

Ambient Insight: *We Put Research into Practice*

December 7, 2006 – iLinc Communications Event

Key Findings: 2006-2011 US Real-time Collaboration-based Learning Market Research

*Beyond the Enterprise: Real-time Virtual Labs and Virtual Classrooms
Now in High Demand across All the Buyer Segments*



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Introductions: Audience Poll

What sector do you work in?

- A. K-12 Academic
- B. Higher Education Academic
- C. Business and Corporate
- D. Government
- E. Non-Profit

What is your primary job role?

- A. Content or Instructional Designer
- B. Technical Developer
- C. Teacher or Trainer
- D. Group Manager or Organization Administrator
- E. Seller of Products: Vendor, Supplier, Service Provider, or Consultant

Where are you located?

- A. Canada
- B. US
- C. Europe
- D. Latin America
- E. Other



Learning Technology in Context: Total US Education and Training Market 2006-2011

across Consumer, Academic, Government, Corporate, and Association Segments

Total 2006 Market = \$994.5B

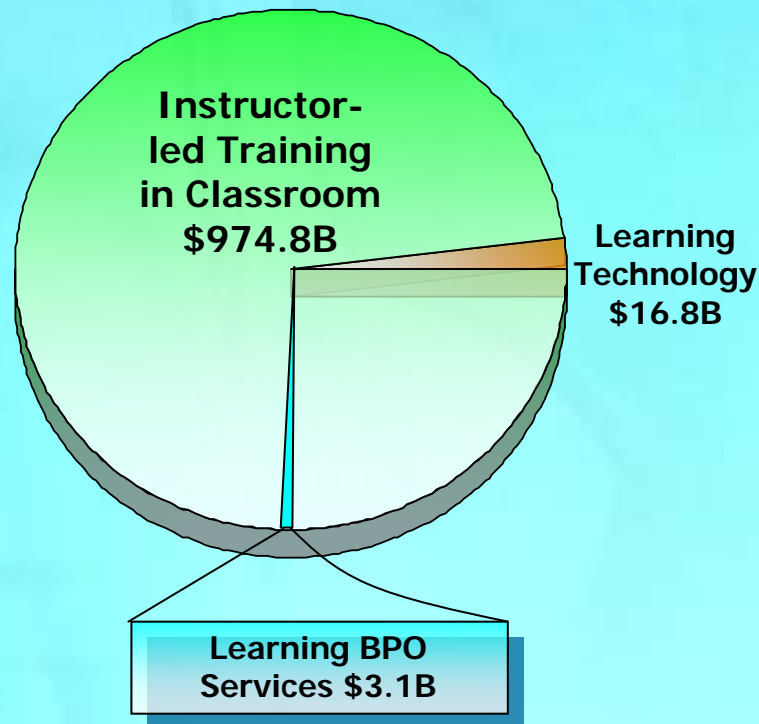
ILT in Classroom \$974.7B

Learning Technology Market = \$16.8B

Learning BPO Services = \$3.1B

■ ILT in Classroom

■ Learning Technology



Total 2011 Market = \$954.0B

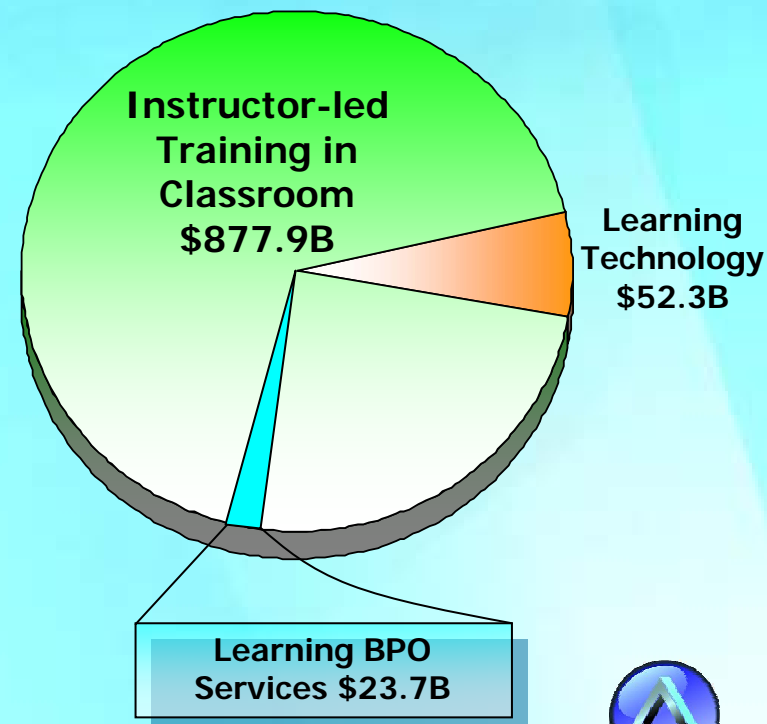
ILT in Classroom Drops to \$877.9B

Learning Technology Market Rises to \$52.3B

Learning BPO Services = \$23.7B

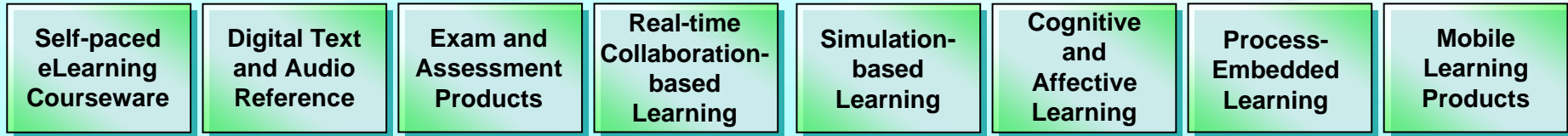
■ ILT in Classroom

■ Learning Technology



Ambient Insight Tracks Eight Pedagogically-defined Learning Technology Products

Ambient Insight's Learning Technology Research Taxonomy



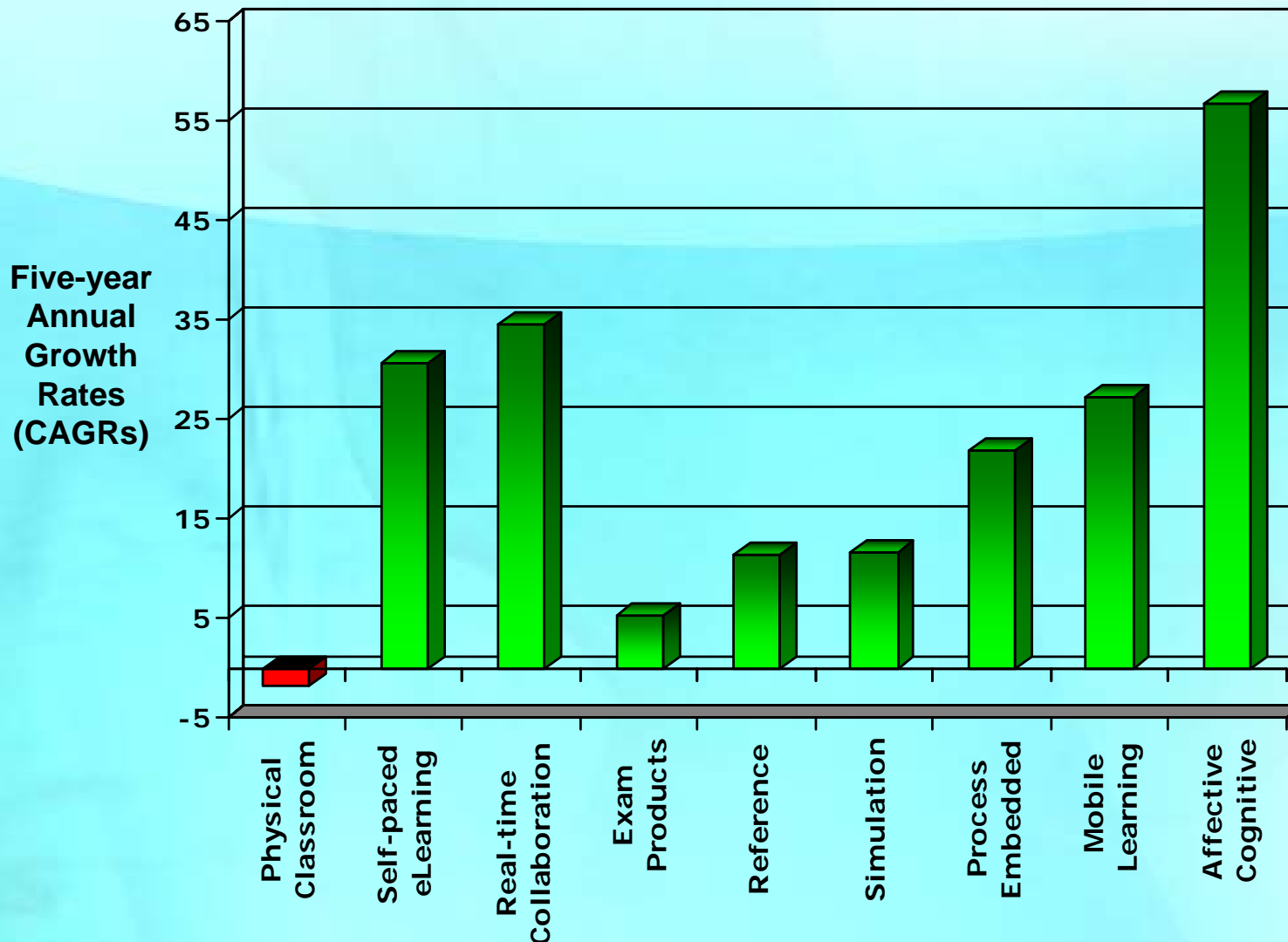
Ambient Insight has developed a learning technology product taxonomy based on pedagogy and information architecture principals.

- ◆ **Self-paced eLearning (courseware)**
- ◆ **Digital Text and Audio Reference (referenceware)**
- ◆ **Exam and Assessment Products**
- ◆ **Real-time Collaboration-based Learning**
- ◆ **Simulation-based Learning**
- ◆ **Affective and Cognitive Learning**
- ◆ **Process-embedded Learning**
- ◆ **Mobile Learning**



2006-2011 Growth Rates by Product Type Across All Buying Segments

80% of all 2011 Learning Technology Revenues will Derive from Self-paced eLearning and Real-time Collaboration-based Learning



Definition of Real-time Collaboration-based Learning

Source: *The US Market for US Real-time Collaboration-based Learning Products and Services: 2006-2011 Forecast and Analysis*

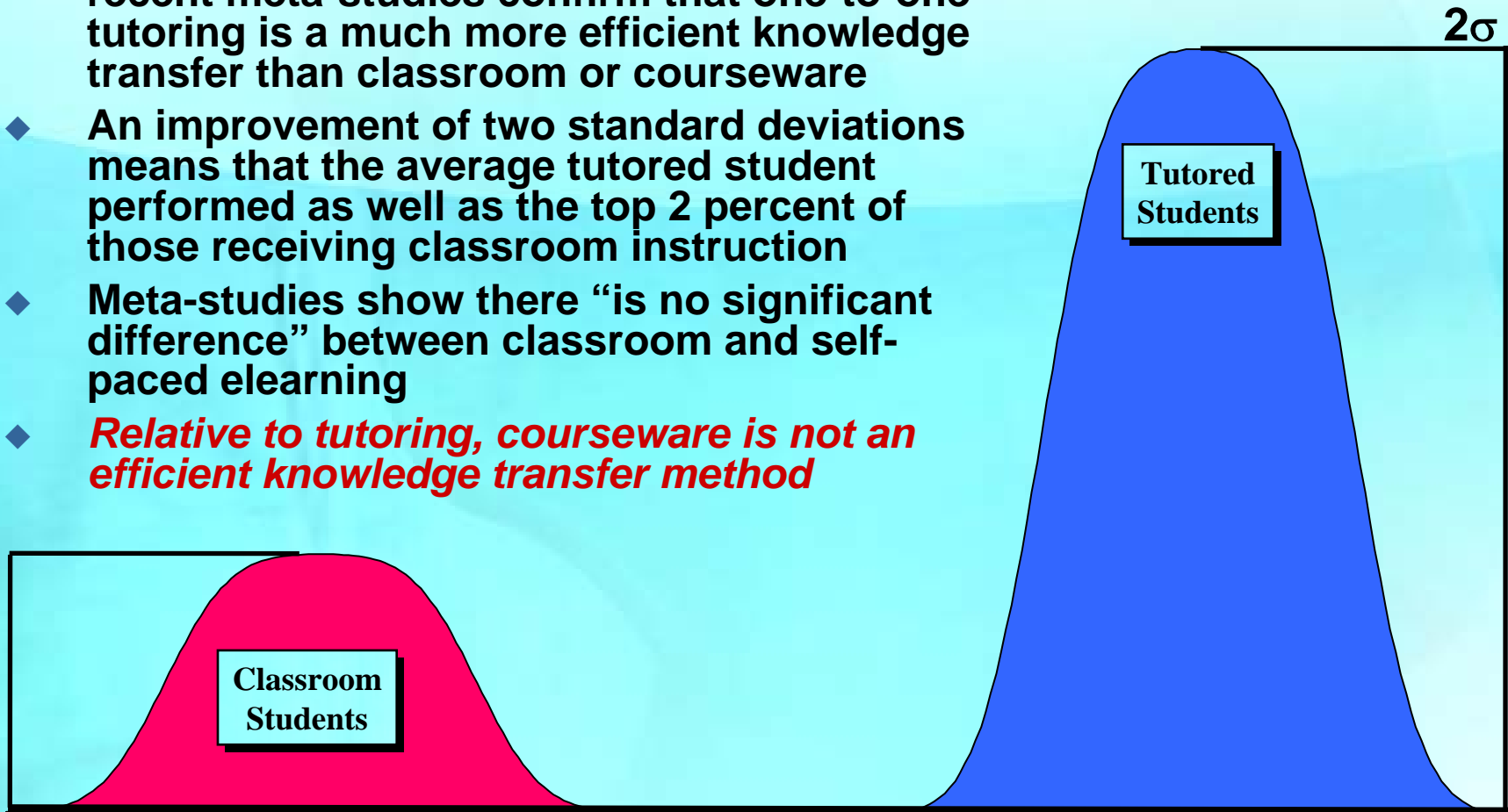
- ◆ **Real-time Collaboration-based Learning is live, technology-based human-to-human collaboration and mentoring**
- ◆ **As a knowledge transfer method, by definition, collaboration requires the real-time interaction between two or more people**
- ◆ **Consequently synchronous collaboration is the defining pedagogical characteristic of Real-time Collaboration-based Learning**



Scientifically Proven to Work: The Most Effective Knowledge Transfer (so far) is One-to-one Tutoring

Courseware is Relatively Ineffective: Bloom's 2-Sigma Problem

- ◆ Bloom's original research and hundreds of recent meta-studies confirm that one-to-one tutoring is a much more efficient knowledge transfer than classroom or courseware
- ◆ An improvement of two standard deviations means that the average tutored student performed as well as the top 2 percent of those receiving classroom instruction
- ◆ Meta-studies show there "is no significant difference" between classroom and self-paced elearning
- ◆ *Relative to tutoring, courseware is not an efficient knowledge transfer method*

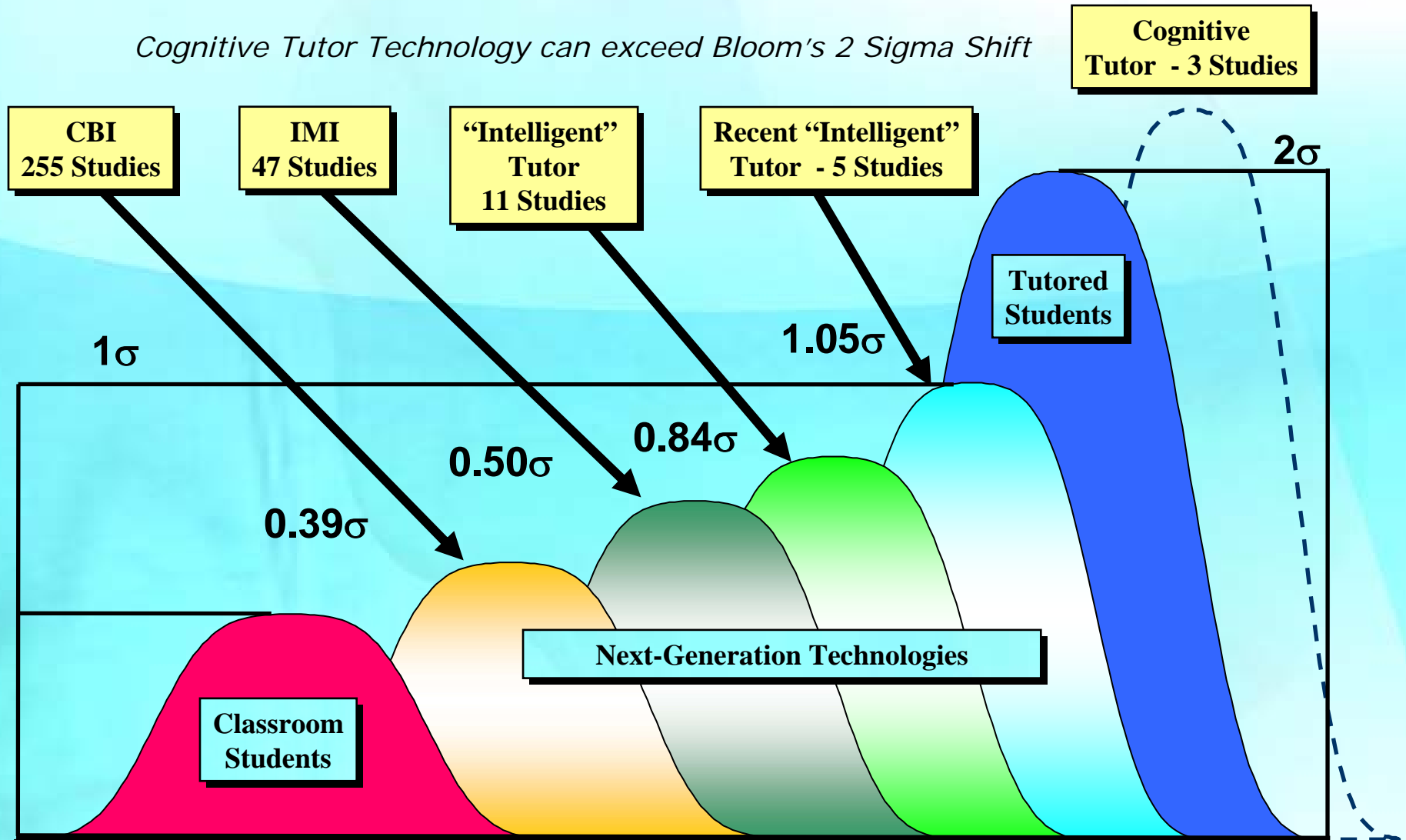


Compiled by: J. D. Fletcher, Institute for Defense Analyses, 2003



Scientifically Proven to Work: The Most Effective Knowledge Transfer Method is One-to-one Tutoring

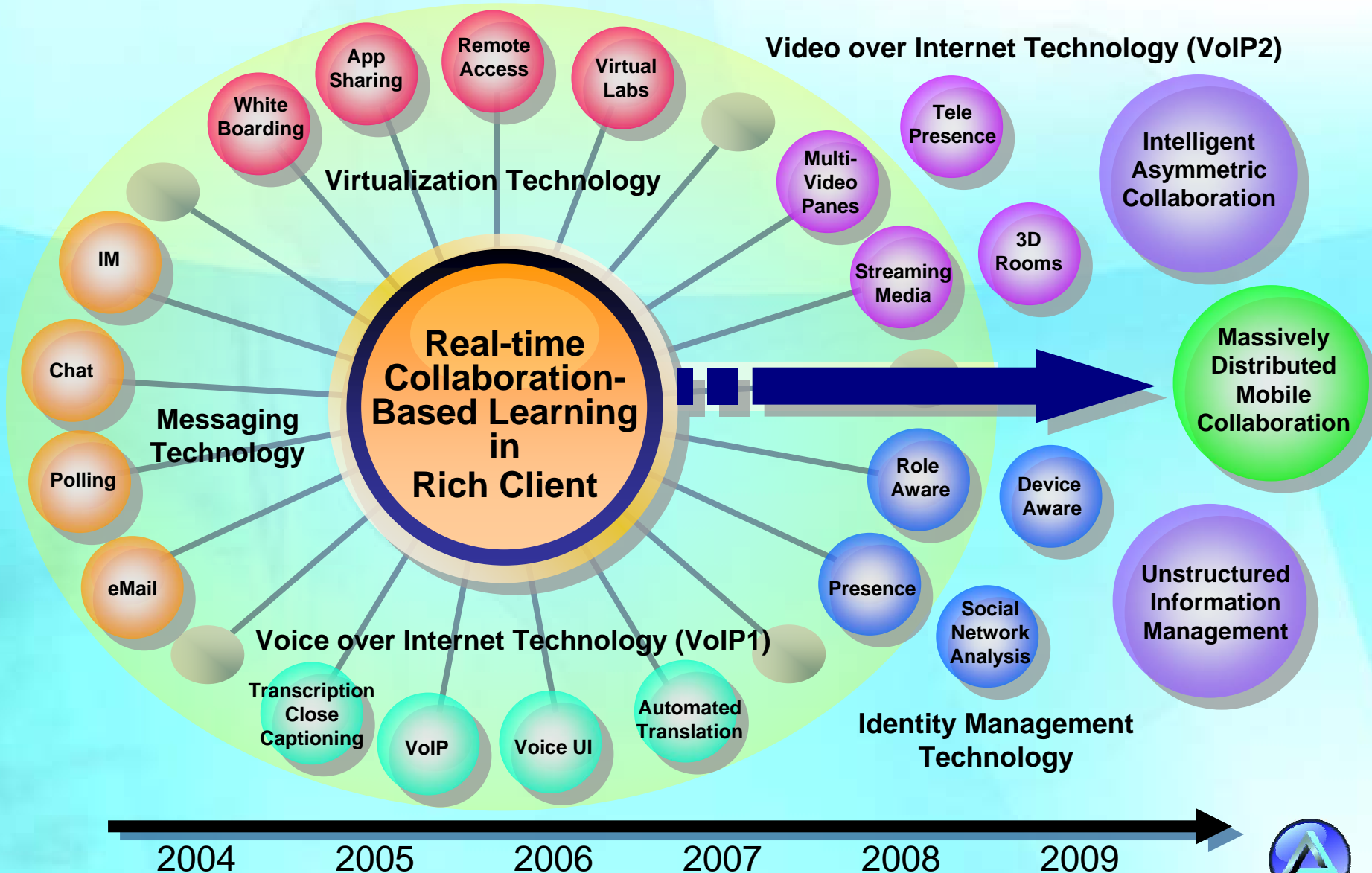
Cognitive Tutor Technology can exceed Bloom's 2 Sigma Shift



Compiled by: J. D. Fletcher, Institute for Defense Analyses
and Sam Adkins, Ambient Insight -- 2006



Real-Time Collaboration-based Learning Leads all other Product Types in Innovation



Collaboration Innovation: Closed Captioning, Custom Collaboration, Social Networking, and Expertise Mining

Source: *The US Market for US Real-time Collaboration-based Learning Products and Services: 2006-2011 Forecast and Analysis*

◆ Live Close Captioning very cool:

Transcription
Close
Captioning

- ◆ Caption Colorado, VITAC, NCI, and WGBH provide 90% of the real-time captioning services for television and the government - moving very fast to collaboration-based learning
- ◆ Caption Colorado now offers real-time captioning services for live online learning events

◆ IBM's collaboration platform revolves around "custom development and social networking":

Social
Network
Analysis

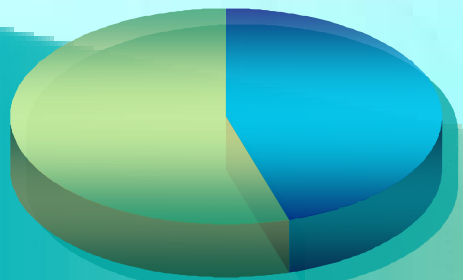
- ◆ IBM's SkillTap tool used on their internal Sametime collaboration platform
- ◆ SkillTap uses social network analysis to create a database of experts that workers use to find experts for real-time help



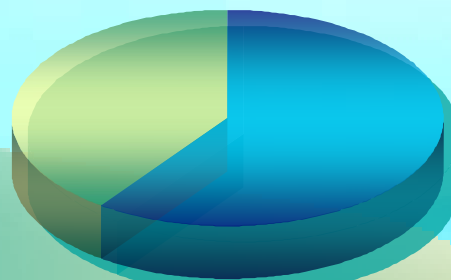
In 2005, 3G Cellular Networks finally started rolling out in the US



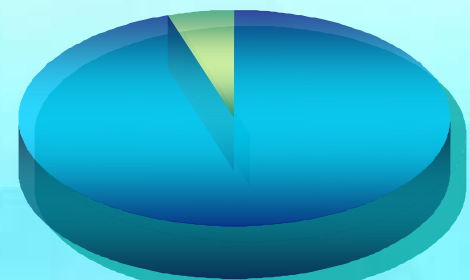
2006



Japan and South Korea

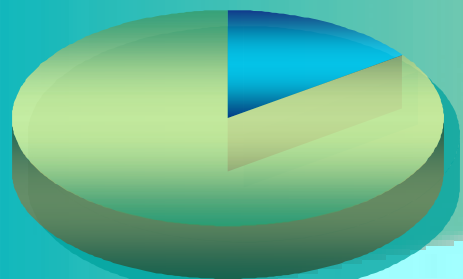


Western Europe

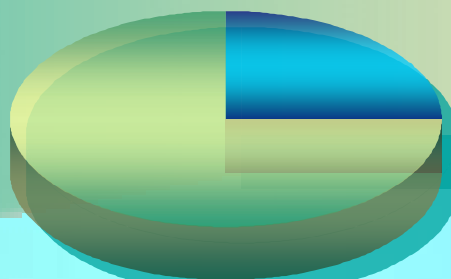


United States

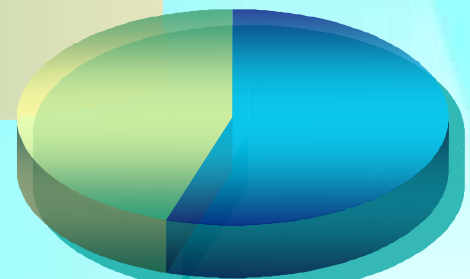
2011



Japan and South Korea



Western Europe



United States



Real-time Collaboration-based Learning Gets Personal on Mobile Devices

Is it Mobile Learning or Real-time Collaboration-based Learning?

◆ Device Makers:

- ◆ Sony and Sony Ericsson
- ◆ Lenova
- ◆ Nokia
- ◆ Catcher

◆ Web Collaboration Vendors:

- ◆ Alice Street
- ◆ PresenterNet
- ◆ Instantstream
- ◆ TANDBERG



Source: Sony Ericsson



Source: Catcher Inc.



Source: Sony



Source: Nokia

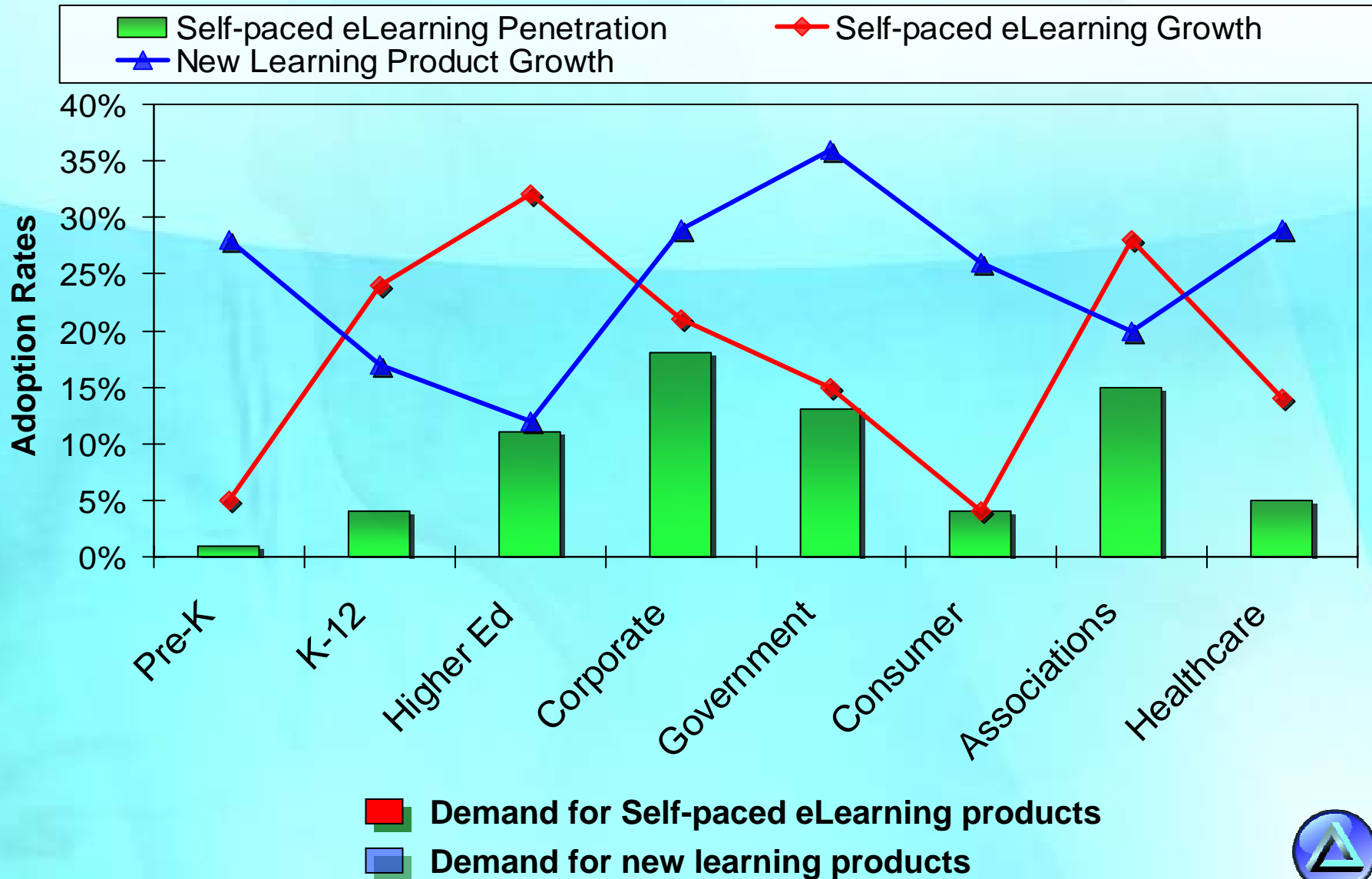


Source: Lenova



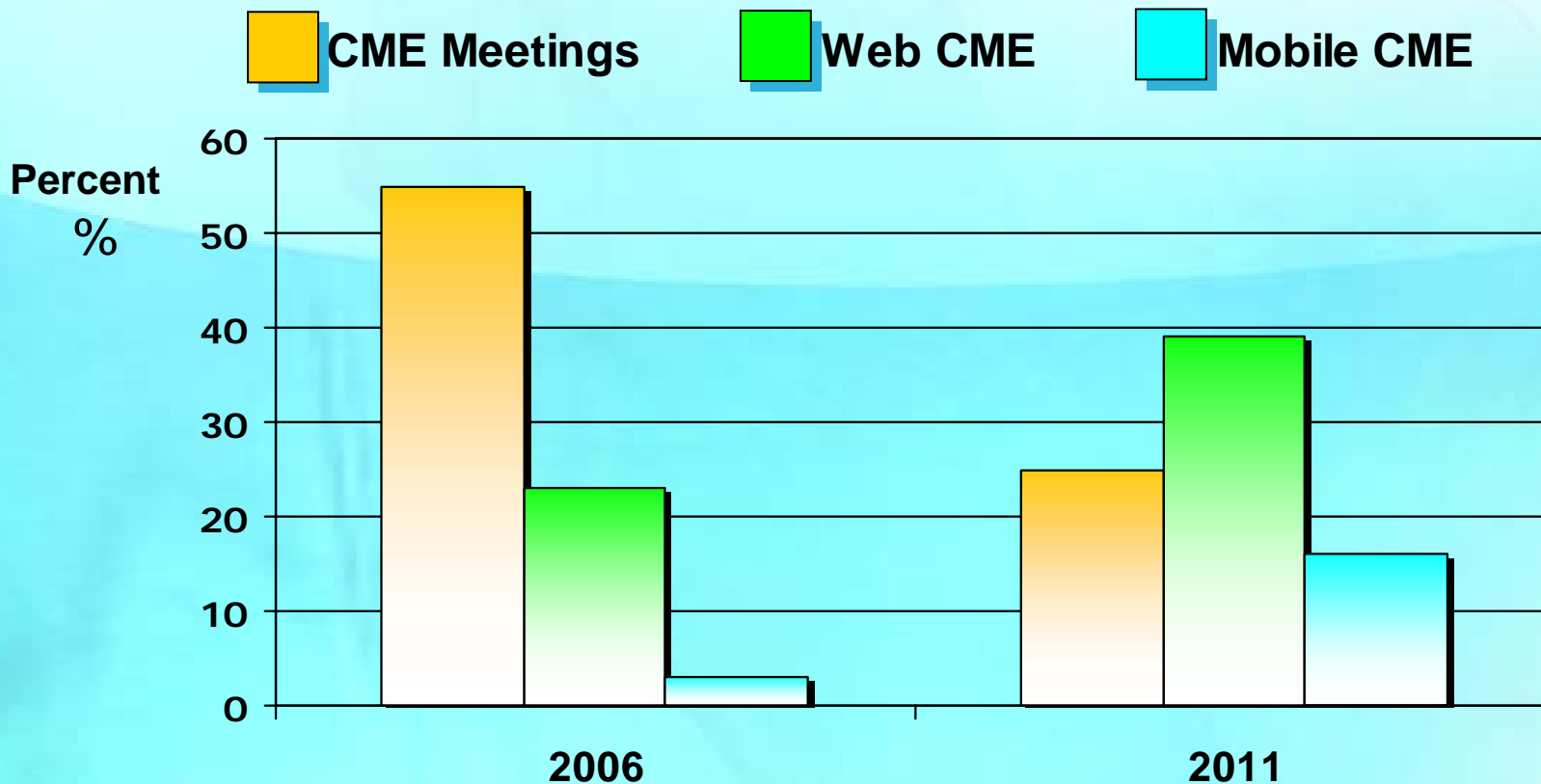
US Learning Product Demand 2006: Courseware Self-paced eLearning Products versus Non-Courseware Learning Products

Includes IT and Non-IT Content Products



Trend: Web-based CME and Mobile CME Rapidly Cannibalizing Meetings and Events

2006-2011 Continuing Medical Education by Format/Medium



- ◆ Traditional meetings and conferences declining by -14.6% (5-year CAGR)
- ◆ Web-based CME growing by 11.1% (5-year CAGR)
- ◆ Mobile-based CME growing by 39.7% (5-year CAGR)



Key Findings: 2006-2011 US Real-time Collaboration-based Learning Market

Source: *The US Market for US Real-time Collaboration-based Learning Products and Services: 2006-2011 Forecast and Analysis*

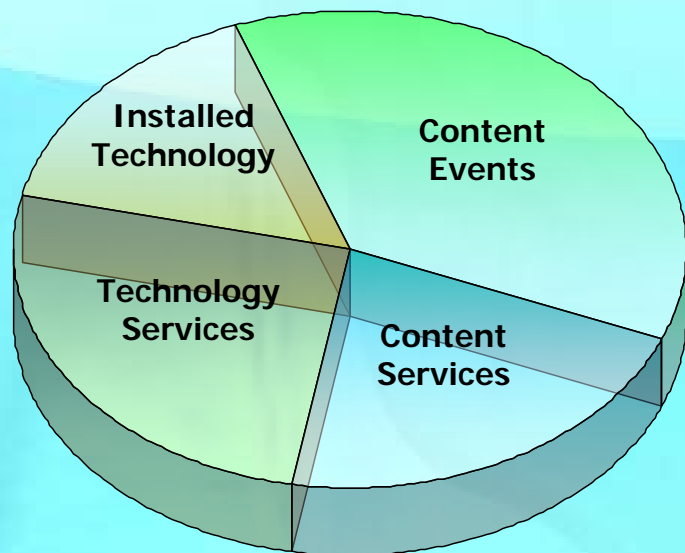
- ◆ The US market for Real-time Collaboration-based Learning is growing by five-year CAGR of 34.5%
- ◆ We track four major product categories and many sub-categories of Real-time Collaboration-based Learning
- ◆ Commercial training vendors moving very fast to Real-time Collaboration-based Learning
- ◆ There is a growing demand for installed on-premises platforms.
- ◆ Growing demand in small and medium business (SMB) market



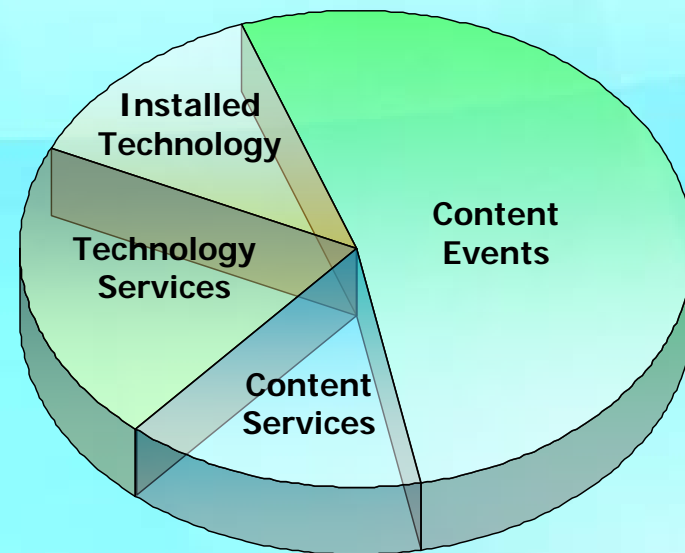
The Four Types of Real-time Collaboration-based Learning Products and Services

Source: *The US Market for US Real-time Collaboration-based Learning Products and Services: 2006-2011 Forecast and Analysis*

Content Events Dominate the Total Market by 2011



Total 2006 Corporate Real-time Collaboration-based Learning Market



Total 2011 Corporate Real-time Collaboration-based Learning Market



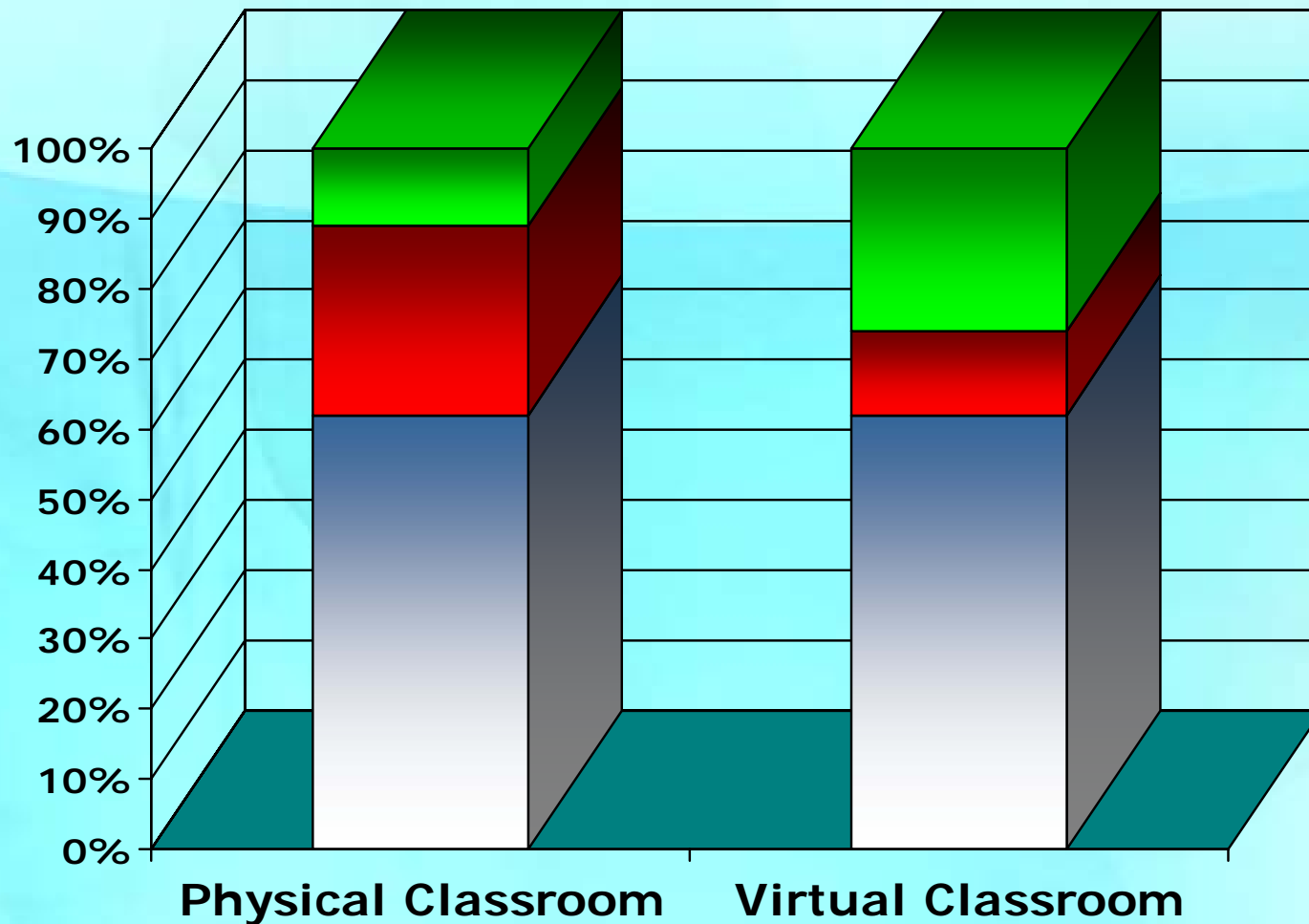
Sub-categories of Real-time Collaboration-based Learning Products and Services

Content Events	Content Services	Technology Services	Installed Technology
	<i>Combined Services</i>		
IT Virtual Labs and Virtual Classes	Virtual Instructor Services	Remote Access and Remote Assistance	Remote Computer Access, Virtualization, & Machine Sharing
IT Educational Webinars and Learning Events	Content Conversion and Development	Virtual Labs	Virtual Labs
Non-IT Educational Virtual Classes	Academic Online Tutoring	Virtual Classrooms and Virtual Learning Environments (VLE)	Virtual Classrooms and Virtual Learning Environments (VLE)
Non-IT Educational Webinars and Learning Events	College Entry, Licensure, and Certification Exam Mentoring	Enterprise Collaboration Platforms used for Learning	Enterprise Collaboration Platforms used for Learning
Live Online Language Lessons	Online Executive Coaching	Product Training and User Conferences	Classroom Collaboration Management Software
Instructor, Teacher and Faculty Development	Individual and Group Business Mentoring	Direct and Downstream Technical Support Services	Maintenance Fees
Association Members Web Training Events	General Individual Adult Mentoring	Customization and Configuration	Developer Tools
Sales & Product Training: Subsidized Partner Webinars	Live Product Tutoring and Third-Party Remote Support	Event Administration and Moderation	Software Tools, Add-Ons, Plug-ins, and Adaptors
Customer Training and Patient Education via Paid Advertising	Live Transcription, Translation, and Interpretation Services	Learning Event eCommerce and Customer Management	Hardware Products
Event After-Market Sales		Integration	
		Localization	
		Archiving, Analysis, Reporting	

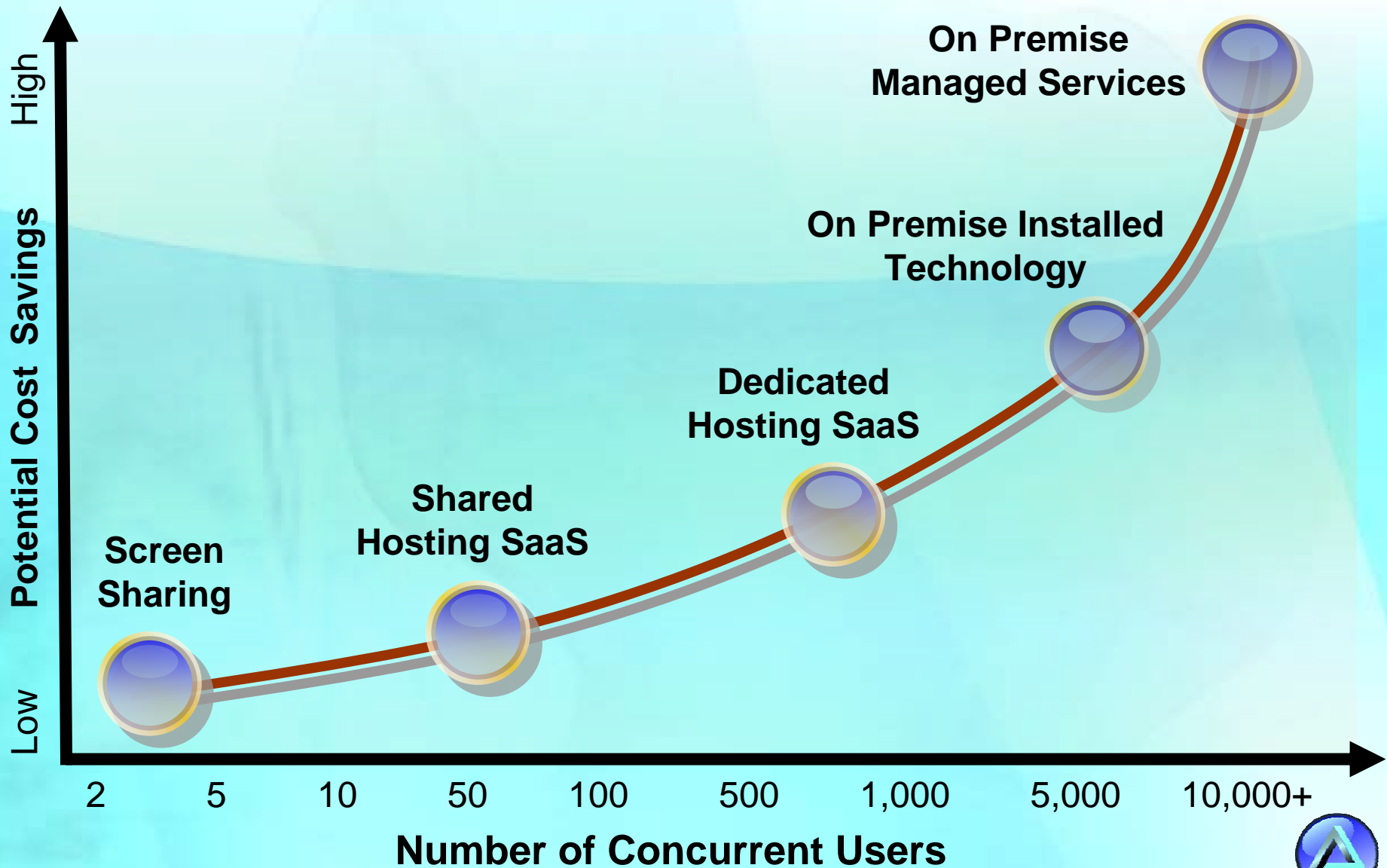


Commercial Content Event Profit Margins: Relative Profits and Expenditures for Physical Classrooms versus Virtual Classrooms

■ Trainer Salaries ■ Operational Costs ■ Profits



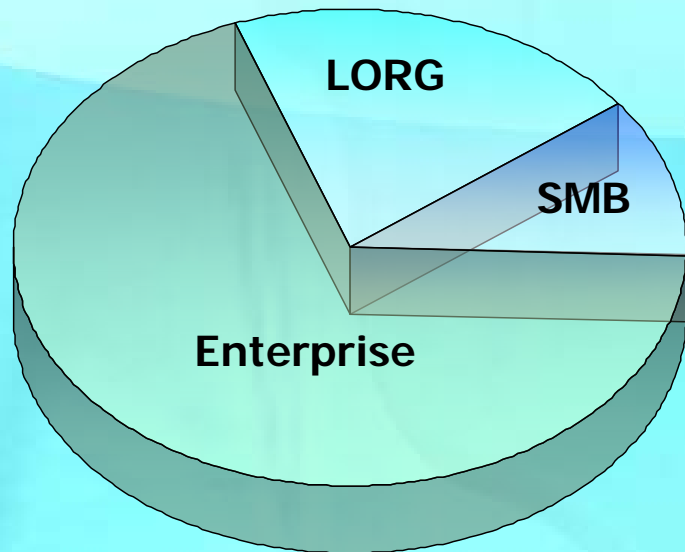
When Buyers of Real-time Collaboration-based Learning Move to Installed Technology Platforms



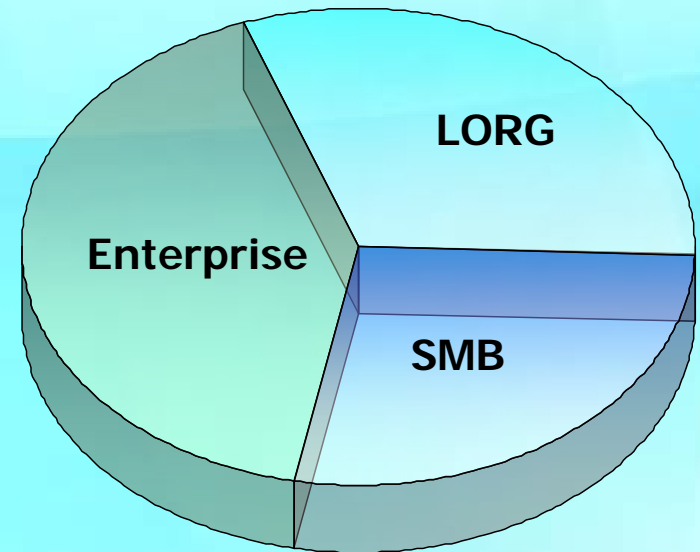
The New Corporate Buyers: 2006-2011 Total US Corporate Market for Real-time Collaboration-based Learning Products and Services

Includes Content Events, Services, and Installed Technology

Non-Enterprise Buyers Dominate the Corporate Market by 2011
(SMB includes both the SmORG and MORG Segments)



**Total 2006 Corporate Real-time
Collaboration-based Learning
Market**



**Total 2011 Corporate Real-time
Collaboration-based Learning
Market**



Key Findings: 2006-2011 US Real-time Collaboration-based Learning Market

Source: *The US Market for US Real-time Collaboration-based Learning Products and Services: 2006-2011 Forecast and Analysis*

- ◆ **Consumers are paying for live product training and live virtual classroom events**
- ◆ **One-to-one mentoring and coaching in high demand**
- ◆ **Suppliers in India aggressively competing for US academic tutoring market**
- ◆ **Virtual K12 schools cannibalizing traditional schools**
- ◆ **Real-time Collaboration-based Learning is displacing Self-paced eLearning in the IT Training industry**

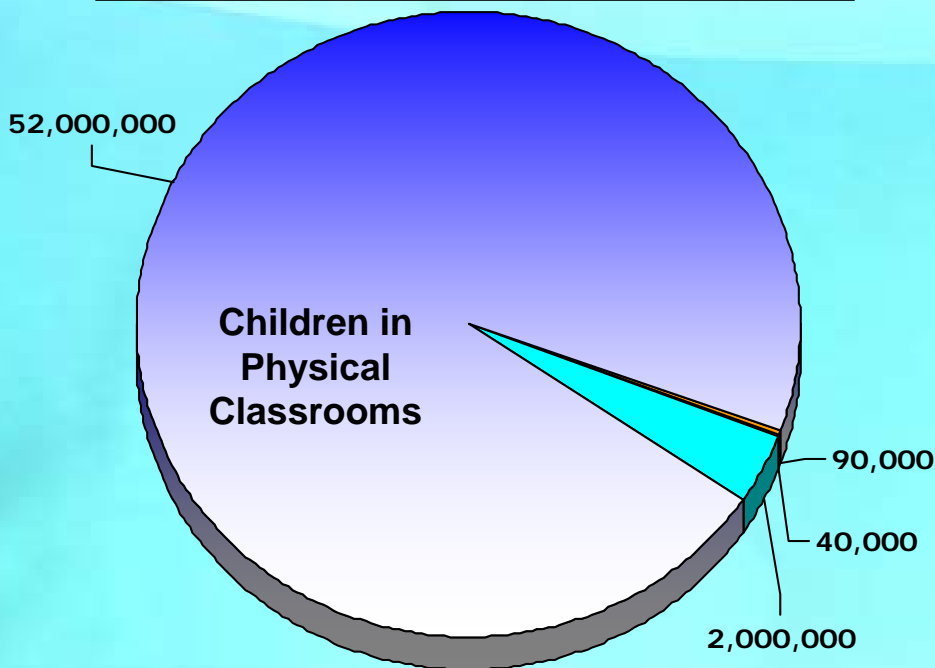


Virtual Schools Cannibalizing Traditional Schools in the US: 16-20% of all Students will be Virtual by 2016

Source: *The US Market for US Real-time Collaboration-based Learning Products and Services: 2006-2011 Forecast and Analysis*

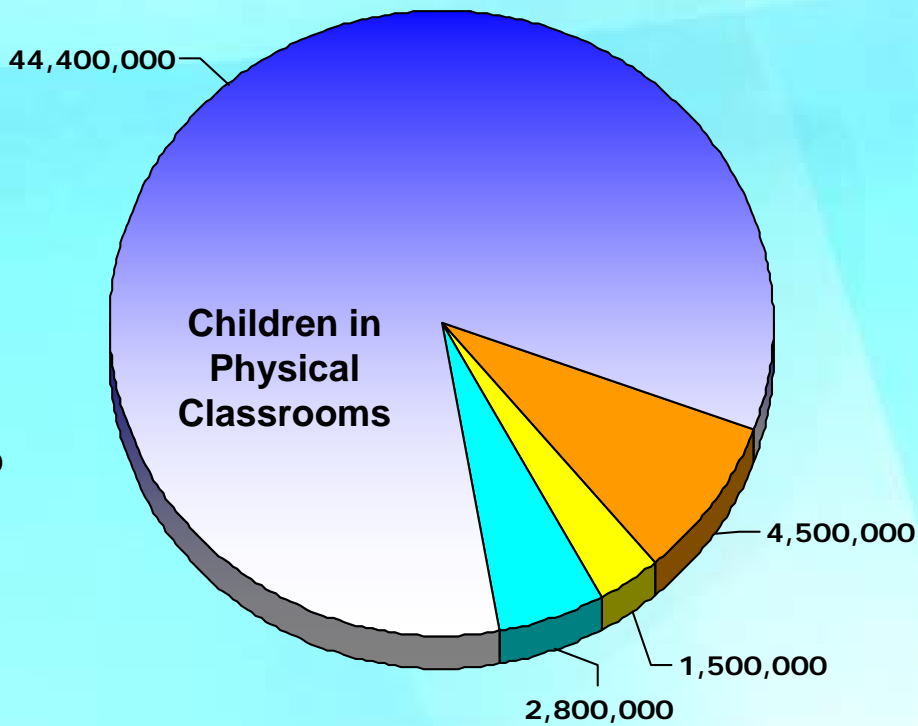
Total Virtual Students in 2006

- Virtual Students
- Cyber Charter
- Home Schooled
- Physical Classrooms



Total Virtual Students in 2016

- Virtual Students
- Cyber Charter
- Home Schooled
- Physical Classrooms



**Trend Accelerated by Universal Broadband and 4G
Wireless Broadband**



Sneak Peek at New Ambient Insight Data: 2007-2012 Top Revenue Generating Products in the IT Training Industry

	2007	2012
1	Classroom	Classroom
2	Services	Services
3	Self-paced eLearning	Real-time Collaboration-based Learning
4	Process Embedded	Self-paced eLearning
5	Simulation	Simulation
6	Exam Products	Process Embedded
7	Real-time Collaboration-based Learning	Reference
8	Reference	Exam Products
9	Mobile Learning	Mobile Learning

Real-time Collaboration-based Learning Eclipses Self-paced eLearning in the IT Training Industry by 2012



Ambient Insight Opinion: Real-time Collaboration-based Learning is Effective and People Like It

- ◆ The wide demand now across all the buyer segments is driven by a number of economic, technical, and social factors, *but the user experience is the primary factor driving adoption ...*
 - ◆ There is a natural affinity between the traditional instructor-led classroom learning experience and the virtual collaborative-learning experience
 - ◆ The transition from the physical classroom to the virtual classroom is a natural progression for instructors, trainers, and students
 - ◆ People enjoy the experience and the knowledge transfer rate can be very high
 - ◆ The market trends and the pedagogical studies confirm that human experts are the most valuable “learning objects”



Sources and Related Research

Ambient Insight: We put Research into Practice

- ◆ **Ambient Insight Learning Technology Taxonomy can be found at:**
 - ◆ <http://www.ambientinsight.com/>
- ◆ **Ambient Insight's 2006-2011 Reports can be found at:**
 - ◆ <http://www.ambientinsight.com/Reports/ReportsMain.aspx>
- ◆ **Follow the Money: Real-time Collaboration Overtakes Self-Paced eLearning in the IT Training Industry**
- ◆ **The US Market for Real-time Collaboration-based Products and Services: 2006-2011 Forecast and Analysis**
- ◆ **The US Market for Self-paced eLearning Products and Services: 2006-2011 Forecast and Analysis**
- ◆ **The US Market for Mobile Learning Products and Services: 2006-2011 Forecast and Analysis**
- ◆ **The US Healthcare Market for Mobile Learning Products and Services: 2006-2011 Forecast and Analysis**



Questions and Comments?



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