



*Shaping the Future* of Assessment

# Testing and Exam Prep in a Mobile World

**Key Findings from Ambient Insight's "The US Market for Mobile Learning Products and Services: 2010-2015 Forecast and Analysis"**

March 1, 2011

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Ambient Insight

[www.ambientinsight.com](http://www.ambientinsight.com)

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# Agenda



- Ambient Insight's Learning Technology Taxonomy
- Definition of Mobile Learning and Overview of the US Mobile Learning Market
- Testing in a Mobile World
  - Academic and Corporate Device-embedded Testing
  - Academic and Consumer Exam Preparation
  - Professional Licensure and Certification Exam Preparation
  - Healthcare Continuing Medical Education (CME)
  - Exam, Quiz, and Assessment Tools and Platforms



# Introductions: Who We Are and What We Do

**Ambient Insight is an integrity-based market research firm that uses predictive analytics to identify revenue opportunities for suppliers.**

- Ambient Insight founded in 2004 by Microsoft Training and Certification veterans - “Boutique” analysis firm specializing in learning technology, M&A analysis, and competitive intelligence
- Clients: Accenture, Adobe, Amazon, Apple, Dell, DeVry, Disney, Education Testing Service, Epocrates, Hasbro, Houghton Mifflin Harcourt, IBM, Kaplan, Microsoft, Proctor & Gamble, RIM, and SkillSoft
- Ambient Insight...
  - Does not evaluate, compare, or rank the effectiveness of learning technology products
  - ***Does not endorse or promote companies or products***



# Ambient Insight's Learning Technology Research Taxonomy

## Eight Buyer Segments

Consumer	PreK-12	Higher Education	Corporations and Businesses	Federal Government	State and Local Government	Associations, NGOs, and Non-Profits	Healthcare
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## Buy Eight Types of Pedagogically-defined Learning Products

Self-paced eLearning Courseware	Digital Video, Text, & Audio Reference	Test Prep & Exam Products	Collaboration-based Learning	Social Learning	Simulation & Game-based Learning	Cognitive Learning	Mobile Learning
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## From Four Types of Suppliers

Packaged Content	Custom Content Services	Software as a Service (SaaS)	Tools and Installed Technology
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# Key Findings

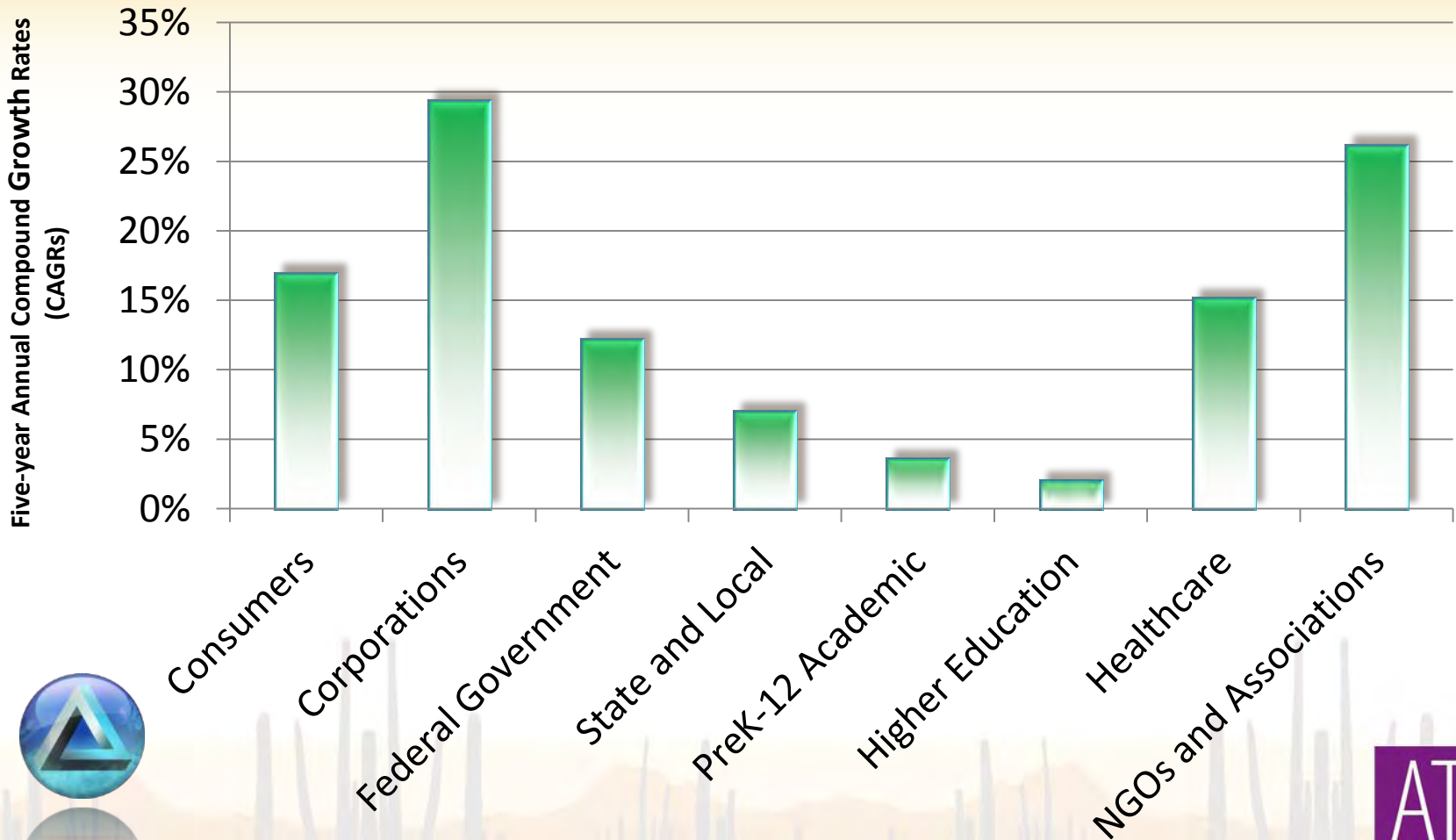
*"The US Market for Mobile Learning Products and Services: 2010-2015  
Forecast and Analysis"*



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# Who is Buying Mobile Learning? 2010-2015 Growth Rates for Mobile Learning Products by Buyer Segment

*Note: Low growth does NOT equate to low revenues. Growth rates can be relatively low and still generate significant revenues for suppliers.*



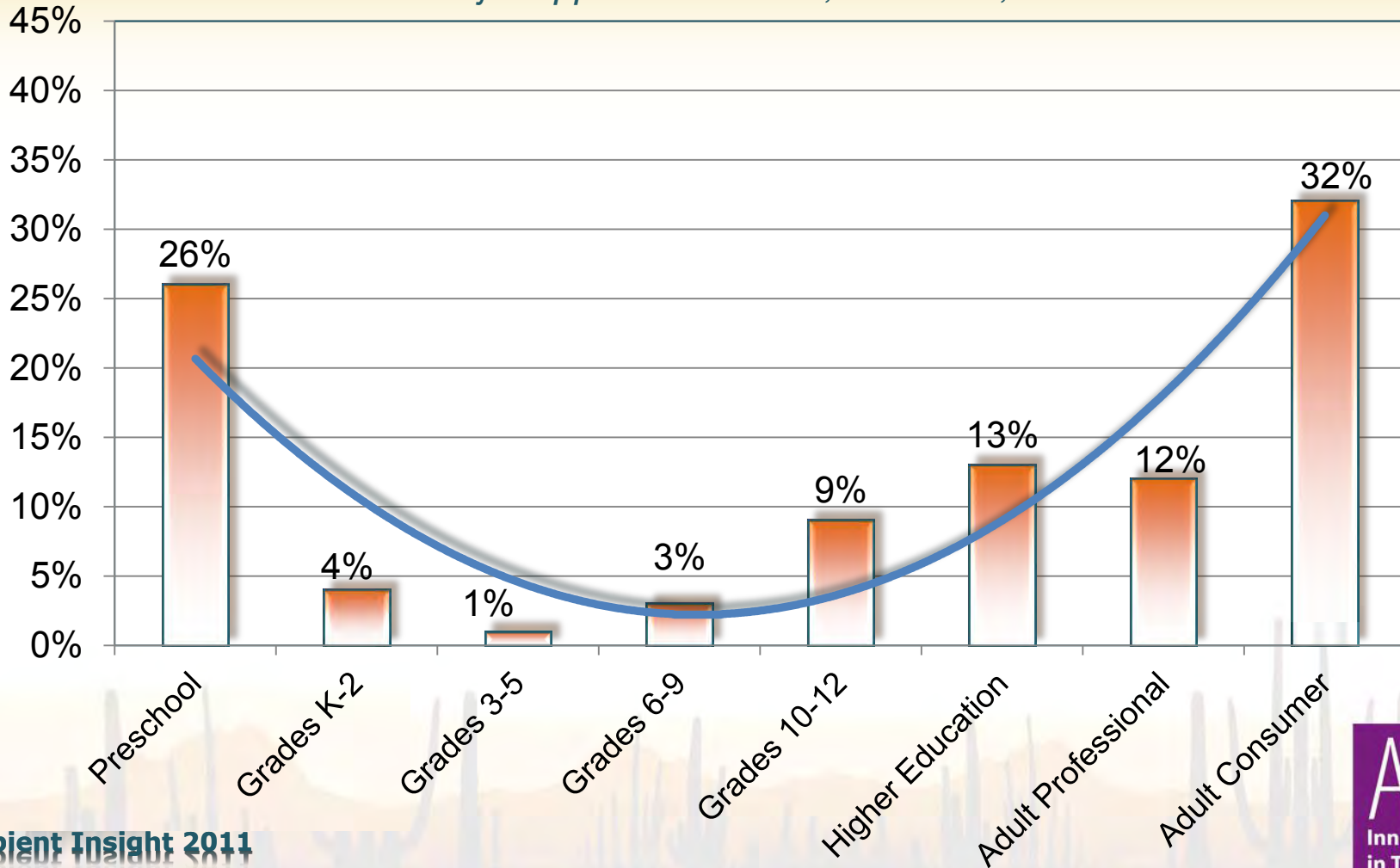
# A Perpetual “Perfect Storm” Drives the Adoption of Mobile Learning



# “The Content Trench” – Percent of Total Paid Mobile Learning Applications in Content Catalogs by Target Demographic

## What's on the Store Shelves?

Consumer-facing Paid Mobile Learning Content  
Across All Major Application Stores, Platforms, and Devices



# Ambient Insight's Definition of Mobile Learning Products and Services

Ambient Insight defines Mobile Learning as knowledge transfer events, content, tools, and applications built using Mobile Information Architecture and accessed on handheld computing devices.

## Mobile Learning Products

- Handheld decision support and performance support
  - Content development tools
    - Installed platforms
    - Technology services
      - Content services
  - Location-based Learning Services
    - Device-embedded Learning
      - Packaged content

## Mobile Learning Products *Specific to Healthcare*

- Handheld medical emergency and clinical decision support
- Content development tools
- Installed platforms
- Technology services
- Content services
- Point-of-care Location-based Learning
- Medical Device-embedded Learning
- Reference, CME, and exam prep



Ambient Insight identifies three native types of Mobile Learning: Handheld Decision Support, Location-based Learning, and Device-embedded Learning.

# Academic and Corporate Device-embedded Testing



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# K12 Device-embedded Quizzes, Polling, and Assessment



Texas Instruments –TI Nspire Navigator  
“Instant Assessment”

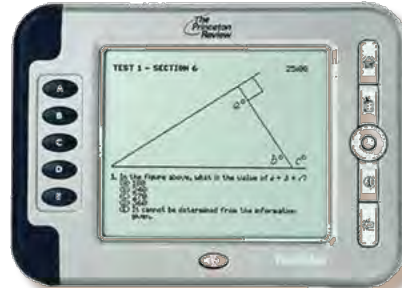


V Tech Quiz Biz – “whiz kids can test their skills in spelling, vocabulary, logic, and problem solving.”

Innovations for Learning TeacherMate System  
“teachers dock the devices, download all of the student progress data, and review the results.”



Infinitoy's QUIZMO - "is the fun, interactive handheld quiz game with an electronic brain that knows the answers to 693,135 questions."



Franklin Publishing - The Princeton Review Pocket Prep for the NEW SAT is “the Portable Interactive Handheld Tutor features comprehensive verbal, math, and essay preparation, full length practice tests, instant scoring and personal diagnostic reports.”



Leapfrog Crammer Study & Sound System quiz-based study guide system, a Spanish-English language translator, and personal music player.

# K12 and Higher Education: Student Response Systems



“eInstruction's Classroom Performance System (CPS) allow students to respond to questions and enables you to instantly assess their comprehension of your lessons. **EXAMVIEW ASSESSMENT SUITE** - Over 60 leading publishers also create and distribute **EXAMVIEW**-formatted questions.”

Qwizdom Q5 - “answer confirmation, and instant right/wrong feedback. Supports fill-in-the-blank questions, and open-ended responses.”



“iRespond allows teachers to immediately identify and track each student's mastery of state standards or objectives. Teachers may modify lessons or assist individual students who need further help.”



Hyper Interactive Teaching Technology TX3200 - “Students respond instantly to questions. The software records the responses and presents the results in the form of a histogram. Each remote has a unique ID number allowing the instructor to know how each student responded to every question.”



SMART Technologies: SMART Response PE interactive - “...allows you to create tests and manage, track, and evaluate the results.”

# Corporate: Audience Response Systems



IML Question Wizard - "create question slides, deliver interactive presentations, compile instant results and assess feedback data without ever leaving PowerPoint. Automatically saves the data to PowerPoint and Access.



Poll Everywhere - "People vote by text messages (or Twitter) to options displayed on-screen. The results are embedded within the presentation in real time.



Meridia - "The students are able to respond to test questions and have their responses evaluated in real time. Instructors can comment on the results and make changes to the content in real time."

Fleetwood Reply Ativa - "First Full Color-Configurable Touch-Audience Response Keypad." Has audio and headphone so questions can be verbal. No Physical Keyboard. Touch Screen. Only the keys needed are displayed.



TurningPoint - "Answer confirmation, and instant right/wrong feedback. Supports fill-in-the-blank questions, and open-ended responses."



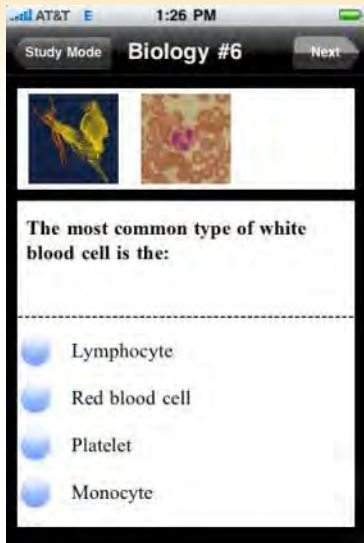
# Academic and Consumer Exam Preparation



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# Mobile Academic Test Prep



Upward Mobility - Biology SAT II - "Advanced Placement (AP), A-Levels, PRAXIS II, GED, CLEP, MCAT and ASVAB exams."



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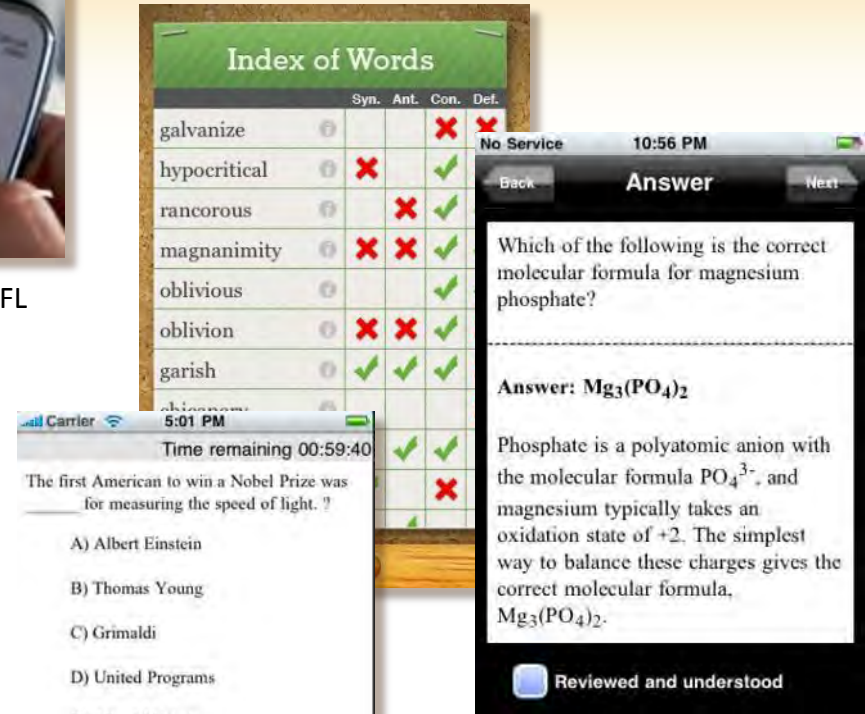


Nokia Mobiledu and ETS - TOEFL Exam Prep



Kaplan - TOEFL Exam Prep

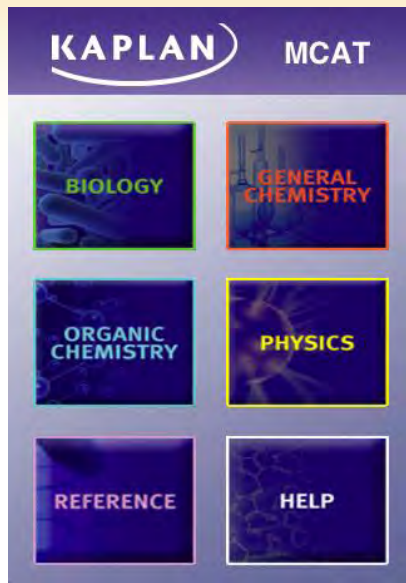
The Princeton Review - SAT Exam Prep



Upward Mobility - SAT II - Chemistry

Wallsberg - ACT Exam Prep

# Post-graduate Mobile Academic Test Prep



Kaplan - Medical College Admission Test (MCAT) Exam Prep



Watermelon Express - Graduate Management Admission Test (GMAT) Exam Prep



Watermelon Express - Law School Admission Test (LSAT) Exam Prep



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# Consumer Test Prep: Driver Tests



DreamCatcher Games' Drivers Ed Portable has content for all 50 US states, 13 Canadian provinces and territories, as well as Spain, Italy, France, Germany and the United Kingdom



MagicMundo - Official Driver Theory Test (Ireland)



Wallsberg - Commercial Driver's License Exam



DMVPrep.com - DMV Test Prep



UK Driving Standards Agency - Motorcycle Theory Test

# Professional Licensure and Certification Exam Preparation



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# Certification and Licensure Exam Prep

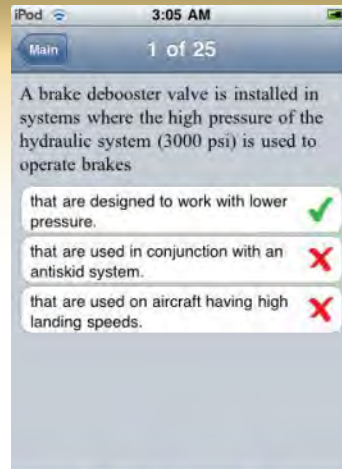
Tech 2000 - CCVP  
 Certification  
 Cisco Certified Voice  
 Professional

Tekk Innovations  
 - FAA Aviation  
 Maintenance  
 Technician  
 General  
 Knowledge  
 Exam Prep

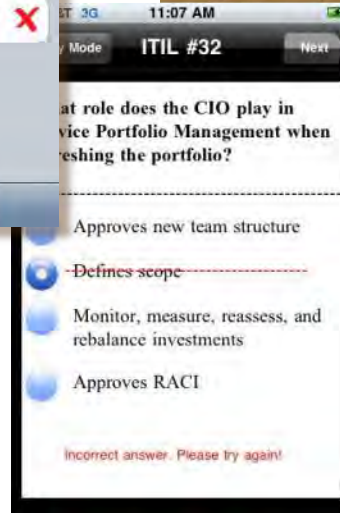
Allen Resources -  
 CFA Exam Level III  
 2010  
 2,100+ CFA Exam  
 Questions



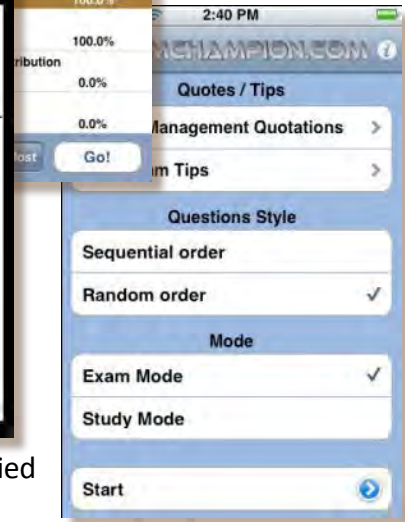
McSnyder Software -  
 American Radio Relay League  
 - Amateur Radio License  
 Exams



Upward Mobility - CompTIA+  
 Certification Exam Prep

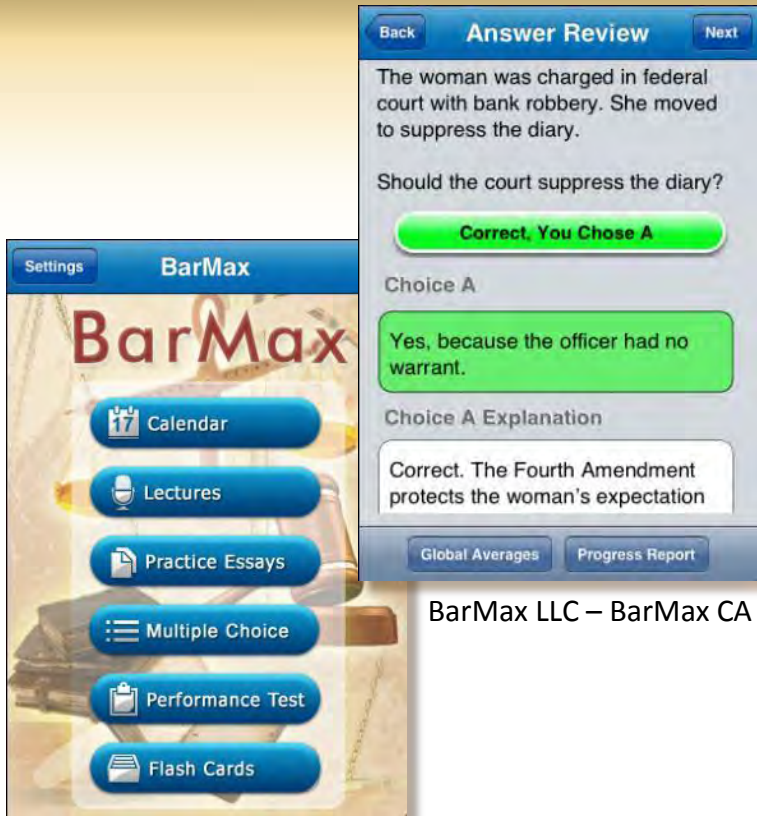


ITIL V3 Foundation Certified  
 Project Manager

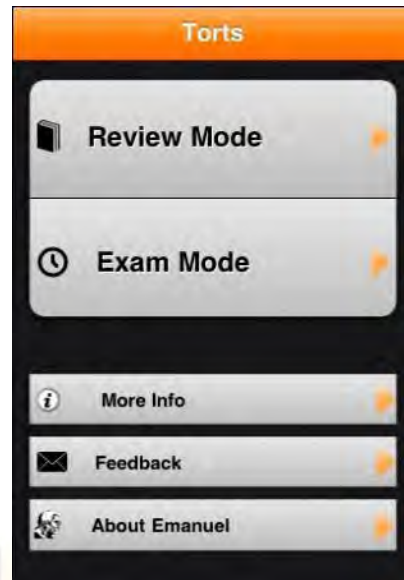


PMCHAMPION - PMP  
 Exam

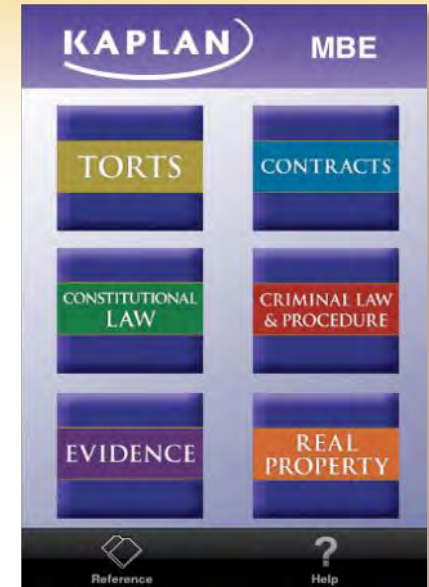
# Bar Exam Prep



BarMax LLC – BarMax CA



Aspen Publishers – Multistate Bar Exam (MBE)



Kaplan – Multistate Bar Exam (MBE)



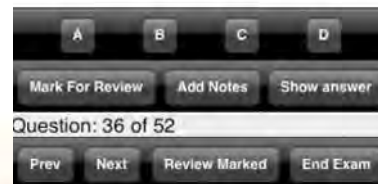
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# Healthcare Licensure Exam Prep

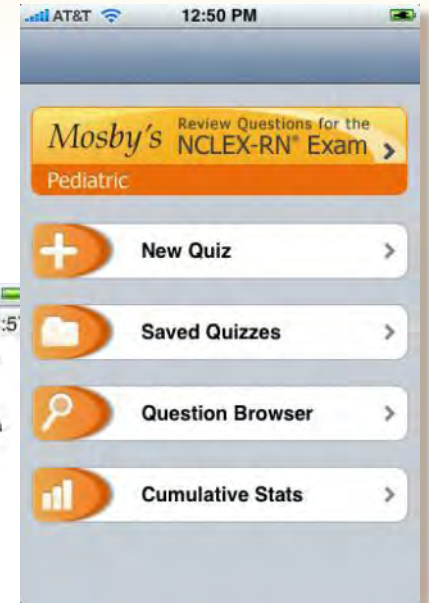
Scorebuilders - National  
Physical Therapist Assistant  
Exam Prep



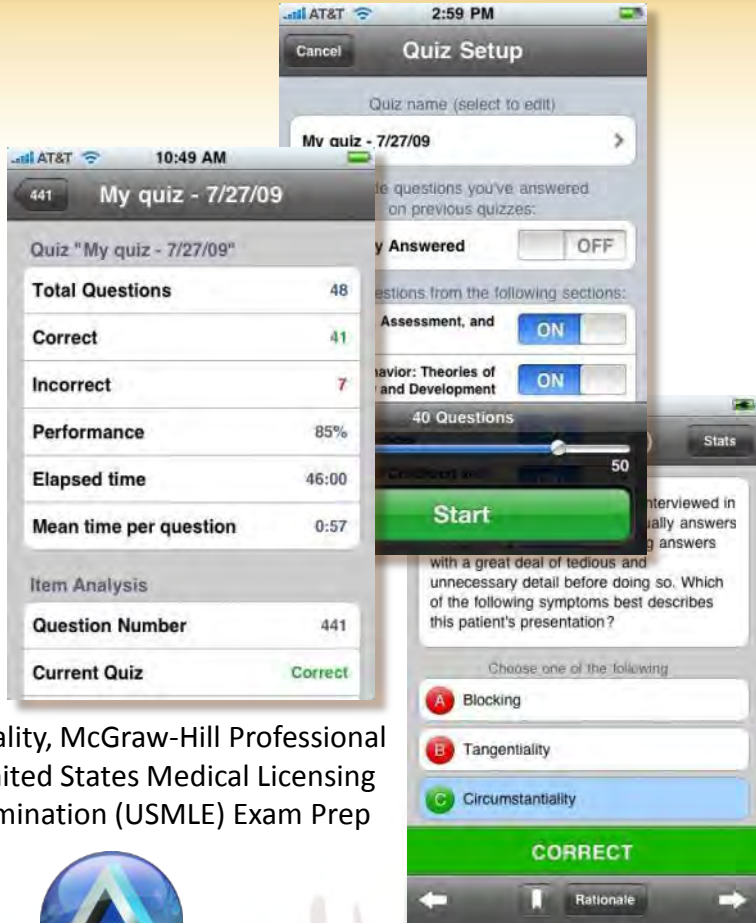
- B) fixed-action pattern.
- C) reflex
- D) kinesis



Stafford - DAT Dental Exam  
Prep



Modality, Kaplan - NCLEX-  
RN Exam Prep



Modality, McGraw-Hill Professional  
– United States Medical Licensing  
Examination (USMLE) Exam Prep



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# Healthcare Continuing Medical Education (CME)



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# Mobile Continuing Medical Education (CME) Suppliers

- ePocrates, Skyscape, First Consult, PEPID, Medical Wizards Corporation, ReachMD, GenerationOne, Modality, Unbound Medicine, Lexi-Comp, MerckMedicus, and PatientKeeper



Skyscape

- The lesion may exhibit a soap-bubble appearance.
- May cause resorption of the roots of adjacent teeth.



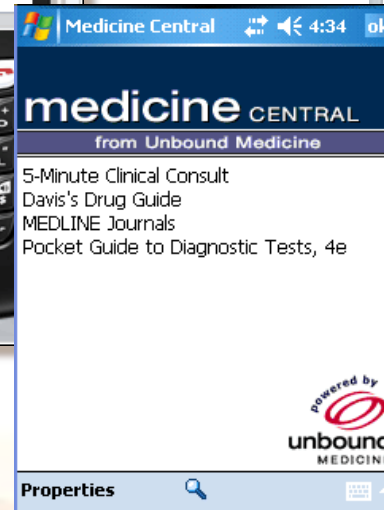
A unilocular ameloblastoma in the posterior mandible.



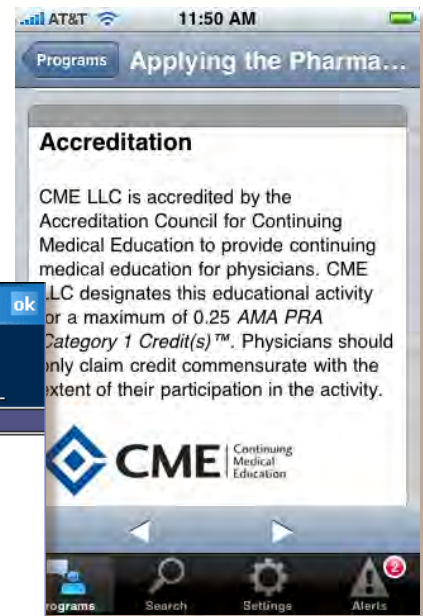
Lexi-Comp



ePocrates



Unbound Medicine

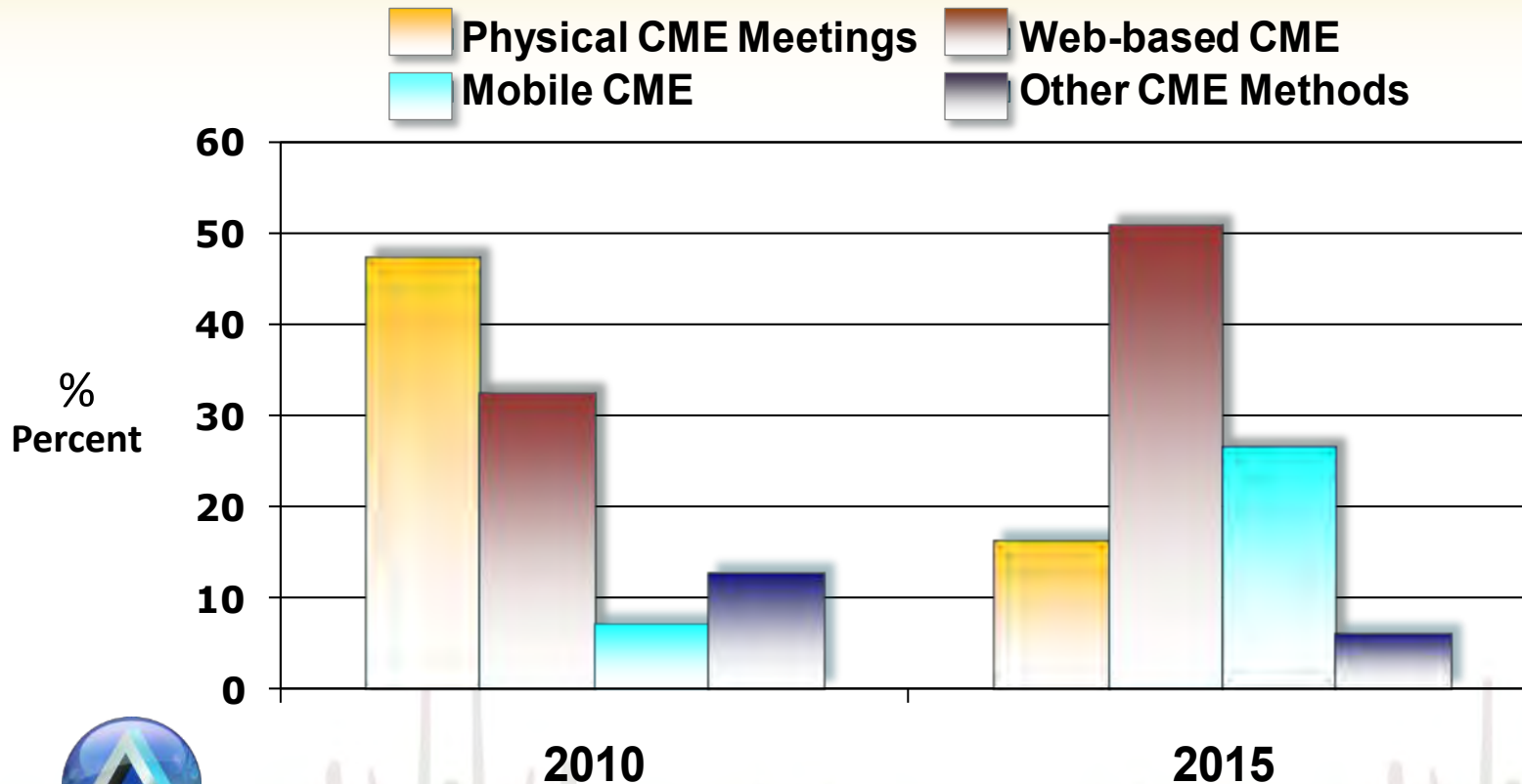


ReachMD



# 2010-2015 US Learning Methods in Healthcare Continuing Medical Education Meetings and Events

*Healthcare Trend: Web-based CME and Mobile CME Rapidly Overtaking Physical Events and Meetings*



# Exam, Quiz, and Assessment Tools and Platforms



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# Shortlist of Tools and Platforms

- **First to Market Best-of-Breeds:**
  - Tribal CTAD's MyLearning (Europe)
  - Hot Lava Software's Mobile Learning Author (acquired by OutStart in 2009)
  - Chalk Media (acquired by RIM in 2009)
- **Legacy authoring tools now support Mobile Learning output:**
  - Questionmark, Blackboard, Adobe's Captivate, SCATE Technologies' ignite, Trivantis' Lectora, Brainvisa's RapidL-i, Saba's Publisher, and SumTotal's ToolBook
- **Aspyr Media's iQuiz Maker tool used by Apple to create iQuiz games:**
  - Kaplan used it to create their SAT Test prep applications that they sell on iTunes
  - McGraw-Hill Higher Education uses the tool to create college-level content
- **New Tools on the Market:**
  - SimpleLeap Software's Cram for the BlackBerry, MediaClick's PodQuiz-hyperMix Maker, Pocket Mobility's Quizzler Maker, & Bizon Software's Pocket Exam Builder
- **Mobile Learning Exam Platforms:**
  - Acquasys Informática's ExamCreator, and eInstruction's **EXAMVIEW SUITE**



# New Cognitive Research



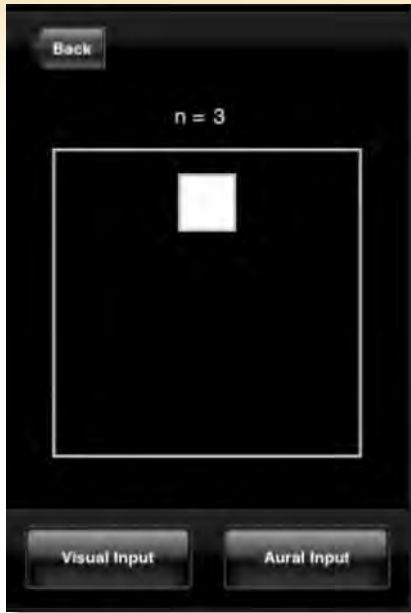
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# Dual N-Back Research

- **N-Back training:** used for decades to evaluate working memory (short term memory).
  - **Single N-Back task:** the user only has to attend to one task, such as the position of an object on a computer screen.
  - **Dual N-Back situation:** the user has to perform two N-Back tasks at the same time, such as the position of an object and audio cues.
- **2008 Dual N-Back study of computer-based game**
  - By Susanne Jaeggi, Martin Buschkuhl, and colleagues at the University of Michigan, Ann Arbor, and University of Bern
  - Documented more than 40% increase in fluid intelligence and working memory.



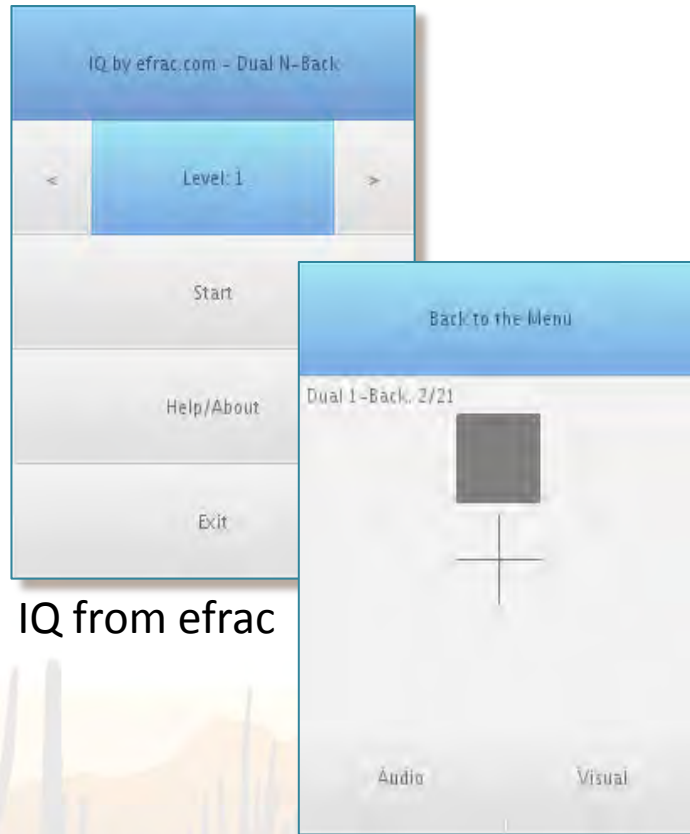
# Mobile Dual N-Back Games



Brain Fitness Pro from  
Mind Sparke



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IQ from efrac



IQ Boost from tnxbai

# Dual N-Back Games

- Play the game on the desktop
  - Soak Your Head
    - <http://www.soakyourhead.com/Default.aspx>
  - MindFlow
    - <http://themindflow.com/>



# Q&A



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