1997, p. 389). The remaining administrative oversight function rests with the state legislature. As the law making body, the legislature enjoys a greater degree of control since they can set or change the operating budget.

The internal administrative organization of universities also varies, but again they differ primarily only at some levels of detail that are beyond the scope of this comparative analysis. At the University of Central Florida, the top of the administrative organization is the Board of Trustees, which in turn has a chairman. Reporting to the Board is the university President. Reporting to the university President is the Provost and Executive Vice President. Reporting to the Provost are the Vice Provosts and College Deans. Below this level are the Department Chairs, Directors, Assistant Directors, and other lower-level supervisors.

In summary, the administrative network is complex, but the checks and balances built into the organization ensure, as well as can be, the continuity, stability, and some assurance from administrative misdirection. Were this review to cover institutions in different states, or the differences between public and private institutions, the length of the analysis would be a much greater.

Detailed comparison of the systems of higher education: the United States and Sweden

Below in Table 1 - *Specific elements that contribute to how higher Ed institutions operate in the US and Sweden*, the authors have assembled a perspective of the similarities and differences between the systems of higher education in the United States and Sweden.

Table 1 – Specific elements that contribute to how higher ed institutions operate in the US and Sweden

	United States	Sweden
Sample Majors/Subjects Available	Art, Business, Communication, Computers, Education, Engineering, Health, Hospitality, Science	Art, Business, Communication, Computers, Education, Engineering, Health, Hospitality, Science
Specialty Programs	Law, Library Sciences, Medicine	Law, Library Sciences, Medicine
Degree Equivalents/Levels	Associate of Arts/Science (AA/AS) Bachelor of Arts/Sciences (BA/BS) Master of Arts/Sciences (MA/MS) Doctorate/Ph.D. Certificates	Filkand Magister Licensure/ Ph.D.
Public/Private	Both available	Both Available
Coed, not coed	Both available	Coed
Number of Institutions of Higher Ed	1773 public 2472 private	61 Universities or Colleges
Different Labels of Institutions of Higher Education	Community College College/University/Institute Vocational School Specialty School (i.e. Law school, Medicine, etc.)	School University/Institute Högskola Universitet Yrkes Skola
Average Education Costs	Tuition ranges from \$1,000 to more than \$25,000 per tuition year Purchase of books and living costs	Free Purchase of books and living costs
Financial Assistance	Available on need basis as well as through private scholarships	For Book and living Costs
Funding	Public – funded by Federal & State Gov't, Military, Corp Partnerships, Foundations, Trust, Donations Private – funded by Federal & State Gov't, Military, Corp Partnerships, Foundations, Trust, Donations, Tuition paid by students	Public: Government Private: Trusts, Privately owned companies
Oversight Governance	Public – Board of Governors (controls accountability and academics) and the State Legislature (controls budget) Private – Board of Regents (controls accountability and academics)	Public and Private – Swedish National Agency for Higher Education or Högskoleverket
Study Terms	Semester (16 weeks) and Quarter system (11 weeks)	40 weeks annual, 5 – 20 weeks at a time
Class Length	50 min to 4 hours per course per week	
Distance Education Prevalent?	Yes	Yes
Textbook Use	Optional per instructor	Optional per instructor
Learning/Course Management Systems (L/CMS) in Use		
Syllabi Used	Yes, required	Yes, required
Grading System	Letter scale with Plus/Minus system A = 4.0 A- = 3.75 B+ = 3.25 B = 3.0 B- = 2.75 C+ = 2.25 C = 2.0 C- = 1.75 D+ = 1.25 D = 1.0 D- = 0.75 F = 0.0	V.G (Pass with distinction) G (Pass) U (No Pass)
Forms of Assessment	Mostly testing, some application	Testing

Importance and Availability of Extracurricular Activities	Extremely important and encouraged. Vast variety available to students.	Not very important
Class Delivery/Methods of Teaching	Lecture is still the most prominent method used in the classroom. Also used: mixed mode, interactive, distance education, online.	Lecture is still the most prominent method used in the classroom. Also used: mixed mode, interactive, distance education, online.
Philosophy behind Educational System	Both the concept of application and research important to institutes of higher ed. Historically research was the priority.	
Goal after Graduation	Employability	Employability
Importance of Student	Learner-centered	Teacher-centered learning

Completing a Program in Macro Economics

Briefly introduced in the previous section, the authors determined that the best way to compare higher education in both the United States and Sweden would be to show a side-by-side comparison of a specific academic program from beginning to end. In Table 2 – *Key milestones in completing a Macro Economics program through an institute of higher education in the US and Sweden*, the authors present a step-by-step description of the key milestone required in completing this program in each country. Following the table is a short narrative that highlights some of the key points found in the table.

Table 2 – *Key milestones in completing a Macro Economics program through an institute of higher education in the US and Sweden*

	United States*	Sweden** (Umeå Universitet)
Admittance Requirements	BA/BS <ul style="list-style-type: none"> • GED or high school diploma • SAT and/or ACT minimum scores • Grade Point Average (GPA) minimum requirement • GPA and SAT/ACT minimum requirements based on sliding scale MA/MS <ul style="list-style-type: none"> • GMAT score of at least 500 • 3.0 GPA • 3 letters of recommendation • Essay with application • Resume Ph.D. <ul style="list-style-type: none"> • GRE scores • 3 letters of recommendation • Resume • Goal Statement 	Gymnasiet's Betyg Högskoleprovet (High School Grades and the national standardized test)
Residency Requirements	Only necessary for tuition purposes	Filkand

		Magister Examen
Standardized Testing while Attending	CLAST in second year	Högskoleprovet
Tuition Cost	Undergraduate full-time per year In state = \$3,432.00 Out of state = \$13,254.00 Graduate full-time per year In state = \$5,406.00 Out of state = \$14,546.00	0 SKR / \$. All education is free even for international students. Students do pay for books, living, and accommodation expenses.
Length of Degree Program (time and units)	AA/AS = 2 years/60 credits BA/BS = 4 years/120 credits MA/MS = 1-2 years/30 additional credits Doctorate = 2 years/72 additional credits	BS = 2 years / 120 credits MS = 1 – 2 years / 180 Credits PhD = 1 – 2 years / 240 credits
General Education Requirements for Bachelor of Arts/Science	Communications Cultural and Historical Foundation Mathematics Social Foundation Science Diversity Requirement Foreign Language Requirement	Not Specified
Core Education Requirements	<p>BA/BS</p> <ul style="list-style-type: none"> • Intermediate Microeconomics • Intermediate Macroeconomics • Quantitative Business Tools I • Quantitative Business Tools II • Research Methods in Economics <p>MA/MS</p> <ul style="list-style-type: none"> • Mathematical Economics • Macroeconomic Theory I • Microeconomic Theory I • Econometrics I <p>Ph.D.</p> <ul style="list-style-type: none"> • Mathematical Economics • Microeconomic Theory I • Macroeconomic Theory I • Econometrics I • Microeconomic Theory II • Macroeconomic Theory II • Econometrics II • Advanced Topics in Economic Theory 	<p>BS</p> <ul style="list-style-type: none"> • Macroeconomics • Economic Policy in Open Economies • Microeconomics • Applied Microeconomics and International Trade • Mathematical Economics <p>MS</p> <ul style="list-style-type: none"> • Macroeconometrics • Financial Economics • Industrial Economics • Employment and Income Distribution • Environmental and Natural Resource Economics <p>Ph.D.</p> <ul style="list-style-type: none"> • Financial Economics • Macroeconomics and Stabilisation Policy • Resource Allocation Theory • International Economics • Research Project
Core Education Requirements	BA/BS = MA/MS = None Ph.D. = None	BS MS = None Ph.D. = None
Elective Requirements	BA/BS = 6 electives based on track MA/MS <ul style="list-style-type: none"> • Games and Economic Behavior • Public Economics • International Economics • Experimental Economics 	BS = electives based on track MS = Ph.D. = Required but not specified

- Survey of Environmental and Natural Resource Economics
 - Industrial Organization
 - Economic Development
- Ph.D.
- Games and Economic Behavior
 - Public Economics
 - Experimental Economics
 - International Economics
 - Time Series
 - Industrial Organization
 - Economic Development

Exit Requirements	BA/BS MA/MS = Thesis or Research Paper Ph.D. <ul style="list-style-type: none"> • Qualifying Examination • Candidacy Examination • Dissertation Proposal Examination • Dissertation (18 credit hours) 	BS = Required but not specified MS <ul style="list-style-type: none"> • 45 credits in specialization • 15 credits thesis • 15 credits electives • 15 credits thesis Ph.D. <ul style="list-style-type: none"> • None specified
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Doctorate (Ph.D.) Dissertation Requirements

Exit Requirements	BA/BS <ul style="list-style-type: none"> • A 2.0 UCF GPA • 60 credits earned after CLEP • 48 credits of upper division • 30 of the last 36 hours of course work completed at UCF • A maximum of 45 hours of extension, correspondence, CLEP, Credit by Exam, and Armed Forces credits permitted • Complete the GEP, the Gordon Rule, the CLAST and nine hours of Summer credit (if applicable) MA/MS = Ph.D. =	BS <ul style="list-style-type: none"> - 180 credits - 90 credits in Economics - 15 credits in Statistics or Econometrics - 75 credits not specified MS <ul style="list-style-type: none"> - 45 credits in specialization - 15 credits thesis - 15 credits electives - 15 credits thesis Ph.D. <ul style="list-style-type: none"> - 105 credits in discipline - 135 credits dissertation
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*Program information derived from the University of Central Florida 2007-2008 catalog
 **Program information derived from Häggglund, H.P., 2008; Umeå University, 2008

Both the US and Sweden have fairly similar requirements when comparing a similar academic program. For instance, the admittance requirements for institutions in both countries are completion of high school, as well as some form of standardized testing. The program levels (i.e. Bachelor, Master, and Doctorate) are also similar. Finally, the completion requirements of both countries are also comparable. Completion is typically based on credits, grades, and specified courses. As noted in the previous sections of this comparative analysis, differences begin to appear with further investigation.

One obvious difference is in the cost of attendance in each country. In the United States an inexpensive undergraduate education is at least \$3,400.00 per academic year (University of Central Florida). The cost can actually range up to and past \$25,000.00 per academic year

(Yahoo!). However, in Sweden, all education is free, even for international students. The only costs the student is responsible for are books and living accommodations.

There are also various differences found in the specifics of the Macro Economics program. For instance, a major focus exists in the Bachelor of Science program in Sweden towards international economics. This same focus does not exist in the U.S., unless the student expresses interest in an international program. In the U.S., this would fall under specialization. However, the higher education system in Sweden determined international trends to be of great importance to all students studying Economics, regardless of specialization. Several conclusions could be drawn from this apparent difference, which would increase the depth of this comparative analysis.

Comparative Review of Online Learning in Sweden

From the previous review of higher education systems in Sweden and the US, we find similarities in the governance processes and university organizational structure, as well as in the program designs for similar academic degrees. In this section, we will conduct a brief review of the practice of developing and delivering distance education in Sweden. With respect to keeping the length of this project to a reasonable length, some extensive analyzes will not be possible. However, where possible this review seeks a balance that will portray in good faith the state of affairs from an international perspective the practice of delivering college coursework in online formats in the country of Sweden.

Specifically, this review will cover the following: some linguistic considerations in assembling this review, such as key terms and issues that can arise through translation challenges; the organization and technology infrastructure by and through which online teaching and learning can be administrated and delivered; some published perspectives from academics, the Swedish government, and an educator; an American instructional systems design perspective on two reviewed courses delivered online through two different Swedish universities; and concluding commentary.

The central question that guided the development of this portion of the review is the following: “From the perspective of an American trained and educated practitioner in the field of instructional systems design, how can the practice of developing and delivering university level courses in an online format in Sweden be characterized?”

Linguistic Considerations – Key terms

A recurring problem in the field of instructional design that is evidenced in the general body of journal, and non-journal, published articles is agreeing on terms used. The problem becomes even more pronounced when the analysis is conducted on a country with a different language. For the purpose of this review, we arbitrarily choose to use the following conventions of terms as highlighted in Table 3 - *Terminology Conventions between US English and Swedish*:

Table 3 - Terminology Conventions between US English and Swedish

Convention Used Herein	Common Terms in US English	Common Terms used in Sweden
Online learning/Teaching	Distance Education, e-learning, Web-Based Training, Distance Learning, Distributed Learning, etc.	Swedish Net-Based Learning, “distans utbildning,” “utbildning över Internet,” “e-lärande,” “distansutbildning,” “Nätuniversitetet”
W (e.g., web based, no meetings) or M (e.g., mixed mode or blended courses)	web courses, blended courses	“Distans med samlingar i ...” (e.g., blended), “Distans över Internet” or “nät- eller webbaserade” (e.g., web or completely Internet type courses)
Portal	Learning Management Systems – LMS, Course Management Systems - CMS (e.g., Blackboard, WebCT, Angel, etc.)	“Kursdatabasen,” LMS Fronter (Norwegian product)
CMC	CMC (Computer Mediated Communications), email, IM (Instant Messaging), Chat Tools, Discussion Boards, ListSrvs, Social Networking	ICT or IKT (Internet Communication Technologies)
Streaming video	Streaming video, Video through the Internet, Desktop sharing, MSN IM with Video Camera, RealPlayer Video	Telebild

Translation Issues

Some of the materials reviewed were in Swedish and required translation. Two of the authors read and speak both Swedish and English, but only one of the authors can write Swedish to a high degree of fluency. There are free resources on the Internet (e.g., <http://www.worldlingo.com>) to facilitate simple translations. All of these resources were used to produce the findings of this review, but there is always the possibility of problems that can impact a study’s findings due to subjective nature of translation. These potential problems can weaken a premise, or undo an argument. In the particular case of this review, it becomes especially important to stay as true as possible with the intent of the original author as might be derived from its context. As much as this is possible, this rule of thumb was closely followed.

Organization and Technology Infrastructure

Earlier in this review, we presented the governance structure of higher education in Sweden. Online learning/teaching programs and courses follow the same oversight structure for governance and organization as do programs and courses offered in traditional lecture formats. However due to the well developed technology infrastructure in Sweden, program and course delivery strategies using online formats followed a different development path than that commonly found in the US. The technical infrastructure in Sweden is so well developed that the Economist Intelligence Unit placed Sweden first among twenty nations as being the most ready to deliver online learning/teaching. Despite this, it was not until 2002 when Sweden committed SEK470 million (using today’s currency conversion rates: 79.5545 M USD) to create an institution called the Swedish Net University (Christie & Jurado, 2007). The Swedish Net University (SNU) is a cooperative venture between 35 colleges and universities in Sweden that together can deliver more than 3,000 courses and 100 programs (Swedish Agency for Networks and Cooperation in Higher Education, 2008b) through a single portal (English version: <http://english.netuniversity.se/> ; Swedish version: <http://www.netuniversity.se/>).

The mode of the courses offered through SNU includes both types W and M. For the M type courses (blended), the organization has a number of “Learning Centers” throughout the country of Sweden where students will congregate and meet with instructors for face-to-face instruction. Through these learning centers, students can also seek administrative, technical, and academic advice, as well as use the center’s computers (Christie & Jurado, 2007).

In addition to W (web only) type course, SNU offers some courses that are M, but there is no physical meeting. Instead, instructors and students use web cameras (see the following Swedish description: <http://www.netuniversity.se/page/4112/hurgardettill.htm>). This course type is similar to an ITV (Interactive Video) courses offered at the University of Central Florida (UCF) through the College of Engineering. According to SNU 2007 statistics, some Swedish universities are contributing the following number of courses (in parentheses): Dalarna University (435), Mid Sweden University, (282), University of Gävle (277), Umeå university (250) Karlstad University (248), and Uppsala University (220) (Swedish Agency for Networks and Cooperation in Higher Education, 2008a). One report states that 8% of university enrollment for 2007 in Sweden were students who registered to take courses through SNU, and two thirds of current SNU students study entirely online (Christie & Jurado, 2007).

State of Affairs: Published Perspectives – Academics

A brief review of published papers on the topic of online learning and teaching in Sweden reveal a national interest to develop online learning/teaching, but that there are also problems. The alignment between outcome objectives and assessments is difficult to determine. (Evidence from two sample courses will be presented in table 4, later in this review.) In one study, of 20 courses designed for delivery using an online format, 80% were found to follow a teacher centered approach (Christie, 2006). Three quarters of the study materials were heavily text based. Only some university courses made use of Computer Mediated Communication (CMC) technologies as part of the course design. There are distinguished universities that are resisting placing courses online (e.g., Chalmers in Gothenburg and the Royal Institute of Technology in Stockholm) (Christie, 2006; Swedish Agency for Networks and Cooperation in Higher Education, 2008a). And, there are serious accessibility issues for disabled people in taking online courses in Sweden (Björk, Ottosson, & Thorsteinsdottir, 2008).

State of Affairs: Published Perspectives – Government

Government reports proved to be a useful source of information on the viewpoints of online learning and teaching in Sweden. In a report published by Högscoleverket – the Swedish National Agency for Higher Education in 2007, the focus was on answering the question, “What is quality in online learning/teaching?” There are many details outlined and discussed in this report, but reported here are only the most interesting.

The report identifies that there is no well defined online learning/teaching models of pedagogy in Sweden. Academic programs are found to vary between different institutions and academic disciplines. Among the differences were that streaming video was common in some places, but not in others, and how it was used varied as well. Also, students were surveyed on a question whether they found their university teachers to have their courses well planned and organized, and the largest response (39%) was in the category “Somewhat Agree,” against which 10% Completely Disagree, 36% Mostly Agree, and 15% Completely Agree (Högscoleverket –

Swedish National Agency for Higher Education, 2007, p. 26). The most satisfied students were those who took online courses that combined group work in face-to-face meetings (i.e., M type courses). The opposite of this was when there were no group face-to-face meetings and students didn't receive satisfactory direction from the instructor, where "...it can happen that days or weeks go by without the instructor responding to emails (Högskoleverket – Swedish National Agency for Higher Education, 2007, p. 26). The report also identified an increasingly common practice that instructors are teaching the same course in both a face-to-face format and online. From this, large gaps between instructor competencies on the pedagogy of online learning/teaching and online practice were found (p. 27). Instructors tended to provide direction *only* during the face-to-face sessions for M type courses (p. 28). Since online students are removed from the campus resources, these students found that they are more dependent (then are students taking courses in the traditional face-to-face format) upon course and program administrators (p. 28).

The report also identifies that there is a weak connection between the theoretical and applied portions of online courses (p. 37). Between 30 and 40% of the surveyed students expressed criticism towards the integration between theory and practice. The perception is that the theory and applied sections of a course are separate and distinct from each other. The report also identifies areas within the practice of online learning/teaching that need improvement:

- Clear structure and course design that is well integrated
- Clear student directions on successful fulfillment of course objectives (i.e., shift to a student-centered model) (p. 42)
- Access to technical and online pedagogy competency training programs for instructors
- Redesign traditional face-to-face courses to online formats that properly use the affordances of CMC technologies
- Develop online courses that consider student needs and interests (p. 43)
- Develop resources for students enrolled in online courses or programs that include technical support, library services, and program advisement
- Determine the technical and organizational requirements for internal and external collaboration
- Provide quality assurance for education components that is provided by community learning centers (p. 44)

Buried near the end of another report by the Swedish government in a section specific to online learning/teaching, the authors of the report identify the elements of quality for online learning/teaching. This section is appropriately titled, "Methods Development" and focuses on how to improve the "...understanding on what comprises quality with regards to online learning/teaching, and how that quality can be evaluated within the national framework for quality assurance in higher education" (Högskoleverket – Swedish National Agency for Higher Education, 2008, p. 33). As a result of a study conducted in 2007 that was based on policy analysis, collaboration via networks, and international research, the report presents 10 elements that comprise quality in online learning/teaching:

- Digitally ready materials
- Structured and virtual environments

- Communication, collaboration, and interaction
- Evaluation of student learning outcomes
- Flexibility and customization
- Support (to students and employees)
- Employee competencies and experience
- Leadership and vision
- Localization of resources
- Process and oversight (Högskoleverket – Swedish National Agency for Higher Education, 2008, p. 33).

It is worth noting that within this derived framework for quality in online learning/teaching for Swedish higher education, no mention is made for the distinctive pedagogical and systematic approach that constitutes instructional systems design in the US. Worse yet, this report is informed by the earlier report “What is quality in distance education...” that was published through the same government organization, and that report repeatedly identified disparities in the pedagogical considerations of online learning/teaching.

Selected Educator Viewpoint

This review would not be complete without including the perspective of a Swedish practitioner who strives to improve the practice by contributing to the national dialog. It is the perspective of this research team that this individual represents a distinct minority of Swedish educators, but it would require a deeper survey of the published (formal and informal channels) articles in Sweden to verify this. In any environment, there will be visionaries and leaders.

Åsa Nygren published a web-based article titled, “To Create Presence at a Distance” (Nygren, 2008). The focus of this article is to present ways to improve the teacher-student collaboration through online learning/teaching courses. In her article, Nygren describes two aspects that affect the sense of “being there” for online courses: *locality* and *climate*. Nygren explains that locality is the metaphorical geography of the place where you meet online. Climate is the psychological aspect of online learning/teaching that affects how work is done in the locality. From these metaphorical perspectives, Nygren presents structured arguments that reflect the practice of instructional systems design (ISD) in a manner meaningful and easily understood by less experienced Swedish online learning/teaching practitioners. Some of her key points within the locality frame include the following:

- Prepare the course structure, directions, and pedagogy well before course start
- Take contact with students to improve student-teacher engagement
- Encourage students to post questions and comments and show where other students have done so
- If a student has practical questions regarding details of the course design, take care of it immediately; otherwise student motivation is quickly lost
- Engage students in group work and discussion threads, which implies that it is important to create circumstances that value their contributions
- A key role for teachers is to provide feedback – a positive bond between teacher and student requires a regular dialog, as well as planning and clear reconnections [throughout the duration of the course]

- Choose carefully your selections of technologies that will support the course pedagogy and student engagement

Some of Nygren's key points within the climate frame include the following:

- Consider Wenger's important ingredients to a successful online learning/teaching environment that include how often one participates, and also work camaraderie, shared responsibilities, engagement with other students, how one communicates with virtual classmates, and how confident one feels that they will be successful with their responsibilities
- Teacher must realize that student areas of weakness contribute to an open work climate
- Open dialog and a sense for participation to support how students will perceive meaningfulness from the online course
- The more that the instructor feels connected to the online learning/teaching climate, the better will be the creation of online presence in the student's learning process
- Strive towards active engagement by the students in the learning process (Nygren, 2008)

Nygren concludes the article with reflections on how online learning/teaching practices can be contradictory: due to the nature of online learning/teaching, the instructor finds him/herself increasingly more in the role of administrator and technician; against this the instructor must place more emphasis on the planning and the design of the course to best create a sense of presence at a distance.

American ISD Perspective on Two Online Swedish University Courses

Online course designs in Sweden do not follow typical ISD structures that guide educators and instructional designers to build courses. To demonstrate this, approximately 20 online courses were reviewed from two different universities in Sweden: the University of Lund, and Umeå University. From the 20, only two were selected because they presented the greatest amount of detail that would be of interest to an American trained and educated instructional designer. The details of these two courses are presented forward in Table 5 - *American ISD Perspective on Two Online Swedish University Courses*. However, to first provide a sense of organizational commitment to online learning/teaching, consider the following statistics derived from the university's web sites, as well as from the Center for Distributed Learning at UCF as presented in Table 4 - *Institutional Statistics for Online Course Delivery*:

Table 4 - Institutional Statistics for Online Course Delivery

Comparative Item	Swedish Institution(s)		UCF Spring 2007
	Lund	Umeå	
No. Courses (Sections) Delivered Online	W: 96	M: 400+, W: 300+	885
No. Registrations for Online Course Delivery	Unknown	Unknown	25,639

Course Delivery Modalities	W	M, W	W / M / ITV / F/V *
% of Courses Delivered via LMS vs All Courses Delivered	Unknown	Unknown	43%

* Modalities: W: Fully online; M: Reduced seat time (blended); ITV: Interactive video at selected UCF instructional sites; F/V: pre-recorded video available via broadband internet

Sources: Umeå University Web Site, 2008; University of Lund Web Site, 2008; Center for Distributed Learning, University of Central Florida, 2007

In Table 4 - *Institutional Statistics for Online Course Delivery*, we see that when compared with the size of operations for delivering online learning/teaching at UCF, operations in Sweden is smaller, but significant. The authors now compare in Table 5 - *American ISD Perspective on Two Online Swedish University Courses*, how U.S. instructional design elements (i.e., by using ISD principles and strategies) are in evidence or not for online courses in Sweden.

Table 5 - American ISD Perspective on Two Online Swedish University Courses

EVIDENCE OF ISD	Swedish Institution(s)	
Audience Analysis	Lund	Umeå
What is the course title? (topic description)	Education: Competency Development in a Planning Perspective (Kursplan PEDB04)	Children’s World of English 1, English for Elementary School Teachers of Children – Grades 1 – 4
Who is teaching the course and through what organization? (sponsors)	University of Lund	Umeå University
What country is the course offered in? (cultural considerations)	Sweden	Sweden
What language is the course offered in? (language considerations)	Swedish	Swedish
Who is the identified audience that would be interested in/stand to benefit from this course? (other considerations from target audience)	The course is suitable both for new students in teacher education as for practicing teachers who want to develop their workplace planning skills on assessment measures in the workplace.	Elementary School Teachers of Children – Grades 1 – 4
Course Delivery Modalities	W	M
Objectives		
Clearly state target outcomes	Fair. Course description includes outcome objectives that present scope of the course.	Fair. Course description includes outcome objectives that present scope of the course.
Includes explicit and measurable goals and objectives	Poor. The objectives do not include details to make them explicit and measurable.	Poor. The objectives do not include details to make them explicit and measurable.
Organization of objectives appear to be logical, properly chunked, and appropriately sequenced	Good. The objectives' order and descriptions separate disparate learning areas that imply a logical sequence.	Fair. The objectives' order and descriptions demonstrate some tendency to elaborate from the more simple to the more complex, yet there is evidence of some topics that might be better sequenced: one example - the assessment objective might be better last after the student has been into the research literature, reported on different approaches and work forms, and having demonstrated critical thinking on educational materials.

The objectives leverage design considerations appropriate to the cognitive, affective, or psychomotor domains	Objectives appear to include only cognitive domain objectives.	Objectives appear to include only cognitive domain objectives.
The lesson objectives follow Bloom's taxonomy or revised taxonomy	Poor. The objectives include choices of verbs that are vague and will be difficult to demonstrate satisfactory outcomes have been achieved.	Poor. The objectives include choices of verbs that are vague and will be difficult to demonstrate satisfactory outcomes have been achieved.

Instructional Strategies

Generally speaking, the materials, activities, and exercises specifically support each learning objective	Somewhat unknown. Course includes lectures, readings, individual and group project, writing one short paper, critiquing another's paper, and a final exam. More details are not presented.	Somewhat unknown. Course includes lectures, seminars, discussions, individual portfolio building, and a research project. More details are not presented.
The lesson content sequence flows from the general or easy to the specific or more difficult	Unknown.	Unknown.
Contents were clearly communicated and properly chunked	Unknown.	Unknown.
Training gained and sustained learners attention	Unknown.	Unknown.
Training appeared to be relevant to learners' needs and interests	This course is part of Swedish teacher training, so it is mandatory. It is also offered as a continuing education course for teachers wishing to improve their course planning skills.	This course is part of Swedish teacher training for Elementary School, grades 1-4. It is a continuation course to deepen teacher competencies in the subject matter.
Training fostered learners' confidence	Unknown.	Unknown.
The lesson includes a well-defined feedback strategy using multiple channels between instructor and student	Unknown.	Unknown.
There is sufficient time for students to successfully complete all activities and exercises	Unknown.	Unknown.
Figures, graphics, and other multi-media elements are well designed and properly used	Unknown. No other media that would be used in the course is described.	Unknown. No other media that would be used in the course is described.
Use of tools (e.g., telecommunication) were appropriate and well integrated	Unknown.	Unknown.
Training design is based on grounded instructional design theories	Course is based on face-to-face, lecture format training design. It is not known whether the course has been reworked to best take advantage of the online learning delivery strategy.	Course is based on face-to-face, lecture format training design. It is not known whether the course has been reworked to best take advantage of the online learning delivery strategy.

Assessment Strategies

The assessment strategies support each of the learning objectives	Unknown. The included details only state that there will be 3 possible grades: Pass with distinction, Pass, or No Pass.	Yes. The included details state that there will be 3 possible grades: Pass with distinction, Pass, or No Pass. These grades will be applied following review of the areas assessed: Continuous assessment of participation in seminars, the discussions via First Class-conferences, portfolio, and project work. These areas match well with the objectives.
Assessment strategies match skills, knowledge, and attitude outcomes	Unknown.	Unknown.
With consideration to Bloom's taxonomy/revised taxonomy, the assessment strategies are appropriate for the topic or area of study	Unknown.	Unknown.
There is sufficient variety in the assessment strategies to maintain student engagement	Unknown.	Yes. There are at least four different assessment strategies that provides good variety.
The assessment strategies are reasonable given the class time, as well as the skills and knowledge of the students	Unknown. However, given the fact that course is reasonable within a face-to-face format, it might be reasonable to assume the assessment strategies are also reasonable with this online format.	Unknown. However, given the fact that course is reasonable within a face-to-face format, it might be reasonable to assume the assessment strategies are also reasonable with this online format.
The training was satisfying (e.g., worth learners' time and efforts considering outcomes)	Unknown.	Unknown.

Stated Objectives

The student after completed course will be able to:	Expected study outcomes for the accredited course are that the student will be able to:
<ul style="list-style-type: none"> • Describe and argue the fundamental concepts of competence, skill development, and competency analysis • Describe fundamental theories about conditions for individuals' learning within organizations • Understand how changes in the surrounding world influence organizations' and individuals' needs as regards competency and skill development • Understand underlying theoretical and practical principles for planning, implementation and evaluation of skill development measures 	<ul style="list-style-type: none"> • Demonstrate knowledge about the role of language education in social change from academic political and individual perspectives, • Demonstrate knowledge about those central concepts that course plans in languages rests on (communication language skills, interactions, strategies, inter-cultural understanding, awareness and responsibilities) and explain what these factors can mean for the education experience, • Demonstrate the ability to use various ways to evaluate, assess and document students' knowledge and skills in languages in relation to local, national, and international objectives and criteria, • Demonstrate fundamental knowledge in current didactic language research about children's learning and language development in the compulsory education's years 1-4,

- Retain skepticism to different types of literature within the topic area
- Report on and use different approaches and work forms that promote the students' language development in lower ages, and to explain and understand how languages can be integrated with other subjects,
- Communicate through writing throughout the course
- Demonstrate critical thinking by checking and analyzing education materials that occur in language education, in printed and electronic forms, and justify its use in English education in the school.

Assessment Details

Final grades will be the following: Pass with distinction, Pass, or No Pass.	Final grades will be the following: Pass with distinction, Pass, or No Pass.
For the grade Pass, the student must fulfill the stated objectives.	Students assessed with Pass will not be permitted to redo work or retake exams to improve the grade.
For the grade Pass with distinction, the student must also demonstrate theoretical understanding and analytic ability.	For students assessed with No Pass will be permitted to redo work or retake exams at a later date to be determined.

Sources: Umeå University Web Site, 2008; University of Lund Web Site, 2008

It is clear from this review of the two online courses that there are strong differences (even with consideration that in some areas the authors could not gain access to more details) from online designs that are structured from instructional systems design: the objectives lack clearly stated outcomes, the objectives do contain explicit and measurable goals and objectives, and the organization of objectives may indicate some weakness in logical sequencing and chunking, as well as not making use of the Swedish version of verbs from Bloom’s taxonomy (which doesn’t exist as such, but could easily be translated). There are many unknowns in the area of instructional strategies (i.e., pedagogical considerations), so it’s difficult to make a very good assessment in this category of instructional design. A final area that was partially available for review was the assessment strategies. In this area, there was variety between the two courses, which is appropriate, but in both courses, we can assume that the assessment strategies map over multiple objectives, but we do not know how these elements are assessed. It is clear that additional research would be necessary to more fully understand the differences between the two countries. Given this, it remains clear from this brief analysis that Sweden could benefit strongly from a systematic approach to online course design, as the consistency in course designs would improve, and both instructors and students would have a greater confidence in their teaching and learning.

Conclusion

Sweden is clearly targeting the development of online learning/teaching as a means to improve enrollment. The money and effort being spent, the development of a strong technical infrastructure, and the efforts to organize administrative departments and develop quality improvement policies indicate a sincere belief that this educational channel must and should be

pursued. That being said, to a foreigner of Sweden, who is well trained in instructional systems design and instructional design theories, there are glaring gaps in the approach of the instructional designs analyzed through this brief review. Evidence of this instructional systems design approach when analyzed against two Swedish online courses seems sporadic and inconsistent, and even completely non-existent in places. There is evidence of progress: the government reports seek solutions; some researchers are publishing the results of surveys into improving the approach to developing course designs, and an errant educator has a solid grasp of building online presence in the midst of dissatisfaction by students with their online course instructors elsewhere.

Should educators in Sweden wish to look for support in building programs to improve design competencies for online learning/teaching courses and programs, they would find ready partners through the department of Instructional Technology and Course Development and Web Services at the University of Central Florida.

Overall, the two countries are very similar despite the differences in history, governance and administration, and abilities to deliver online learning/teaching courses and programs. However in both countries, the missions of institutions of higher education are concerned with the same general goals: increase basic knowledge and educate a population.

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