Integrating Business Education with Core Academics

Why is it so difficult?
What barriers and challenges exist?
How can these barriers be reduced or minimized?
Business educators are asked to integrate core academics into classes

- NBEA Standards (2007) provide guidelines for the inclusion of core academics in 11 business content areas.
  - Accounting, business law, careers, communication, computation, economics, personal finance, entrepreneurship, information technology, international business, management and marketing.
  - These standards detail the necessary competencies, skills, and knowledge students need to become productive citizens and informed consumers.
Career & Technical Education’s Role

- It is imperative that all students have the basic core academic skills needed to succeed in the workplace and in life.
- Many CTE programs require higher levels of core academic competency than the general academic curriculum (DeWitt, 2010, senior public policy director at ACTE).
- Common Core College and Career-Ready State Standards are being developed by The National Governors Association and the Council of Chief State School Officers (2010) which are intended to develop standards in English-language arts and math development and achievement.
ACTE is involved in these discussions to ensure the link between CTE and academics is strong and includes the following:

- Career-readiness skills within a career path.
- Students apply academic skills in the workplace.
- Students have technical and employability skills.
- College ready includes two-year postsecondary institutions not just four-year colleges and universities.
CTE’s Role in Adolescent Literacy

- The ability to read, write and communicate is a prerequisite to learning in all other subjects – particularly business.
- The reading level of US teens has declined during the past 20 years.
  - Only 35% of 12th graders are considered proficient in reading and can demonstrate overall understanding of texts, make inferences, draw conclusions and make connections to prior experiences.
  - Results on writing exams are similar.
- CTE programs are accepting the challenge to offer students a rigorous and relevant education rich in reading, writing, and math.
Rigorous and Relevant Content

• Surprise! Students prefer to read things that interest them.

• Helping students make connections between reading and writing and the real world helps engage reluctant readers.

• Students are more willing to engage in reading and writing within the context of their CTE program.
  • Business education courses are a natural.

• Projects and activities should involve the in-depth integration of reading and writing along with critical thinking and employability skills like oral communication, leadership and teamwork.
Core Academics

- Core academics are fundamental courses that provide skills students need to survive in the 21st century. The content includes:
  - Reading, Math, Social Studies, and Science.
  - Curricular changes to core content areas have affected business education programs nation-wide.
  - Business teachers must take the initiative to make certain that the core competencies are an integral part of the curriculum.
  - Business teachers may or may not get cooperation from the core academics teachers so they need to be prepared to go it alone while, at the same time, trying to forge partnerships.
Integrating Reading into Business Classes

• Biancarosa & Snow (2004) in *Reading Next*, suggest a blend of elements that fall into two categories: instruction and infrastructure.
  • Instructional Elements include: comprehension instruction, instructional principles embedded in content, motivation, self-directed learning, and ongoing formative assessment.
  • Infrastructure elements include extended time for literacy instruction, professional development, frequent assessment of students and programs.
• Some combination of these factors should be considered to determine what is best for the students.
Strategies for Teaching Reading

- Four types of reading are: skimming, scanning, extensive reading, and intensive reading.
  - Skimming is reading rapidly for main points and big picture.
  - Scanning is reading rapidly to pinpoint specific information.
  - Extensive reading is reading longer segments of text with the emphasis on content.
  - Intensive reading is reading a short segment of text for detailed information.
- Students tend to improve their reading ability when provided with strategic instructions and an opportunity to practice.
The SQ3R approach to teaching reading.

- SQ3R stands for Survey, Question, Read and Underline, Recite and Write, and Review. The SQ3R technique can be found at [http://www.studygs.net/texred2.htm](http://www.studygs.net/texred2.htm).
- To pilot the SQ3R approach you can start by selecting a two or three-page article in a periodical and guide students through each step as they read.
Additional Strategies for teaching reading

- Select a multiple chapter book. Place students in groups determined by the number of chapters in the book. Each student reads and reports on one chapter in the book. This procedure promotes active reading and spoken communication skills.

- Collect business documents which students read and then answer instructor-prepared questions about major points.

- Identify content-related topics such as ethics, cell phone etiquette, identify theft, soft skills, teamwork. Students research, read, and summarize one topic. They submit a copy of the article and the summary for evaluation. They may also prepare a short oral report.
Measuring Reading Levels.

- The Lexile Framework (MetaMetrics, 2000) offers teachers with a tool to measure the reading levels of their students. Refer to [www.lexile.com](http://www.lexile.com)
- For more information refer to:
Integrating Math into Business Classes

- NBEA addresses math from a financial perspective. Students must manage their own finances and they must become financially competent in our complex society.
  - Skills needed include solving math problems, analysis and interpretation of data, and applying sound decision-making skills.
- NBEA believes that skills learned over time are most beneficial.
- Competencies should include calculating interest and interest rates, reconciling bank statements, learning accounting principles, preparing financial statements, preparing tax forms.
Strategies for Teaching Math

- Reading and math are interrelated. Students who don’t read well have difficulty understanding math terms and solving word problems.

  - The recommend group projects which allow students to work together, read aloud, question, and restate concepts.
  - Students need to understand how math is essential to other learning experiences.
Activities to integrate math into business

- “Math Matters in Careers” combines math skills, career opportunities, and computer applications to increase students’ interest and awareness in math careers.
- The “Measure Up” activity emphasizes the importance of using everyday math activities like measuring a room for carpet.
- “Who is moving out after graduation?” focuses on budgeting and selecting affordable housing based on a budget. Students learn terminology, prepare a spreadsheet, and determine where their money comes from and how quickly it is used for necessities.
- Visit:  [www.bankrate.com](http://www.bankrate.com)
- Use newspaper ads to help students compare the cost of specific items and determine where to purchase the best value.
Integrating Social Studies into Business Classes

- Social studies from a business education perspective consists of economics, personal finance, entrepreneurship, international business, management and marketing.
- The National Council for Social Studies has standards that include economics, geography, US history, and world history.
- Activities to integrate social studies with computer applications include:
  - Format newsletters based on historical events
  - Write an ethics policy for an Internet business
  - Conduct web-based research on business and economic topics
  - Use current events related to business and contemporary social issues
Integrating Science into Business Classes

- National Science Education Standards charge teachers with having students understand science as it relates to personal and community health, population growth, natural resources, environmental quality, natural and human induced hazards, and science and technology in local, national, and global challenges.

- Students should learn the scientific process which uses observations, hypotheses, experiments, and analysis to investigate issues and answer questions.

  - Problem-based learning addresses authentic experiences organized around solving real-world issues.
Activities to integrate science with business

- Design and develop a brochure about health and wellness including healthy foods and maintaining a healthy body weight.
- Prepare a multimedia presentation on hazardous water or waste management issues.
- Research and write a paper using APA guidelines on climate and weather patterns.
- Plant an indoor garden, nurture it, and help it grow.
- Prepare a report on chemicals and pesticides.
- Do an in-depth analysis on some aspect of space exploration.
That Being Said: What makes it work?

• The idea of integration of business education into core academics and/or the integration of core academics into the business curriculum is not new or difficult to embrace.
  • For two decades, or more, studies have indicated that students understand and retain knowledge best when they apply it in a practical and relevant setting.
  • CTE and academic integration is supported by educators, business and industry, and government policy makers.
  • Academic and vocational skills are essential in the workplace and help make education for students more meaningful and relevant.
Three essentials for success:

- Academic and business teachers are excited and supportive of the concept, want it to be successful, and are willing and eager to team teach classes.
  - There is a clear respect for one another’s knowledge and work.
  - Positive relationships develop between the CTE and academic teachers.
- Daily instruction and assessment incorporates academic and career and technical skills.
- Class projects are jointly sponsored by academic and career and technical education teachers.
Integrate Literacy Development

• Literacy development is integrated into the combined curriculum. The classrooms are full of textbooks, trade publications, reference books.
  • Students are expected to engage in outside reading of topics related to the curriculum.
  • There is a focus on vocabulary.
  • Students engage in note taking and reading aloud. Literacy development strategies are incorporated including rehearsed reading and the use of editing checklists.
• Teaching literacy is important to the effective teaching and learning of all subjects.
Technology Integration

- Business teachers have computer labs and academic teachers frequently do not. Technology integration can help improve student achievement if successful partnerships are created and implemented.

- **Technology integration encompasses more than merely using computers in a school setting.**

- Technology integration involves the incorporation of technology in lessons to transform learning experiences for students.

- It involves redesigning curricula and aligning lesson content and learning objectives with effective instructional practices.
Technology Integration con’t:

- Technology integration can lead to improvements in students’ reading, writing, and math skills. Collateral benefits are improved computer skills, confidence, and academic motivation.
- Using technology in the classroom involves redesigning curricula and aligning lesson content and learning objectives with effective instructional practices to maximize technology’s benefits.
- Technology offers benefits to learners such as feedback, a multi-dimensional environment, and personalization.
- Timely, rich, and immediate feedback is vital to improving learning and motivational levels.
Technology and Inquiry-based Instruction

- Technology integration appears to be most effective in the context of inquiry-based classroom instruction.
- The impact is evident in developing students’ higher-order thinking skills.
- There appears to be a relationship between inquiry-based teaching methods, technology integration, and higher student achievement.
  - Inquiry-based instruction taps into the student’s tendency to learn through exploration and discovery.
  - Technology facilitates this approach and encourages teachers to redesign their curricula to be more inquiry-based.
Teachers who are trained in TI

- Higher academic achievement by students is linked to teachers who are trained in technology integration.
- Well designed professional development can enhance all teachers’ skill with and attitudes about technology in the classroom.
  - This can positively influence student attitudes about using technology for learning both in and out of class.
  - Technology integration and related instructional innovations take time but the benefits are evident and extend to at-risk students as well.
Guiding Principles for Technology Integration

- These principles can assist business and other CTE teachers work with academic teachers to improve student learning in a variety of subjects as well as overall academic success.
- TEACHERS, not technology, are the key to developing student potential and achievement.
  - A teacher’s training in, knowledge of, and attitude toward technology are central to effective technology integration.
- CURRICULUM DESIGN is critical for successful integration.
  - Teachers must rethink their methods and curricula in order to effectively integrate technology to improve student learning.
  - It is important to combine inquiry-based instruction with technology to enhance academic achievement.
Guiding Principles, con’t

• TECHNOLOGY DESIGN determines the success of integration efforts on student achievement.
  • It must be flexible enough to be used in many settings, deliver rich and timely feedback, and provide students with multiple opportunities to engage with the content.

• ONGOING FORMATIVE EVALUATIONS are necessary for continued improvement from integrating technology into classroom instruction.
  • Successful technology integration demands up-front planning and a focus on program evaluation.
The Bottom Line is that:

- Scientifically based research shows that, provided certain conditions are met, integrating technology in classroom instruction can significantly and measurably improve students’ academic achievement.

- The effect was found for core subjects such as math, language arts, science, and social studies as well as for general achievement in multiple subjects.

- Other benefits include improved computer skills, problem-solving skills, motivation levels, and attitude toward learning.

- Computer-based simulations are particularly effective at increasing academic achievement.
So why aren’t Integration Efforts more successful?
Many Challenges with Few Incentives

- Few Incentives for CTE and Core Teachers to Work Together
  - Scheduling is a problem.
  - Team teaching is difficult to implement and maintain.
  - Not enough computer labs to accommodate students in their core academic subjects.
- Curriculum must be more project based and hands-on.
- Teachers are preparing students to take high-stakes tests.
- Many schools are overcrowded and are made up of students with special needs, language and cultural barriers, poor reading skills, behavioral problems, socio-economic discrepancies, dysfunctional families, poverty, homelessness, substance abuse, and more.
What Can Be Done?
Possible Practices

- Career Pathways and/or career clusters
- Support the Academy Model
- Promote an interdisciplinary approach to education and learning
- Promote career development activities
- Promote class, group, and individual projects
- Support student centered curriculum
- Give students choices
- Support differentiated learning activities
- Accommodate individual needs
- Demand respect, cooperation & collaboration
The Time is NOW! It is Up to US!

- Incorporate reading, writing, composition, thinking, reflection, and analysis into virtually all projects and assignments.
- Engage students in discussions of local, state, and national current events that impact on business, careers, finances, and success.
- Require students to solve unstructured problems.
- Provide incentives for engagement in reading and writing activities outside of class and through their student organizations.

- GOOD LUCK
Thanks for Coming & Spending Your Valuable Time With Us!

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