Business Education: changes and advances in technology, teaching and learning

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FEA/ USP - Brazil
Summary

- Education
- Objectives and Needs
- Teaching, Learning, Theories, ...
- Learning Styles
- Adult Learner
- Business Education, Accountancy...
- Educational Environment
- Educational Technology
- CBT (BYU)
- Participant-Centered Learning (HBS)
- Reflections
Pacioli (1493), on the relevance of accounting:

“Books should be closed each year, especially in partnership because frequent accounting makes for long friendship”

Geijsbeek (1914, p.27)
“During the Colonial Period there was no formal training for business teachers.

What was provided was either through the apprenticeship method or by private instruction.

It was thought that anyone could teach the business subjects if students could be persuaded to attend the classes.

Very little thought was given to the formal preparation of the business teachers until about 1900.”

Wakin & Petit Jean (1979, p.11)
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1836</td>
<td>Telegraph</td>
</tr>
<tr>
<td>1858-1866</td>
<td>Transatlantic Cable</td>
</tr>
<tr>
<td>1876</td>
<td>Telephone</td>
</tr>
<tr>
<td>1957</td>
<td>Sputnik (URSS)</td>
</tr>
<tr>
<td>1962-1968</td>
<td>Packet Networks</td>
</tr>
<tr>
<td>1971</td>
<td>Internet (begining)</td>
</tr>
<tr>
<td>1973</td>
<td>Global Networks</td>
</tr>
<tr>
<td>1991</td>
<td>WWW (begining)</td>
</tr>
<tr>
<td>1992</td>
<td>Multimedia (web)</td>
</tr>
<tr>
<td>1993</td>
<td>WWW (expansion)</td>
</tr>
<tr>
<td>1995</td>
<td>Hosts (expansion)</td>
</tr>
<tr>
<td>2000</td>
<td>Broadband</td>
</tr>
<tr>
<td>2002</td>
<td>Wireless Networks (expansion)</td>
</tr>
<tr>
<td>2003</td>
<td>Handhelds (expansion)</td>
</tr>
</tbody>
</table>

Fonte: Ferrell & Hirt (2003, p.106)
BE - Approach

Higher Education → Accounting

Technicism vs. Humanism

- Research
- Education
- Outreach

In this sense:
→ UNIVERSITY vs. COLLEGE vs. ... (?!)

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Business Education

- Accounting
- Business Law
- Career Development
- Communication
- Computation
- Economics & Personal Finance
- Entrepreneurship
- Information Technology
- International Business
- Management
- Marketing

Source:
NBEA – National Business Education Association
“The primary purpose of colleges and universities is to provide an education. Not all accounting instructors are aware of this objective, and as a consequence they spend most of their energies in training the relatively small percentage of students who expect to take the C.P.A. examination. This attitude prevails in spite of the fact that under the present curricula of accredited professional schools of commerce... at least 40 per cent of the work toward a bachelor’s degree is required to be taken outside of the school of commerce. Of the remaining 60 per cent only about 25 to 30 semester hours are devoted to accounting subjects...Most public accounting firms prefer university-educated individuals who have taken about one-fourth of their work in accounting.” (AAA 1953, 26-7).
### Curricular Contents

<table>
<thead>
<tr>
<th>I  Basic Formation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Economics</td>
</tr>
<tr>
<td>Law</td>
</tr>
<tr>
<td>Quantitative Methods</td>
</tr>
<tr>
<td>Mathematics</td>
</tr>
<tr>
<td>Statistics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II Professional Formation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting Theory</td>
</tr>
<tr>
<td>Topics on Actuarial Sciences, Auditing and Controllership</td>
</tr>
<tr>
<td>Public and Private Environments</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>III Theoretical &amp; Practical Formation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervised Work Program (Trainee)</td>
</tr>
<tr>
<td>Complementary Activities</td>
</tr>
<tr>
<td>Independent Studies</td>
</tr>
<tr>
<td>Elective Courses</td>
</tr>
<tr>
<td>Computer Laboratory Practice with Accounting Software</td>
</tr>
</tbody>
</table>

**Directives to Curricular Contents for Undergraduate Accounting Programs in Brazil**

Source: MEC
## Credentialism (CFC vs. CPA)

<table>
<thead>
<tr>
<th>Professional Sufficiency</th>
<th>BRAZIL - CFC</th>
<th>USA - CPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Accounting</td>
<td>1) General Accounting</td>
<td>Financial Accounting &amp; Reporting (FARE)</td>
</tr>
<tr>
<td></td>
<td>2) Cost Accounting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7) Accounting Theory</td>
<td>Accounting &amp; Reporting (ARE/Federal Taxation)</td>
</tr>
<tr>
<td></td>
<td>10) BR-GAAP</td>
<td>Accounting &amp; Reporting (ARE/Governmental &amp; Not-for-profit Organizations)</td>
</tr>
<tr>
<td>Taxation</td>
<td>8) Private &amp; Public Law</td>
<td>Accounting &amp; Reporting (ARE/Governmental &amp; Not-for-profit Organizations)</td>
</tr>
<tr>
<td>Governmental Accounting</td>
<td>3) Public Accounting</td>
<td>Accounting &amp; Reporting (ARE/Managerial Accounting)</td>
</tr>
<tr>
<td>Internal Accounting</td>
<td>4) Managerial Accounting</td>
<td></td>
</tr>
<tr>
<td>Auditing</td>
<td>5) Auditing</td>
<td>Auditing (AUDIT)</td>
</tr>
<tr>
<td></td>
<td>6) Forensic Accounting (PERICIA)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9) Legislation &amp; Professional Ethics</td>
<td></td>
</tr>
<tr>
<td>Businesses, Regulations and Professional Responsibility</td>
<td>11) Social, Economical and Political Knowledge of Brazil</td>
<td>Business Law &amp; Professional Responsibility (LPR)</td>
</tr>
<tr>
<td>Complementary Skills</td>
<td>12) Portuguese</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13) Financial Calculations</td>
<td>(*) -Language (writing) Skills are considered through the essay questions;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Financial calculations topics are covered by the ARE &amp; FARE Exams;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Information Technology topics are covered by the AUDIT Exam.</td>
</tr>
</tbody>
</table>

Business Education

• Higher Order Skills
• Problem-based Learning
• Learning Styles
• Mentoring
• On-the-job Training
• Collaborative Learning
• Corporate University
• Online Learning
• Case Study (Harvard)

• CRITICAL & CREATIVE THINKING
Accountants (US - CPAs)

**US CPAs - July 2003**

- Members in Consulting: 10,594
- Members in Education: 7,959
- Members in Government: 13,662
- Members in Industry: 148,517
- Members in Law: 2,359
- Members in Public Accounting: 128,688
- Members in Other Areas: 17,964
- Inactive Members: 4,412
- **TOTAL**: 334,155

**BR CFC – April 2003**

- 146,846 (undergraduate)
- 187,326 (high school level)

**Source:**
AICPA – [www.aicpa.org/members/memstats.htm](http://www.aicpa.org/members/memstats.htm)
1. In-class free writes
2. Testing
3. Explain errors on tests
4. Writing test questions for class reviews
5. Papers
6. Rewriting
7. Evaluating other’s writing
8. Journals
9. Projects
10. Class listserv
11. Author an accounting text
12. Class notes
13. Editorials
14. Divided-page journals
15. Small groups
16. Real-life cases
17. Oral reports
18. Class discussion
19. Discussion preparation
20. Get notes from a good student

Source: Blazelton (2000)
Historic Evolution

Underwood Bookkeeping Machine

Accounting Department, National Lead Co., New Orleans, photograph by Covert, 1917.

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Ch. 5] THE LEDGER, POSTING, AND THE TRIAL BALANCE

| Jan. 2 | 1500 | 193- | Jan. 2 | 1 60 - |
| 5     | 596.25 | 3   | 89250  |
| 25    | 2378.25 | 30  | 500 -  |
|       | 15020   | 31  |       |

Cash

“20th Century Bookkeeping & Accounting”  
Evolution - Models / CIT

- Costs / Inventories
- Quality
- Specific Sectors/Industries
- Downsizing/Rightsizing
- Outsourcing
- Automation & Integration
- Operational-Strategic (Management)
- Price Level, Interests, Opportunity Costs…
- EBTIDA, EVA©, MVA©, CVA©, DVA, BSC, SM…
- Chaos Theory, Fuzzy Logic, Neural Nets…
Current Pressures - Evolution

• Movement → Mega-Corporations
• Individual Human Interests (naturals)
• CIT Potential (exponential)
• New levels of utility & value
• More available knowledge
• HR: ↓ quantity (%) with ↑ preparation
Practitioner: key

- Historical Evolution (*Books ➔ ...*)
- Comprehension of the Whole
- Knowledge ➔ Action
- International References (*e.g., SOX*)
- Education (*ISAR, creative professional*)
- Productivity
- Industry-based Investment (*Technology*)

↑ Business Value Proposition
Metaphor

- Information System (Cars)
  - Fuel (quantity) → Distances
  - *Past vs. Present*
  - Now: Several gauges (analogic, digital...)

Autonomy Estimates/
(Distances to be reached)
Schank (1992) external agent: “But at six, all this changes. Children try to avoid having to learn, they fear failure, their educational goals are to please authority or do less work, and the instruction they receive is more like thirty-on-one than one-on-one, including tremendous ridicule and social difficulties caused by their peer group. What has happened? The six-year-old has started school.”
Educational Environment (cont.)

• Educational Environment
  – Johnson (1996) - Factory Model: “students are viewed as raw materials that move through various processes until the desired product is achieved”.
  – Brufee (1993, 66) stated that some institutions or programs only focus on the “...one-to-one relationship between student and teacher”, while “...there is no recognized, validly institutionalized, productive relationship among students.”

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Educational Environment (cont.)

• ENVIRONMENT
  – The environment, or nature, plays another tremendous role in this context, supplying in a long-run approach the main conditions and all the reality. In some sense a huge part of the external material which the individual will need and use, will be extracted from the environment.

• **INSTITUTION**
  
  – The *institution* involved in this process, as the *school*, the *company*, the *state*, the *church* etc., also has its contribution, once it should be offering the perfect combination of people (e.g., staff), methods, subjects, approaches, materials, and instruments, in fact, *relevant tangible and intangible conditions* that would support the learning experiences.

*Source: Cornachione Jr. (2003)*
• SUBJECT
  – The **subject** is a relevant aspect of this process, considering that while establishes the **ground** where all the communications and efforts will be developed toward learning experiences.

*Source: Cornachione Jr. (2003)*
• INSTRUCTOR
  – The instructors, or masters, professors, instructors, teachers, experienced, etc., as conducting the novices or apprentices through the sometimes hard, sometime soft, paths of knowledge, is another significant part of this play.

• STUDENT
  – The student itself, of course, is an important factor. His lifelong experiences, not mentioning several pre-born conditions, may influence, both positively and negatively, the behavior, awareness, creativity, response level, motivation, capacity of dealing with abstractions, with reality, and many other characteristics.

• COLLEAGUES
  – The colleagues are prominent players, performing closely to the student as a source of discussion and reasoning throughout the progress in the program, with the advantage of helping (or disadvantage of disturbing), according to their real interests, knowledge, or focuses.

Concepts...

-Class

-Classroom

EXTREMES:

Lecture Convention
- Teachers: talk and perform
- Students: listen and watch

Recitation Convention
- Teachers: listen and watch
- Students: talk and perform

("Class artifacts"

(Brufee, 1963)
The Cathedral of Learning Project

University of Pittsburg

http://www.pitt.edu/~natrooms/
Process of Instruction

- Presenting information
- Guiding the learner
- Practicing
- Assessing Learning

Source: Alessi & Trollip (2001, 7), adaptado
## Class Artifacts

### I - Nonprojective Visual Aids
- A. Blackboards
- B. Duplicated Materials
- C. Charts, Pads, and Easels
- D. Practice Sets
- E. Government Forms, Tax Blanks, and other Literature
- F. Publications:
  1. Annual Reports
  2. Periodicals, Magazines, and Newspapers
  3. Professional Pamphlets
- G. Specimen Business Papers and Accounting Records

### II - Projective Audio-Visual Aids
- A. Opaque Projection
- B. Slides
- C. Film Strip
- D. Transparencies
- E. Motion Pictures

### III - Other Teaching Aids
- A. Guest Speakers
- B. Equipment Company Exhibits
- C. Field Trips
- D. Conventions and Meetings
- E. Student Accounting Clubs and Fraternities
- F. Bulletin Boards
- G. Part-time Jobs

### IV - Teacher Self-Evaluation Aids
- A. Constructive Student Criticism
- B. Testing Program of the American Institute of Accountants
- C. Sound Recorders

*Source: AAA (1956)*
Class Artifacts - now

Blackboard
Magnetic Board
Flip Chart
TV + VCR
Recorder
Camcorder
Transparencies
Overhead Projector
Software
LCD Projector

Document Camera
SoftBoard
Videoconference
Audioconference
Chat
Forum
Virtual Collaborative Env.
WebCT, Blackboard ...
Tapped In, Netmeeting...
LMS (e.g., SABA)

...
Educational Technology

Telecommunications Revolution

Internet

Educational Technology

- Software
- Hardware
- Database
- Telecommunications
But first...

Distance Education

Distance of Education
– Dewey (1939, 5): “...persons do not become a society by living in physical proximity, any more than a man ceases to be socially influenced by being so many feet or miles removed from others”.
1. Integration with policies, strategies and quality standards regarding higher education as a whole and the specific program
2. Project design: the identity of DE
3. Multidisciplinary professional team
4. Communication/interactivity between instructor & student
5. Quality of educational resources
6. Support Infrastructure
7. Quality Evaluation: continuous and broad
8. Partnerships
9. Information on DE undergraduate programs
10. Designing & maintaining costs for DE programs

Source: MEC-SEED (2000)
### DE/ Brazil - programs (2001)

<table>
<thead>
<tr>
<th>Majors</th>
<th>Undergraduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE</td>
<td>483</td>
</tr>
<tr>
<td>ES</td>
<td>3,600</td>
</tr>
<tr>
<td>MG</td>
<td>473</td>
</tr>
<tr>
<td>PR</td>
<td>2,140</td>
</tr>
<tr>
<td>RJ</td>
<td>160</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6,856</strong></td>
</tr>
</tbody>
</table>

- 6 institutions
- 5 states
- 13,976 prospective students
## DE/ Brazil – programs (2003)

**as of Feb. 7th, 2003**

<table>
<thead>
<tr>
<th>Majors</th>
<th>Undergraduate</th>
<th>Graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Education</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Health</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Law</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Sciences</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

*Source: MEC-Sesu (as Feb. 7th., 2003)*
### DE/ Brazil - programs (2003)

#### as of July 14th, 2003

<table>
<thead>
<tr>
<th>Majors</th>
<th>Undergraduate</th>
<th>Graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Education</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>Health</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Law</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Sciences</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26</strong></td>
<td><strong>28</strong></td>
</tr>
</tbody>
</table>

*Source: MEC-Sesu (as July 14th., 2003)*
### DE/ USA - courses (97/98)

<table>
<thead>
<tr>
<th>Field</th>
<th>Total</th>
<th>Undergraduate</th>
<th>Graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>English, humanities, social and behavioral sciences</td>
<td>14,900</td>
<td>13,690</td>
<td>1,210</td>
</tr>
<tr>
<td>Business and management</td>
<td>8,160</td>
<td>6,330</td>
<td>1,830</td>
</tr>
<tr>
<td>Health professions</td>
<td>4,440</td>
<td>2,630</td>
<td>1,810</td>
</tr>
<tr>
<td>Physical and biological/life sciences</td>
<td>2,160</td>
<td>1,890</td>
<td>270</td>
</tr>
<tr>
<td>Mathematics</td>
<td>1,730</td>
<td>1,510</td>
<td>220</td>
</tr>
<tr>
<td>Education</td>
<td>4,990</td>
<td>1,470</td>
<td>3,520</td>
</tr>
<tr>
<td>Computer science</td>
<td>2,400</td>
<td>1,810</td>
<td>590</td>
</tr>
<tr>
<td>Vocational/technical fields</td>
<td>2,340</td>
<td>2,210</td>
<td>130</td>
</tr>
<tr>
<td>Engineering</td>
<td>3,950</td>
<td>1,020</td>
<td>2,930</td>
</tr>
<tr>
<td>Agriculture and natural resources</td>
<td>620</td>
<td>500</td>
<td>120</td>
</tr>
<tr>
<td>Library and information sciences</td>
<td>420</td>
<td>110</td>
<td>310</td>
</tr>
</tbody>
</table>

Most expressive fields with distance education courses offered in US postsecondary system during the academic year 97-98

*Source: Based on NCES #2000013 (1999, 25), adapted*
<table>
<thead>
<tr>
<th></th>
<th>1995</th>
<th>1997-98</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-way interactive video</td>
<td>57%</td>
<td>54%</td>
</tr>
<tr>
<td>One-way pre-recorded video</td>
<td>52%</td>
<td>47%</td>
</tr>
<tr>
<td>Two-way audio, one-way video</td>
<td>24%</td>
<td>14%</td>
</tr>
<tr>
<td>Two-way online interactions</td>
<td>14%</td>
<td>-</td>
</tr>
<tr>
<td>Internet synchronous courses</td>
<td>-</td>
<td>19%</td>
</tr>
<tr>
<td>Internet asynchronous courses</td>
<td>-</td>
<td>58%</td>
</tr>
<tr>
<td>Two-way audio</td>
<td>11%</td>
<td>6%</td>
</tr>
<tr>
<td>One-way audio</td>
<td>10%</td>
<td>6%</td>
</tr>
<tr>
<td>One-way live video</td>
<td>9%</td>
<td>6%</td>
</tr>
<tr>
<td>Audiographics</td>
<td>3%</td>
<td>-</td>
</tr>
<tr>
<td>Other computer based technology</td>
<td>22%</td>
<td>-</td>
</tr>
<tr>
<td>CD-ROM</td>
<td>-</td>
<td>7%</td>
</tr>
<tr>
<td>Multi-mode Packages</td>
<td>-</td>
<td>8%</td>
</tr>
<tr>
<td>Other technologies</td>
<td>5%</td>
<td>2%</td>
</tr>
</tbody>
</table>

*Source: Based on (NCES #98062 1997, 11; NCES #2000013 1999, 38), adapted*
## Distance Education Delivery Methods

<table>
<thead>
<tr>
<th>Method</th>
<th>Undergraduate</th>
<th>Graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Live TV or Radio</td>
<td>37%</td>
<td>43%</td>
</tr>
<tr>
<td>Prerecorded TV or Radio</td>
<td>39%</td>
<td>28%</td>
</tr>
<tr>
<td>Internet</td>
<td>60%</td>
<td>67%</td>
</tr>
</tbody>
</table>

*Distance Education Delivery Methods*

*Source: Based on NCES (#2003154, 22), adapted.*

Students who took DE courses:
- Undergraduate: 8%
- Graduate: 10%
### Distance Education Students’ Satisfaction Compared to Regular Classes

**Source:** Based on NCES (#2003154, 23), adapted.

<table>
<thead>
<tr>
<th></th>
<th>Undergraduate</th>
<th>Graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>More satisfied</td>
<td>23%</td>
<td>22%</td>
</tr>
<tr>
<td>Equally satisfied</td>
<td>47%</td>
<td>51%</td>
</tr>
<tr>
<td>Less satisfied</td>
<td>30%</td>
<td>27%</td>
</tr>
</tbody>
</table>
### Distribution of Distance Education by Delivery Branch

<table>
<thead>
<tr>
<th>Delivery Branch</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ homes</td>
<td>49%</td>
</tr>
<tr>
<td>Other branches of the institution</td>
<td>39%</td>
</tr>
<tr>
<td>Other college campuses</td>
<td>35%</td>
</tr>
<tr>
<td>Elementary/postsecondary schools</td>
<td>24%</td>
</tr>
<tr>
<td>Work sites</td>
<td>18%</td>
</tr>
<tr>
<td>Libraries</td>
<td>10%</td>
</tr>
<tr>
<td>Correctional institutions</td>
<td>6%</td>
</tr>
<tr>
<td>Community based organizations</td>
<td>4%</td>
</tr>
<tr>
<td>Other sites</td>
<td>13%</td>
</tr>
</tbody>
</table>

*Source: Based on (NCES #98062 1997, 12), adapted*
<table>
<thead>
<tr>
<th>Type of Student</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>81%</td>
</tr>
<tr>
<td>Graduate</td>
<td>34%</td>
</tr>
<tr>
<td>Professional Continuing Education</td>
<td>13%</td>
</tr>
<tr>
<td>Elementary/secondary</td>
<td>6%</td>
</tr>
<tr>
<td>Other Continuing Education</td>
<td>6%</td>
</tr>
<tr>
<td>Adult Basic Education</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
</tr>
</tbody>
</table>

*Distance Education and Types of Students*

*Source: Based on (NCES #98062 1997, 14), adapted*
<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other workers seeking skill updating or retraining</td>
<td>49%</td>
</tr>
<tr>
<td>Professional seeking recertification</td>
<td>39%</td>
</tr>
<tr>
<td>Individuals with disabilities</td>
<td>16%</td>
</tr>
<tr>
<td>Military personnel</td>
<td>12%</td>
</tr>
<tr>
<td>Native Americans/Alaskan Natives on tribal islands</td>
<td>7%</td>
</tr>
<tr>
<td>Non-English speaking individuals</td>
<td>3%</td>
</tr>
<tr>
<td>Other types of individuals</td>
<td>17%</td>
</tr>
</tbody>
</table>

*Distance Education Targeted Students*

*Source: Based on (NCES #98062 1997, 17), adapted*
## Distance Education Courses Developers

<table>
<thead>
<tr>
<th>Developer Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution’s subject area departments or schools</td>
<td>75%</td>
</tr>
<tr>
<td>Commercial or noncommercial vendor</td>
<td>30%</td>
</tr>
<tr>
<td>Another institution of higher education</td>
<td>12%</td>
</tr>
<tr>
<td>Institution’s distance education department / office</td>
<td>7%</td>
</tr>
<tr>
<td>Other developer</td>
<td>6%</td>
</tr>
</tbody>
</table>

*Distance Education Courses Developers*

*Source: Based on (NCES #98062 1997, 18), adapted*
Accrediting Bodies - USA

Accrediting Association of Bible Colleges (AABC)
Accrediting Bureau of Health Education Schools (ABHES)
Accrediting Commission of Career Schools and Colleges of Technology (ACCSCT)
Accrediting Commission of the Distance Education and Training Council (ACDETC)
Accrediting Council for Continuing Educational Training (ACCET)
Accrediting Council for Independent Colleges and Schools (ACICS)
Association of Advanced Rabbinical and Talmudic Schools (AARTS)
Association of Theological Schools in the United States and Canada (ATS)
Council on Occupational Education (COE)
National Accrediting Commission of Cosmetology Arts and Sciences (NACCAS)
Transnational Association of Christian Colleges and Schools (TRACS)

US National Accreditation Bodies
Source: CHEA – Council of Higher Education Accreditation (www.chea.org), as of July 16th 2003
UI UC – DE Experience

MASTER OF EDUCATION

Human Resource Education
  - Companies
  - Organizational Development - OD

Face-to-face ➔ 1 year (9 courses / 3 semesters)
Online ➔ 3 years (9 courses / 9 semesters)

(no Thesis requirement)

Ranked 6th
(US News – Best Graduate Programs)
-UIUC → PLATO (1960) - www.csl.uiuc.edu
Programmed Logic for Automatic Teaching Operations

- Opportunity & Potentiality
  - Campus (U of I)
  - Unity (COE)
  - Department (HRE & EDPSY)

- New Markets + Quality
- Human Resource Education
- Business Education

- Profession (DO vs. KNOW vs. BE)
  - Job Market
    (requirements vs. self-actualization...)
  - Credencialism
    (focus problem...)
  - Competency vs. Seat-Time
    (process...)

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MAKE IT SIMPLE!

No reinventing the wheel...
- Educational System using Internet (e.g., Webboard®)
- Assignments Control System (ACS)
- Audio broadcast (one-way), over the Internet
- Text Chat (two-way)
- Contingency Plans (alternative solutions)
- Internet Pagers (e.g., AIM®)
- Public (free) chat solution (e.g., AOL®, Tapped-in®)
- Telephone lines (1-800)
- Technical Staff
- Teaching Assistants (TA’s)
- Students minimum requirements (Hw, Sw, Telecom)
- Access to the Electronic Library (eLibrary)
- Availability / Commitment - Week hours (+20hs)
Ten impressions

- Distance education is education;
- Technology does not scare, it is not the most important;
- Face technology → seriously and professionally;
- Equilibrium between internal & external solutions ("black box");
- Perfect Solution → interests (teaching & learning);
- Low competition between online and face-to-face programs;
- Values are known and common among participants;
- Limited (e programmed) interactive hours;
- Restricted number of participants (cohort) and pace;
- Different time approach (e.g., 1 year → 3 years).
Parameters Online Model

- Accreditation
- Support
- Infrastructure
- ...

• Flexibility
• Research
• Materials
• ...

Parameters Online Model (cont.)

- Accessibility
- Background
- Workload
- ...

Parameters Online Model (cont.)

- Motivation
- Accountability
- Time Management
- ...

Introduction to Accounting

- Brigham Young University (BYU)
- School of Accountancy and Information Systems
- Instructor: Norm Nemrow
- CD-ROM / 15 lessons
Participant-Centered Learning

• Harvard Business School (HBS)

• CPCL
• 3 CD-ROM
• Business Education & Case Method