

# INNOVATION IN ESL EDUCATION: MOBILE-LEARNING TECHNOLOGY

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## **Innovation in ESL Education: Mobile-Learning Technology**

March 2008



**THE PARTHENON GROUP**

Boston • London • Mumbai • San Francisco

# Agenda

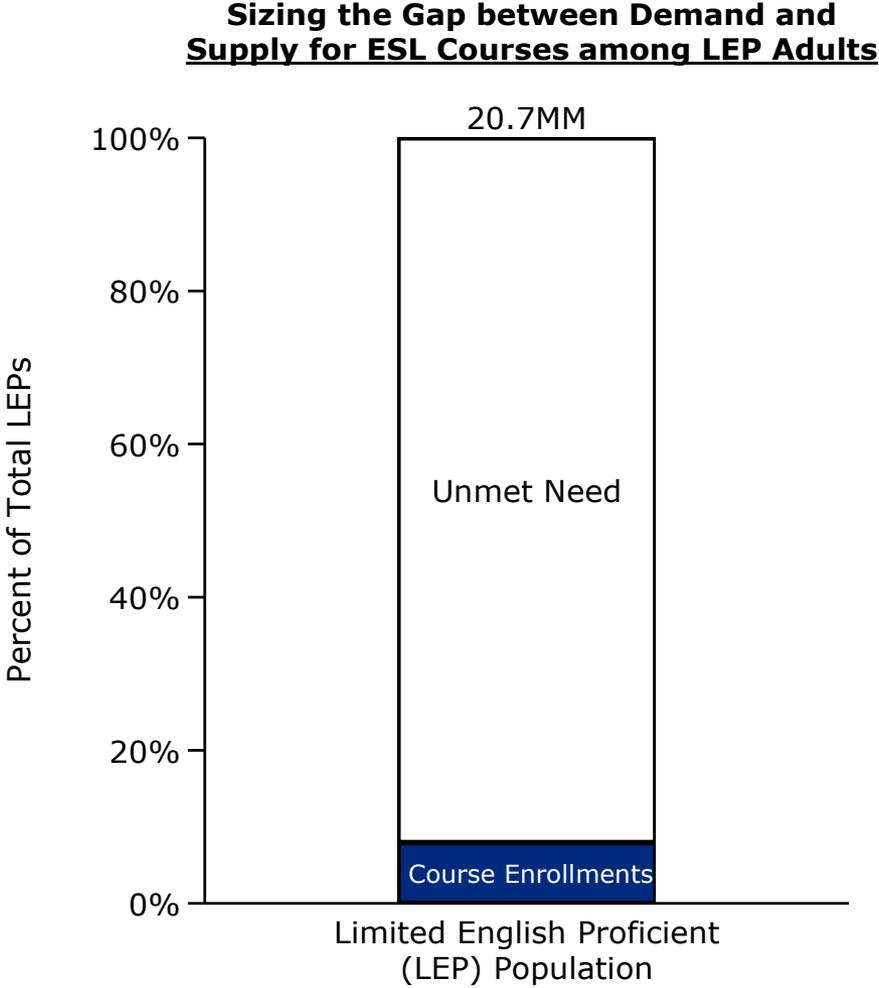
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- **What is the problem?**

- How can we innovate?
- What are other potential opportunities?

# What Is the Problem?

## The Adult ESL Population Is Enormously Underserved

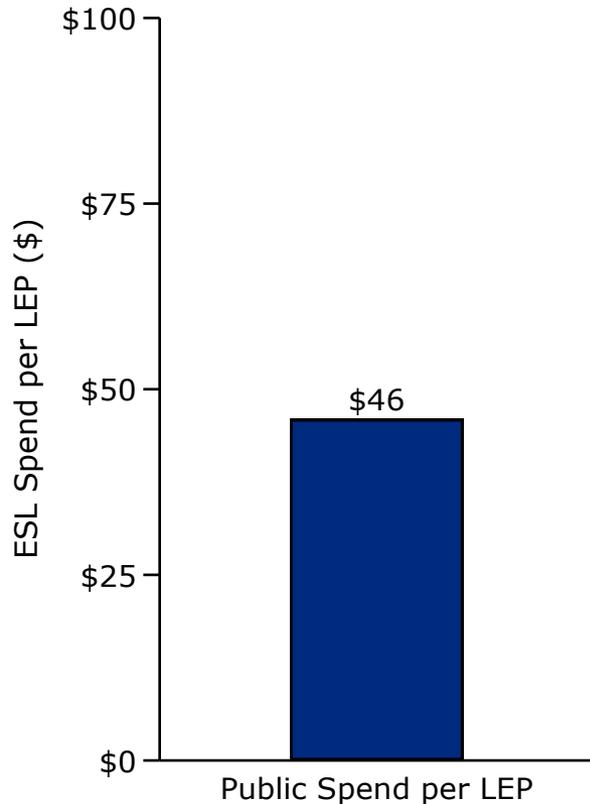


Note: Includes U.S. LEP Population 18 years and older; LEP defined as speaking English less than "Very well"; Acute LEP are those that speak English "Not at all" or "Not well"  
Source: NCES; US Census Bureau; 2005 National Household Education Survey: Adult Education; Business Wire (9/07); Parthenon Phase I Survey (n=70)

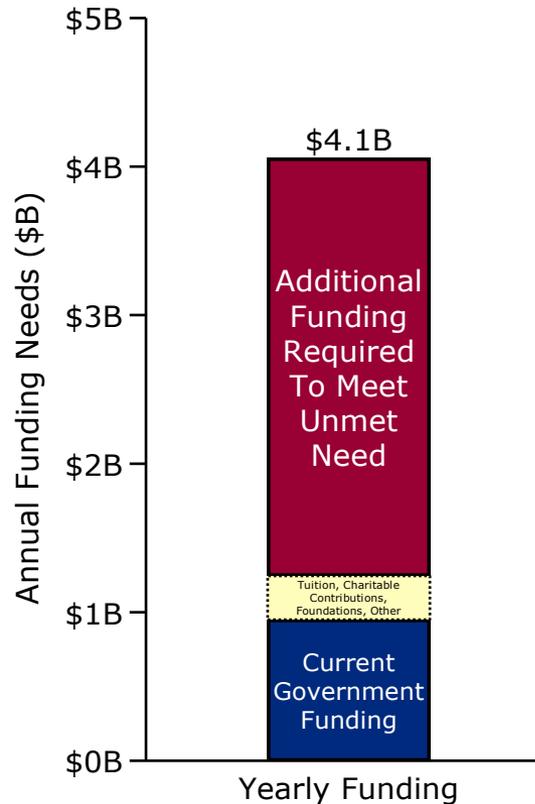
# What Is the Problem?

## Unmet Need Is Driven by Funding Constraints

**Annual U.S. Government ESL Spending per LEP (2007)**



**Adult ESL Funding (2007)**



**Mitigants to Near-Term Increases in Funding Levels**

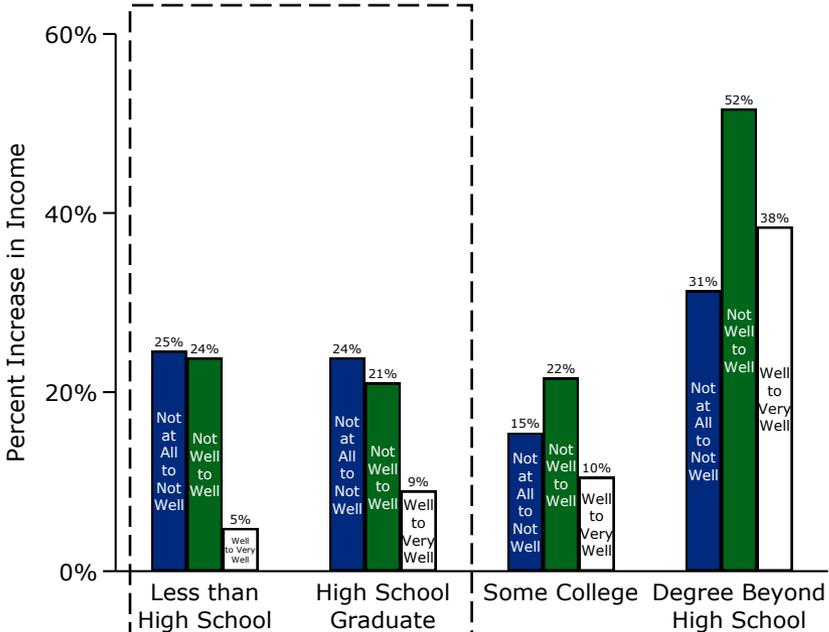
- **Difficult political climate for immigrants**
  - Comprehensive Immigration Reform Act of 2007 died in the Senate after a filibuster
  - States cracking down on illegal immigrants: denying in-state tuition and state financial aid, not issuing driver's licenses
- **No federal funding directed specifically to ESL**
  - States free to distribute federal funding between the two elements of Adult Education (Adult Basic Ed. and ESL) as they see fit
- **State caps and restrictions limit funding growth**
  - States are required to match at least 25% of the federal funding allocation, but the actual levels of state matching vary widely
  - Some states, like California, enforce an annual growth cap on adult school funding

**Narrowing the gap between supply and demand through increasing available seats is unlikely due to budget and funding issues**

# What Is the Problem?

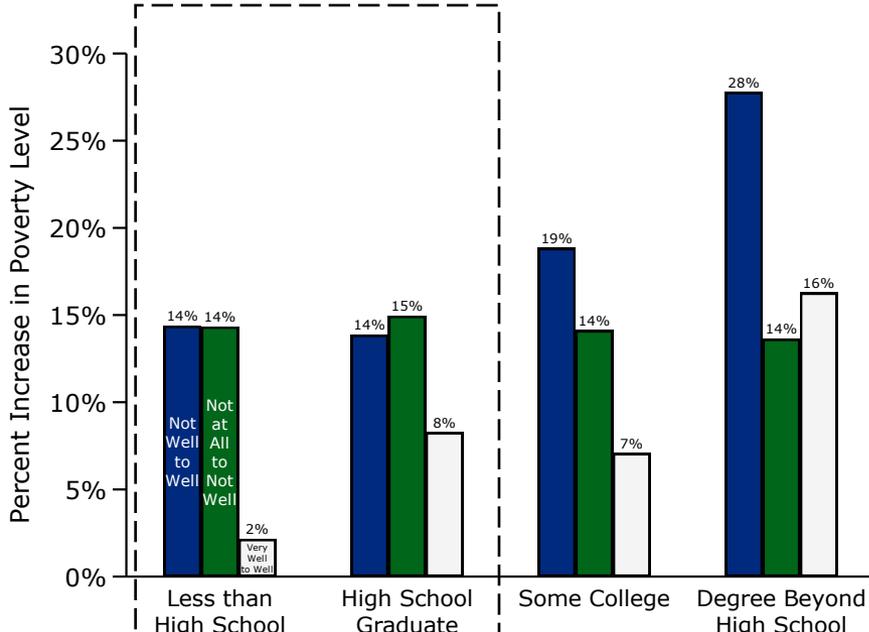
## Hence the Need to Prioritize a Target Population – Those with the Greatest Need Who Will Most Benefit from ESL Training

**Average Foreign-born Income by English Proficiency and Educational Attainment**



Base Salary (Not at All)	<b>\$16,831</b>	<b>\$18,406</b>	\$21,720	\$23,766
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**Poverty Index by English Proficiency and Educational Attainment**



Average Poverty Level (Not at All)	<b>171</b>	<b>194</b>	203	232
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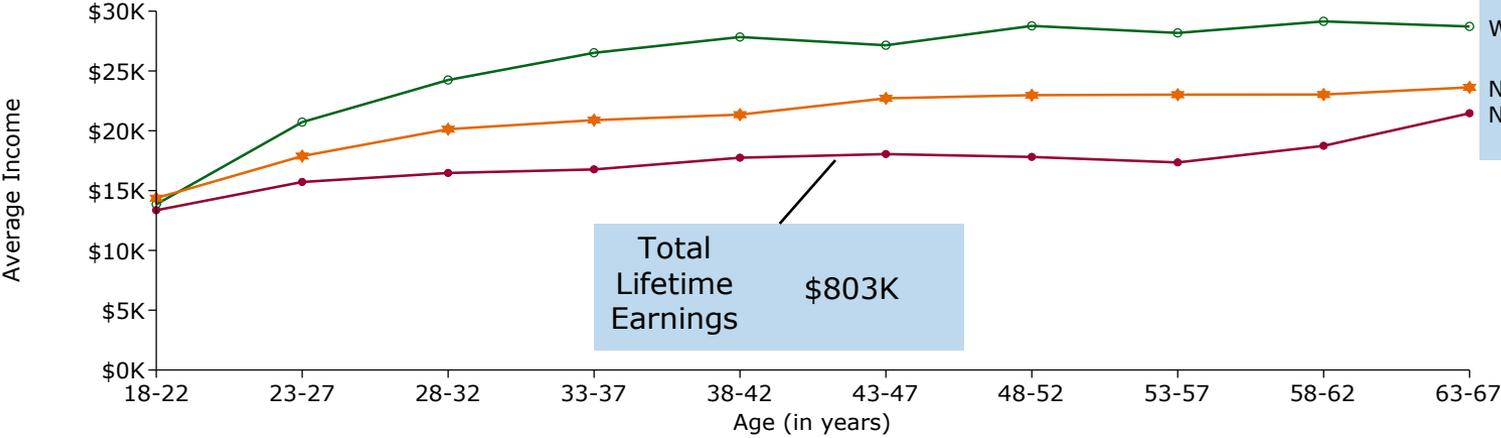
**A clear relationship exists between both income and the poverty line and the level of English proficiency; a similar relationship does not hold for the unemployed or those not in the labor force**

Note: Poverty line based on U.S. Census calculations based on family size and household income; Poverty line=100, most federal programs accept up to 130 or 185  
 Source: U.S. Census Bureau American Community Survey; Parthenon Analysis

# What Is the Problem?

## By Focusing on the Employed, There Is Potential For Significant Impact on Lifetime Earnings by Improving English Ability

**Lifetime Earning Potential of Target Population (Less than High School)**

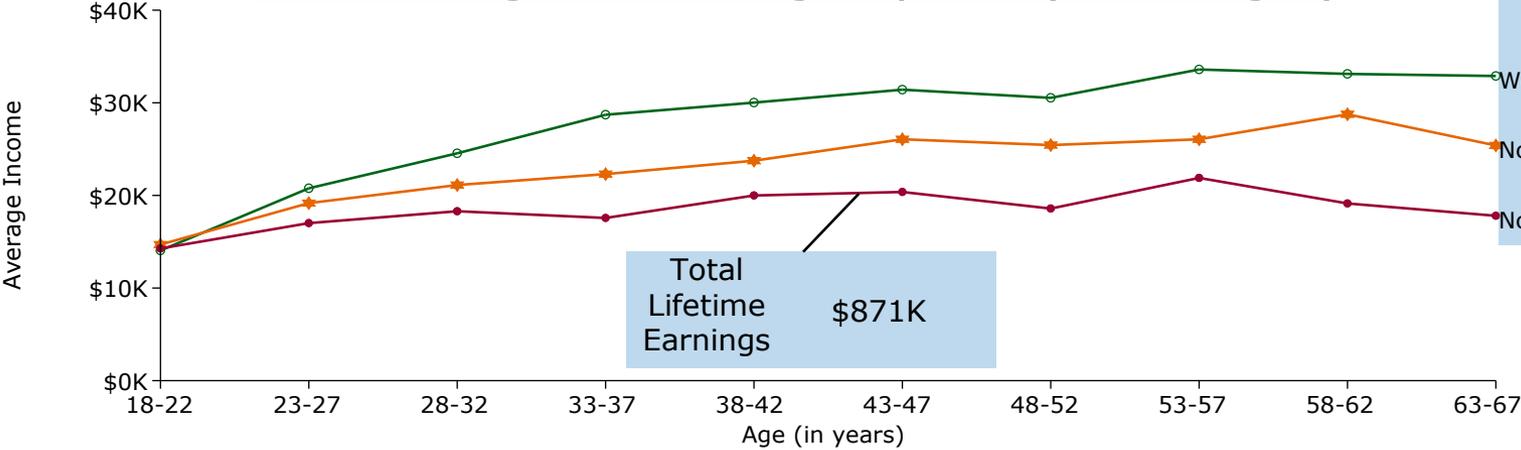


	Amount of Increase*	Percent Increase
Well	\$210K	21%
Not well	\$176K	22%
Not at all		

Total Lifetime Earnings \$803K



**Lifetime Earning Potential of Target Population (With HS Degree)**



	Amount of Increase*	Percent Increase
Well	\$212K	20%
Not well	\$216K	25%
Not at all		

Total Lifetime Earnings \$871K

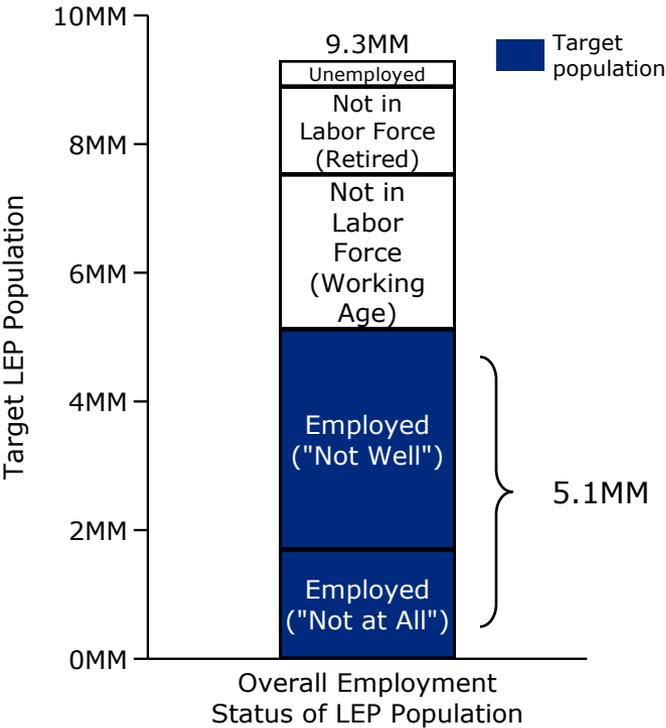
Level of Spoken English	
Well	<span style="color: green;">■</span>
Not well	<span style="color: orange;">■</span>
Not at all	<span style="color: purple;">■</span>

Note: Lifetime earning potential includes age 18-64; \* From previous LEP level  
 Source: U.S. Census Bureau American Community Survey; Parthenon Analysis

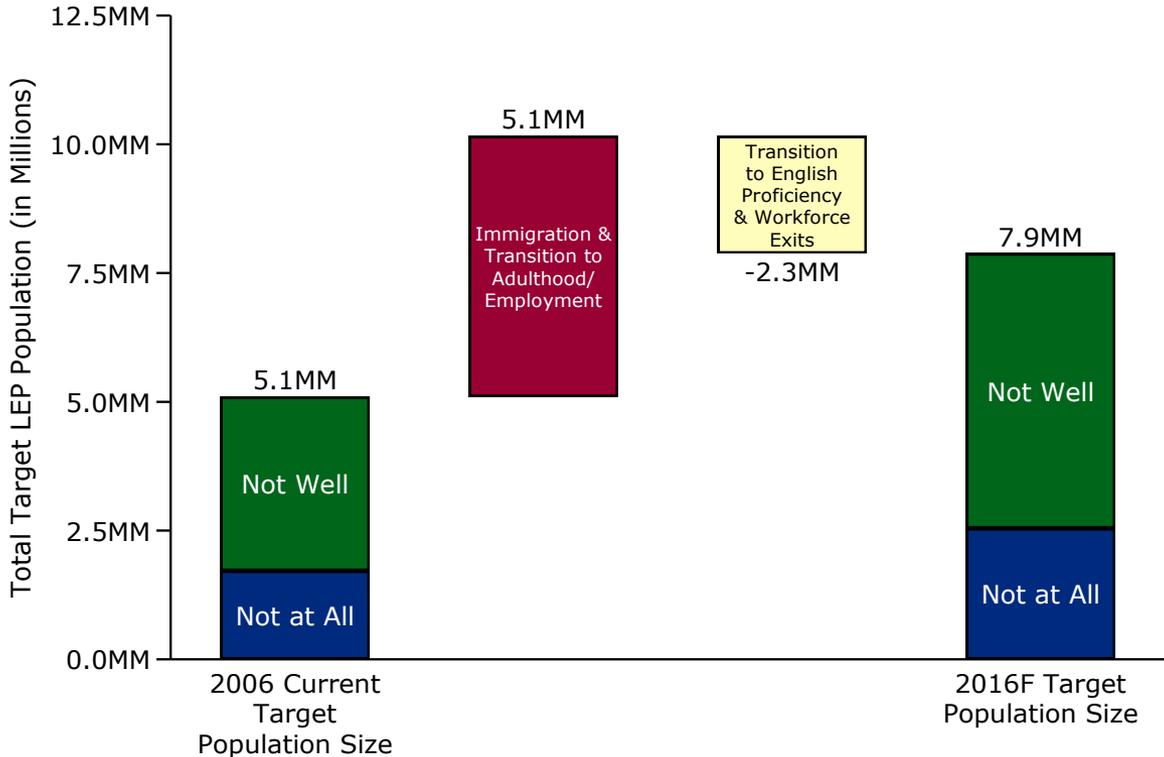
# What Is the Problem?

**This Employed Target Population Consists of ~5.1MM Adults Who Speak English “Not at All” or “Not Well”; At Current Funding Levels, this Number will Continue to Grow**

**Breakdown of Low Education Acute LEPs (2006)**



**Projected Growth in Target Population (2006-2016F)**

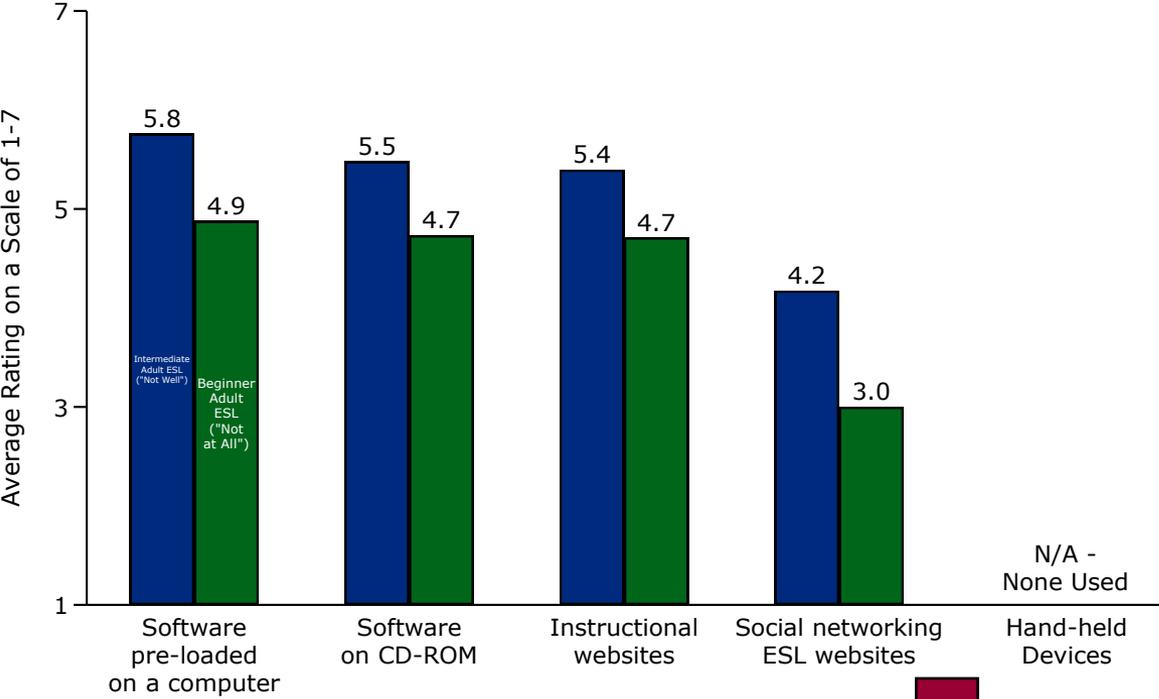


Note: Target population consists of employed, acute LEP population with high school diploma or less, ages 18 and older  
 Source: U.S. Census Bureau American Community Survey; Parthenon Analysis

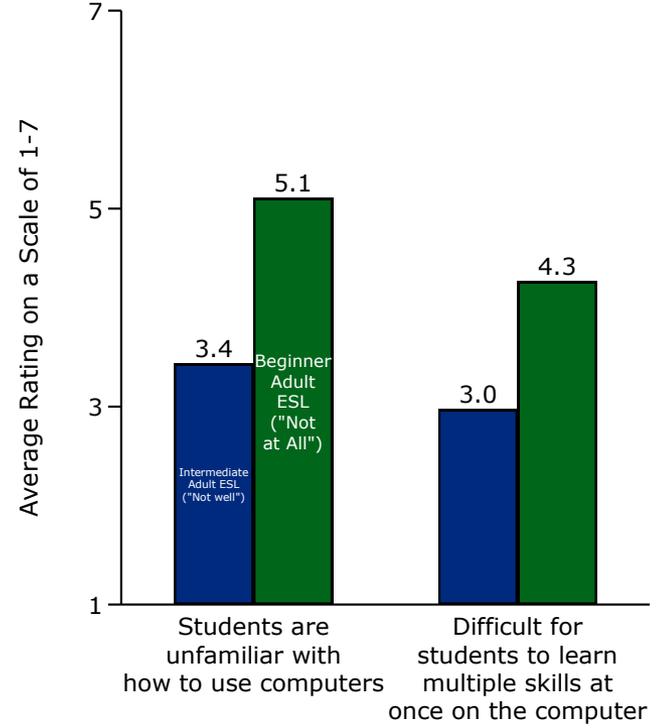
# What Is the Problem?

## Increased Efficiency Through More Innovative Technology Is Most Needed with “Not at All” Population

**Q:** For Adult ESL students, rate the product’s effectiveness on a scale of 1 to 7 where 1 is “Not at all effective” and 7 is “Extremely effective”



**Q:** Rate the following statements on a scale of 1 to 7 where 1 is “Completely disagree” and 7 is “Completely agree”



**Hence, Parthenon proposes a prioritized approach for the Gates Foundation:**

- **Priority I: Design a product to meet the needs of the “Not at All” adult employed population**
- **Priority II: Investment in high potential existing technologies to increase access to instruction for the “Not Well” population**

# Agenda

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- What is the problem?

- **How can we innovate?**

- What are other potential opportunities?

# How Can We Innovate?

## Common Sense Dictates the Necessary Components to this Solution

Solution Components	Description	What We Heard
<b>Reduces classroom time through blended learning component</b>	<ul style="list-style-type: none"> <li>Allows reduction in classroom time by 75%</li> </ul>	<p><i>"I know it's possible, I've seen it."</i> - University Professor</p> <p><i>"It is certainly possible to reduce classroom time with the use of mobile technology."</i> - University Professor</p>
<b>Flexible and convenient</b>	<ul style="list-style-type: none"> <li>Ability to learn English during downtime (e.g., on bus, at home, etc.) and at own pace</li> </ul>	<p><i>"Students can go at their own pace and on their own time...this will give students who can't make class regularly a way to learn."</i> - Adult Literacy Provider</p>
<b>Targets employed individuals</b>	<ul style="list-style-type: none"> <li>Relationship between level of English and income helps define target pop.; class scheduling should be conducive to the employed</li> </ul>	<p><i>"We've seen proof of higher rates of promotion and performance due to English Language Learning. The employers we work with will tell you this definitively."</i> - technology-based ESL Provider</p>
<b>Low-Cost</b>	<ul style="list-style-type: none"> <li>Leverage existing infrastructure and tools</li> </ul>	<p><i>"Anything for these students should be easy to use, and cheap!"</i> - University Professor</p>
<b>Personalized</b>	<ul style="list-style-type: none"> <li>Monitor student use of application and engagement</li> </ul>	<p><i>"It can help to individualize learning but must be simple – just push a button."</i> - Public Library Representative</p>
<b>Interactive</b>	<ul style="list-style-type: none"> <li>Critical component of learning a language (e.g., pronunciation, confidence)</li> </ul>	<p><i>"Anyone can figure out how to use a cell phone; if this technology could go onto cell phones, people world-wide could learn English."</i> - Community College Program Director</p>
<b>User-friendly</b>	<ul style="list-style-type: none"> <li>Simplicity and ease of use is key for adoption purposes</li> </ul>	<p><i>"Many of our students, even low-level, already use hand-held devices like cell phones to communicate. Using Web 3.0 apps to give students more time with the lessons just seems like a natural extension of a skill they already have."</i> - Community College Professor</p>
<b>Pedagogy that addresses key ESL Learning areas (e.g., life skills, job skills, civics, etc.)</b>	<ul style="list-style-type: none"> <li>Lessons should focus on building skills that are most relevant to the learner</li> </ul>	<p><i>"Should have lots of listening and repeating sequences or listening and matching activities; any type of tool must include life skills and be culturally sensitive."</i> - CBO Representative</p>
<b>Prescriptive program driving curriculum</b>	<ul style="list-style-type: none"> <li>Must set complete curriculum (vs. solely a supplemental tool) in order to gain traction</li> </ul>	<p><i>"If the content is scaffolded, and the technology is intuitive and easy to use, there is no reason why lower levels of students couldn't use it."</i> - Community College Program Director</p>

# How Can We Innovate?

## No Current Domestic Technologies Meet These Hurdles

 Does not meet criteria  
 Meets criteria

Description	Examples	Low Cost	Interactive	User-Friendly	Does Not Require Computer	Does Not Require Literacy	Allows Study Flexibility
<b>CD-ROM Software</b>	<ul style="list-style-type: none"> <li>Rosetta Stone</li> <li>Pearson ELLIS</li> </ul>						
<b>Online Practice Tools</b>	<ul style="list-style-type: none"> <li>4esl.org</li> <li>TESL.org - Teachers of ESL</li> </ul>						
<b>Electronic Dictionaries</b>	<ul style="list-style-type: none"> <li>ECTACO Partner EW800/ITravl</li> </ul>						
<b>Interactive Web Portal</b>	<ul style="list-style-type: none"> <li>USA Learns</li> </ul>						
<b>Social Networking Sites</b>	<ul style="list-style-type: none"> <li>LiveMocha</li> <li>SharedTalk</li> <li>Soziety</li> </ul>						
<b>Hand-held Learning Tools</b>	<ul style="list-style-type: none"> <li>Sed de Saber</li> </ul>						
<b>Cell Phones</b>	<ul style="list-style-type: none"> <li>METU (Turkey)</li> <li>Praxis (China)</li> <li>Athabasca University (Can)</li> <li>Tribal Edu. (UK)</li> </ul>						

**However, innovative solutions are in development internationally; a cell phone initiative is the most logical solution to fit the problem**

# How Can We Innovate?

## These Innovations Are Occurring Primarily Internationally and Are in Their Nascent Stages

	Description	Insights / Key Observations
<b>Dr. Kursat Cagiltay, Middle East Technical University - Turkey</b>	<ul style="list-style-type: none"> <li>• Mobile phone-based ESL program for high school students               <ul style="list-style-type: none"> <li>- Use MMS (teaching) and SMS (quizzes) to teach vocabulary and pronunciation</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Mobile phones found to be more effective than computers or hand-outs (attributed to convenience factor) in a controlled experiment</li> </ul>
<b>Tribal Education &amp; Technology (M-learning) - UK</b>	<ul style="list-style-type: none"> <li>• Educational software specializing in M-learning technologies (e.g., mobile phones, pocket PCs, online tools, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Used for self-learners, classrooms, or blended learning</li> <li>• Targets immigrants</li> </ul>
<b>Praxis (EnglishPod, ChinesePod) - China</b>	<ul style="list-style-type: none"> <li>• Primarily podcast-based product</li> <li>• EnglishPod product is particularly business-English focused</li> </ul>	<ul style="list-style-type: none"> <li>• Use of podcasts have shown remarkable increases in popularity               <ul style="list-style-type: none"> <li>- ChinesePod is receiving over 300k unique visitors per month online</li> </ul> </li> </ul>
<b>Athabasca University (M-learning) - Canada</b>	<ul style="list-style-type: none"> <li>• Use mobile phones as the primary component of ESL learning</li> <li>• Curriculum designed as a review of grammar principles in a typical beginning ESL course</li> </ul>	<ul style="list-style-type: none"> <li>• Lowest-level ESL students realized the biggest proficiency increases in pre- and post-testing</li> <li>• Teacher provides 30 minutes of training on how to use mobile phone</li> <li>• Internet-based content accessed through proxy server on 3G capable phones (\$50 phones provided to students)</li> </ul>
<b>University of Tokushima - Japan</b>	<ul style="list-style-type: none"> <li>• Use of PDAs, GPS and RFID tags to teach English to foreign students</li> </ul>	<ul style="list-style-type: none"> <li>• Supports language learning outside classroom through informal learning and providing real life tasks to students</li> <li>• Helps learner memorize vocabularies by using RFID tags to display information</li> </ul>



**These initiatives provide proof that it is possible to use technology - particularly cell phones - to further enable ESL learning**

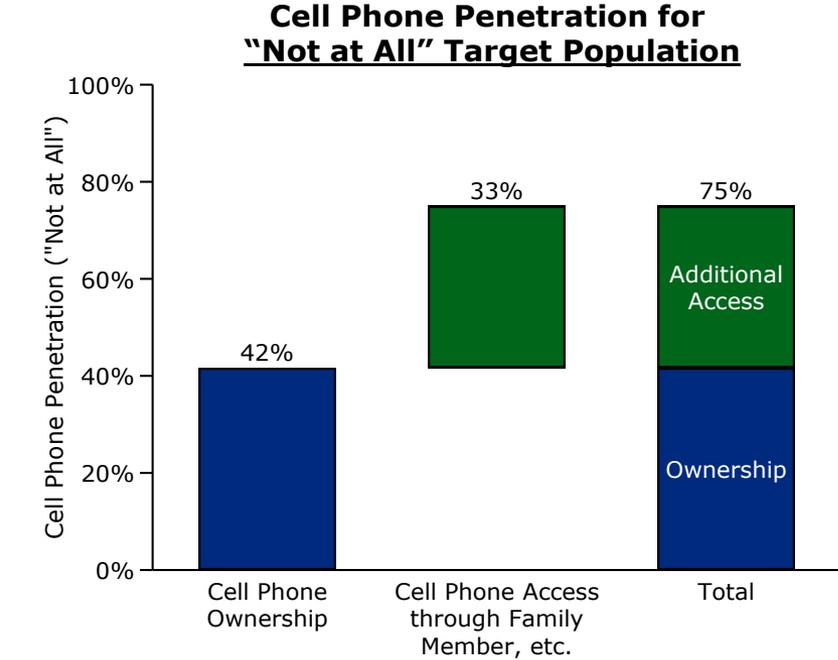
# How Can We Innovate?

## A Cell-Phone Initiative Has the Capability to Address Key Needs; Over 75% of “Not at All” Target Population Has Access to a Cell Phone in Their Home – Penetration Will Continue to Increase



**Interactive**

**Low-cost**

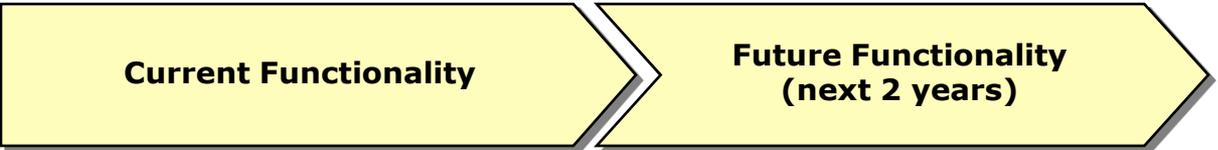


<b>Overall US Population</b>	81%	N/A	81%+
<b>“Not Well” Target Pop.</b>	62%	24%	86%

**There is room for increased cell phone penetration for this target population, indicating potential opportunity for carrier participation**

# How Can We Innovate?

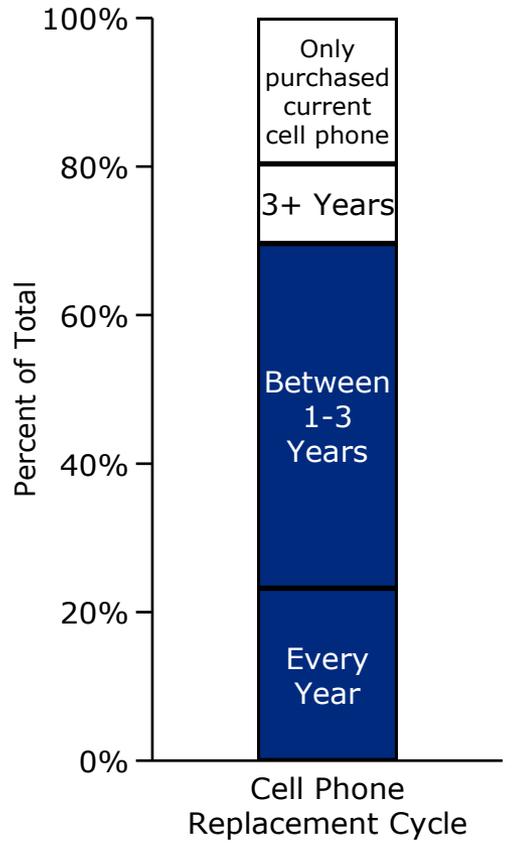
## Cell Phone Functionality Is Advancing Rapidly



Type of Cell Phone	Current Functionality	Future Functionality (next 2 years)
Low-end Cell Phones	<ul style="list-style-type: none"> <li>Voice capabilities</li> <li>Text messaging</li> <li>Low intensity single player games</li> <li>Basic speech recognition</li> <li>Photo-taking ability (camera)</li> </ul>	<ul style="list-style-type: none"> <li>Multi-player video games</li> <li>Speech recognition</li> <li>Multimedia Messaging Service (MMS)</li> <li>Podcasting (MP3 player)</li> <li>Other?</li> </ul>

Type of Cell Phone	Current Functionality	Future Functionality (next 2 years)
High-end Cell Phones	<ul style="list-style-type: none"> <li>Voice capabilities</li> <li>Text messaging</li> <li>Multimedia Messaging Service (MMS)</li> <li>Multi-player video games</li> <li>Speech recognition</li> <li>Podcasting (MP3 player)</li> <li>Streaming video</li> </ul>	<ul style="list-style-type: none"> <li>Graphically intense multi-player video games</li> <li>Live TV</li> <li>Applications ranging from educational or financial transactions to communication platforms</li> <li>Greater web functionality</li> </ul>

**Replacement Cycle for Target Population Owning Cell Phone (2007)**



 Type of cell phone predominantly used by target population



**Approximately 70% of our target population will replace their cell phone within the next 3 years**

# How Can We Innovate?

## M-Learning Can Drive a Blended Learning Program

### Potential Program Flow:



- Organization buys a set number of "M-Learning" program subscriptions from supplier

- Organization prioritizes employed learners with rationale being that there are modules specific to the employed

- Organization assigns subscriptions to students enrolled in ESL classes

- Students register the program on their phone with a unique ID / password
- Students increase the minutes or data plan on their cell phone, if necessary
- Students are assisted in cell phone learning orientation (est. ½-1hr. required for cell phone module explanation at beginning of course)

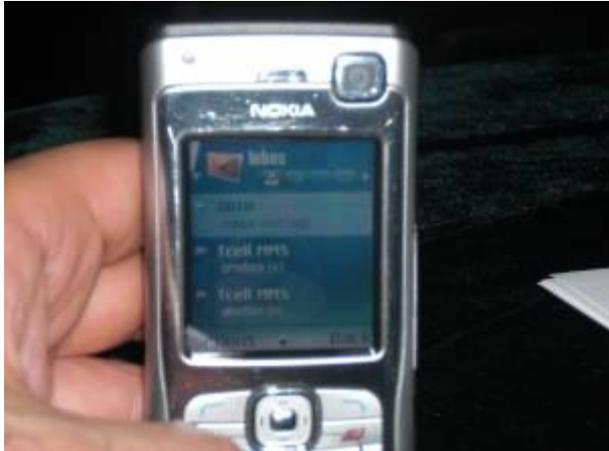
- Teacher oversees classroom and cell phone coursework
- Teacher sets expectations around use of program outside of class; deadlines for cell phone work are enforced with class time component

- Students use M-Learning outside of class time
  - Spend ~25% of their time in class
  - Spend ~75% of their time working with the cell phone program
- Teachers monitor student progress on cell phone program
  - Real-time data available to shape in-class instruction
  - Early identification of problems/issues for specific students

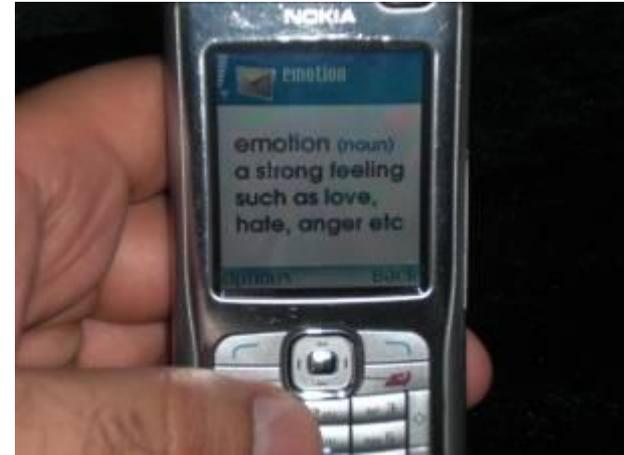
- Program subscription ends and students can no longer access program
- Teacher has access to "summary" of student use / performance data for duration of program

# How Can We Innovate?

## Example: Product Delivery (Vocabulary and Pronunciation)



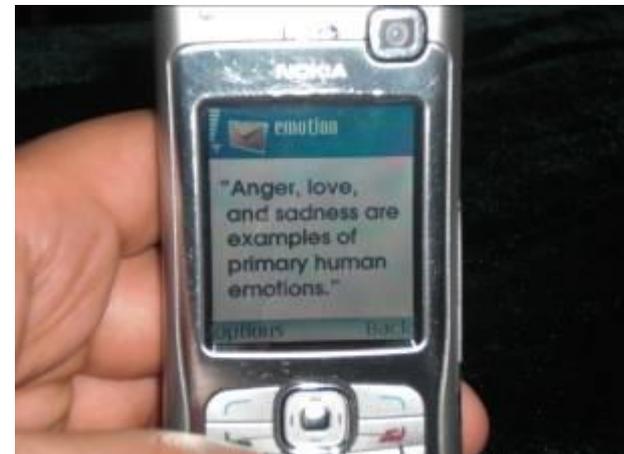
Step 1: MMS Received (New words received 3-4 times per day – sound clip for pronunciation included)



Step 2.1: Definition of word  
[Step 2.1-2.3 in an 8-second loop]



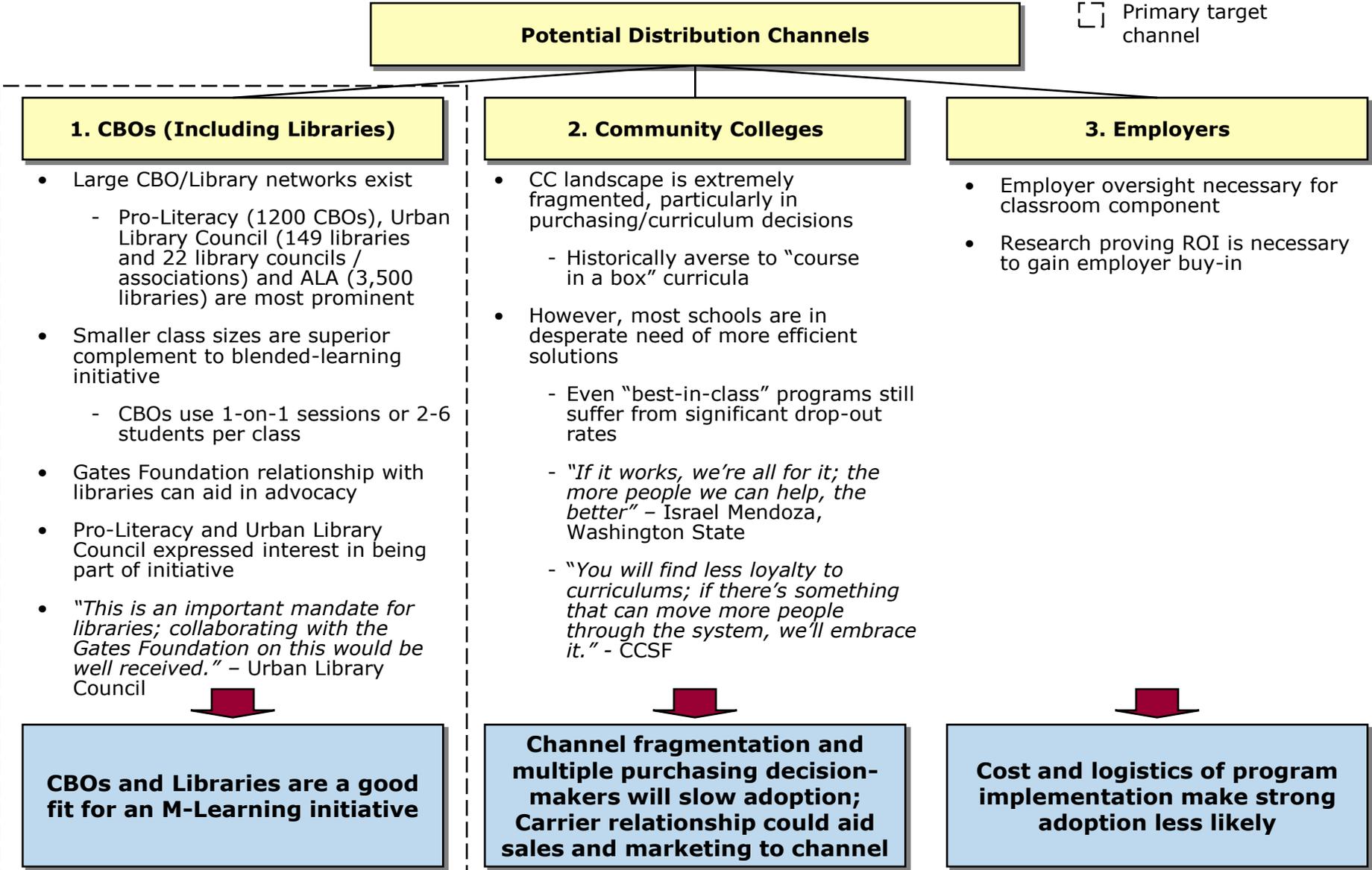
Step 2.2: Visual representation of word



Step 2.3: Use of word in a sentence

# How Can We Innovate?

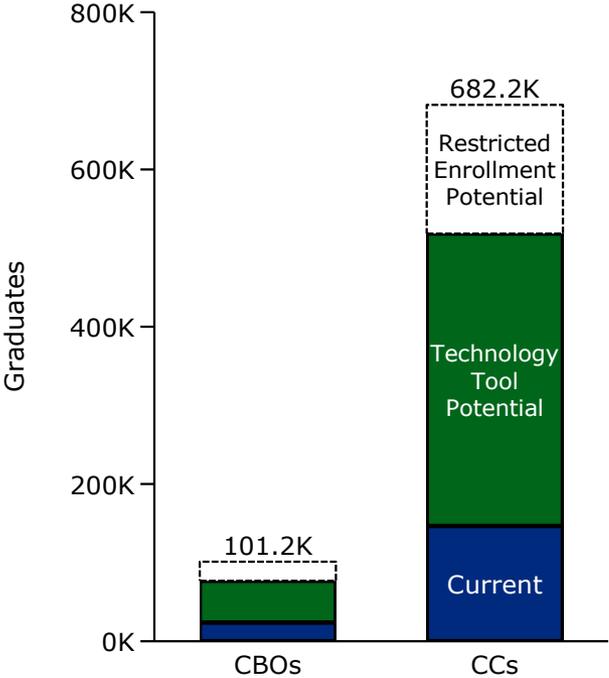
## CBOs and Libraries Are Well Positioned to Implement M-Learning



# How Can We Innovate?

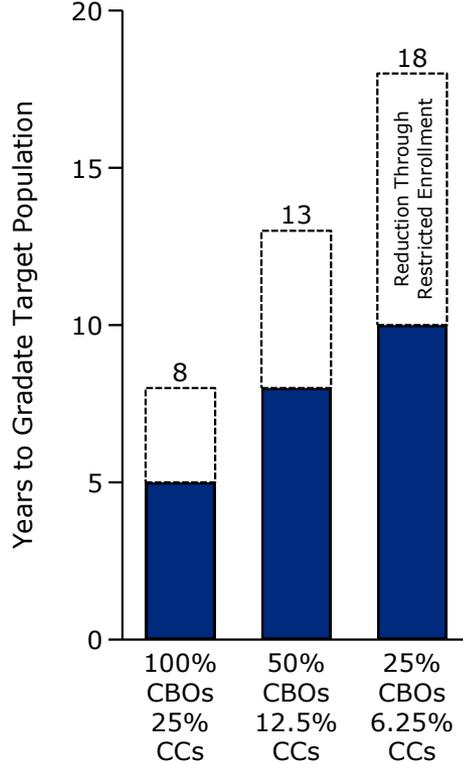
## Full Potential Impact on Target Population Enrollment is Moderate; High and Sustained Penetration Is Necessary to Impact This Cohort

**Target Population Graduates from "Not at All" to "Not Well" per Year**



**Total Current "Not at All" Population 1.7MM**

**Years to Graduate "Not at All" to "Not Well" Target Population**



**Assumptions**

- **Target:** Employed beginner LEPs with low educational attainment (HS degree or lower)
- **Blended Learning Approach:**
  - 25% Classroom-based
  - 75% Technology-based

• **Blended Learning Cost to CBO:**

Classroom	\$ 150
+ Phone/Hand-held Application	\$ 36
<b>Total</b>	<b>\$ 186</b>

Current cost per course is ~\$600

• **Blended Learning Cost to CC:**

Classroom	\$ 275
+ Phone/Hand-held Application	\$ 36
<b>Total</b>	<b>\$ 311</b>

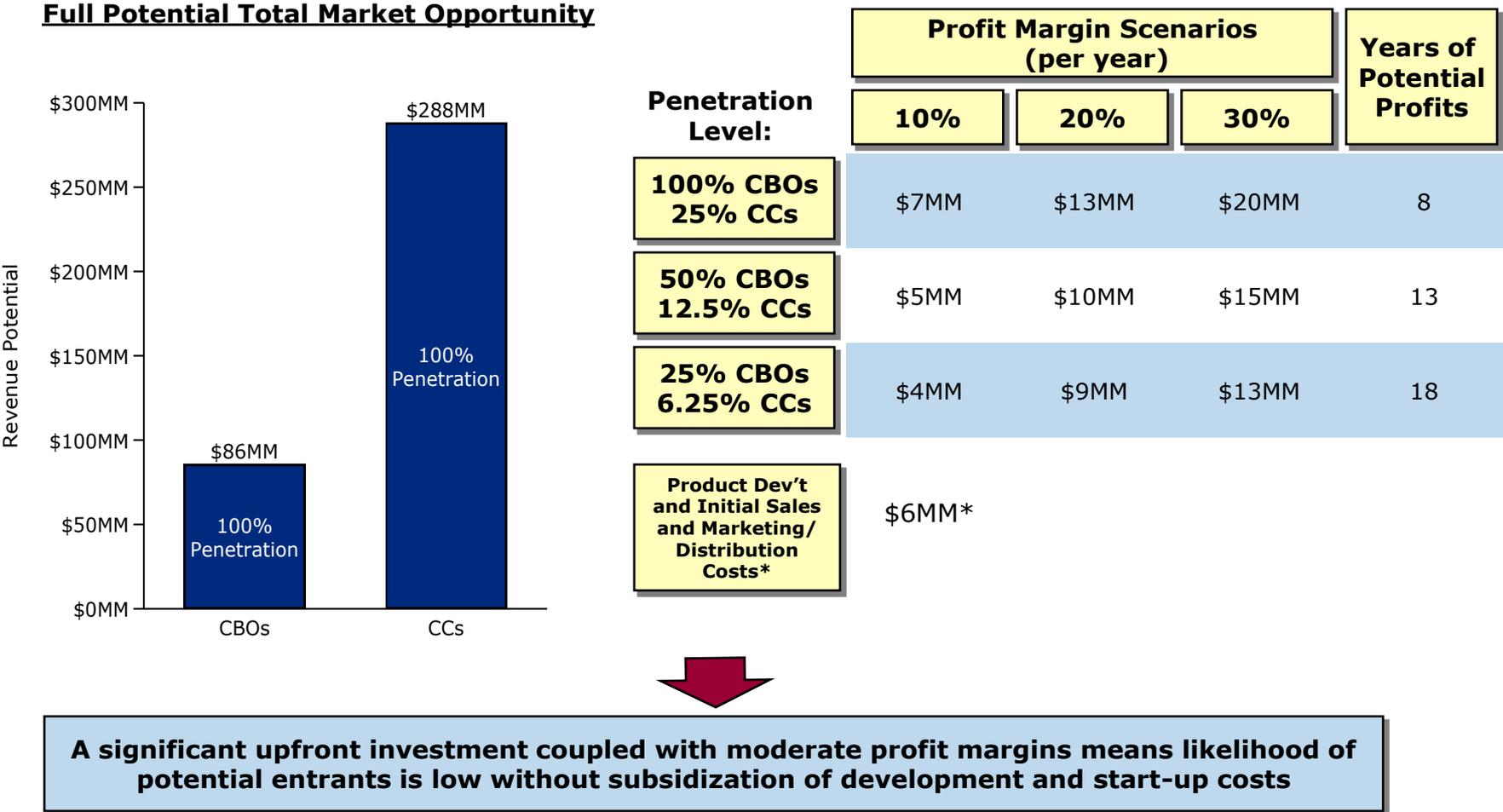
Current cost per course is ~\$1100

**Status quo, this target population will continue to increase with no time horizon for graduation**

Note: Cost per tool per course based on pro-rated annualized cell phone video game costs  
Source: Parthenon Analysis

# How Can We Innovate?

## Potential Profit Upside Is Not Significant Enough to Warrant Interest From Large Players

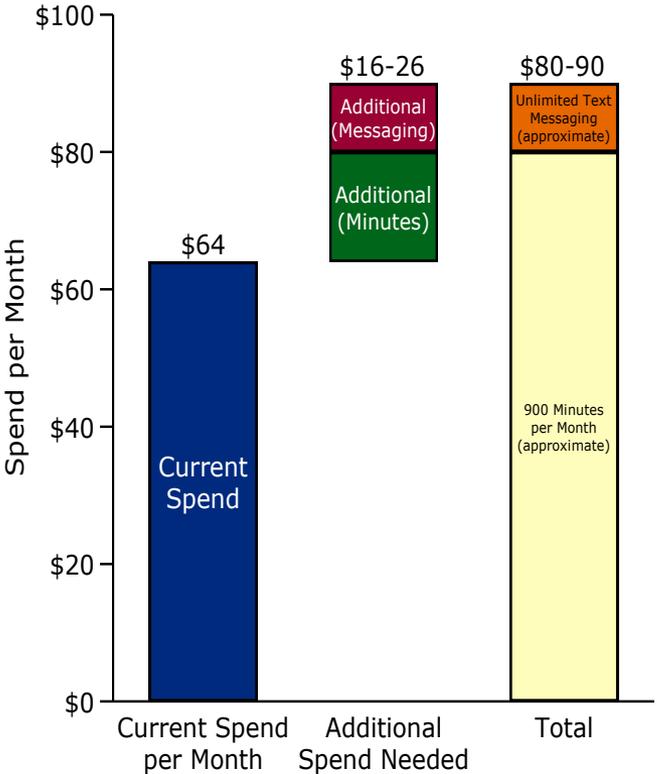


Note: Total market opportunity assumes 3 classes to move all "Not at All's" to "Not Well" at a tool cost of \$36 per class; \*Estimates. based on LiveMocha start-up investment  
 Source: Parthenon Analysis

# How Can We Innovate?

## Additional Minutes and Data Plan Purchase Require a New Funding Mechanism Via the Student or a Cell Phone Carrier

**Current and Future Spend per Month on Cell Phone Plan for Target Population**



**Plan Increase Assumptions**

- Plan increase of 300 minutes
- Additional text messaging/ data capabilities

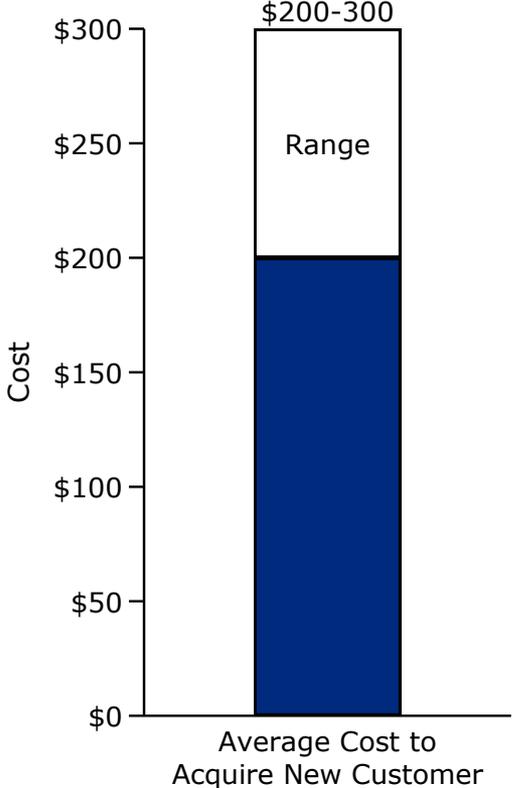
**State Regulations Precluding Student Payment**

- In California (largest LEP state), all government funding grantees are required to provide free courses to all students
  - Fringe costs cannot accrue to the student



**Additional cell phone plan fees for students are an additional potential barrier to successful roll-out that must be funded through other means (i.e. Carrier partner)**

**Average Customer Acquisition Costs for Major Cell Phone Carriers**



Source: Parthenon Phone Survey, n=100; Parthenon Interviews; Forbes.com; T-Mobile 10-K, 2007

# Agenda

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- What is the problem?
- How can we innovate?

- **What are other potential opportunities?**

# What Are Other Potential Opportunities?

## There Are Several Opportunities to Move the Dial for the “Not Well” Target Population

### Enrollment Growth Opportunities

#### Increased Enrollment within Current Funding Limits

- Cell phone initiative has potential to be adapted to intermediate “Not Well” population
  - Currently being used in pilot phases in Turkey and Canada to address this population
- There are many technology programs considered “best-in-class” in each target channel
  - A “new” effective innovation is needed to differentiate product from current selection
- Social networking is an effective option
  - Provides a platform with content and a built-in peer network
  - Social networking site LiveMocha (founded by a former Microsoft employee) stands out for both user growth and reviews
    - Program currently lacks ties to classroom learning but is well-suited to a blended learning model

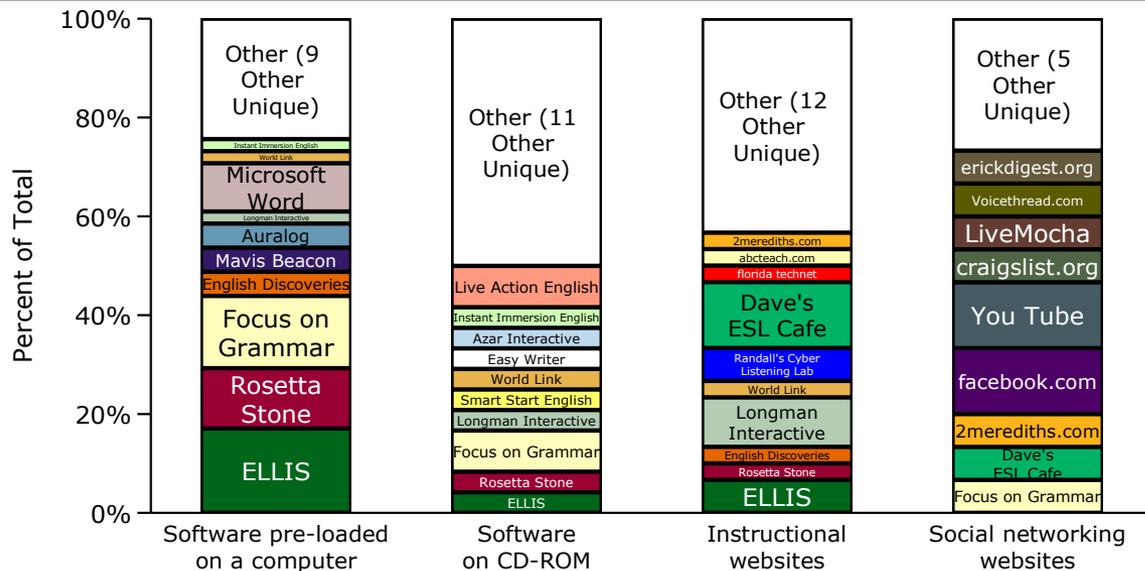
#### New Market Catalyztion

- There are 3.7MM target population “Not Well” LEPs
  - Increasing throughput by improving classroom efficiency is not enough – a market expansion program is necessary
- A cross-channel partnership between a for-profit online ESL instruction provider and an existing for-profit multi-campus institution has the opportunity to significantly expand the market
- Loans are likely required for target population to pay for class, and a strong IRR makes this a worthwhile investment

# What Are Other Potential Opportunities?

## There are a Plethora of “Best in Class” Products for ESL; CBO & Community College Administrators Find These Products Effective

**Q:** In your opinion, what is the Best-in-Class Adult ESL product in each of the following categories? [Graph]  
**Q:** For Adult ESL students, rate the product’s effectiveness on a scale of 1 to 7 where 1 is “Not at all effective” and 7 is “Extremely effective” [Dashboard]



<b>Unique Products</b>	19	21	22	14
<b>Product Effectiveness for "Not Well" Population</b>	5.8	5.5	5.4	4.2



**An effective but differentiated product is necessary to engage buyers**

# What Are Other Potential Opportunities?

## Though in Its Nascent Stage, Social Networking Has High Potential, Offering A Platform with Built-In Curriculum and Peer Network

Welcome Bryan D Hurren

Sex: Male  
Native speaker: English  
City: Seattle  
Country: United States  
Member since: Fri, Jul 27th 2007  
Course points: 240  
Learning: French

**French 101**  
100% complete  
RESUME COURSE

Tasks *last week | next week*

**This week**  
(Unit 2, Lesson 2)  
 Learn  
 Reading  
 Listening  
 Magnet

**Past due**  
! Learn (week 1)  
! Reading (week 1)  
! Listening (week 1)  
! Magnet (week 1)  
! Learn (week 2)

French 101 Leader Board

RANK	SCORE	MEMBER	ENROLLED
1	2460	Sarah Trai...	Sep 05, 2007
2	1955	Patricia	Sep 03, 2007
3	1239	C Blackman	Sep 09, 2007
4	640	Erik Anspach	Jul 26, 2007
5	624	Angela	Aug 29, 2007

Recent activity *More*

Qin Cao wants to be your friend *Accept Decline*  
Sep 19, 2007, 11:16 am

You accepted Eric Scheufler's friend request, you are now friends with Eric Scheufler  
Sep 18, 2007, 12:16 pm

You signed up for English Course 102

Dialog [?]

Lo lamento. Por favor, en la estación.

Bob: ¿En qué le puedo ayudar?  
Mary: Me gustaría comprar dos pasajes a Londres.  
Bob: ¿Cuándo desea viajar?  
Mary: Hoy, por favor.  
Bob: Lo lamento, pero no quedan boletos para hoy.  
Mary: ¿Y para mañana?  
Bob: Sí, para mañana tenemos pasajes.

Choose Dialog Partner

Friends

Speaking Spanish!

Similar Exercises

Introducción  
Sam: Hola. Me llamo Sam. Keiko: Hola. Yo soy Keiko. Sam: Gusto en conocerte. Bienvenida a Londres. Keiko: Gracias. Ig...

Disculpa. Gracias. ¿Qué hora es?  
Sam: ¿Disculpa? Keiko: ¿Sí? Sam: ¿Sabes qué hora es? Keiko: Sí, son las 4:30. Sam: ¿Sabes a qué hora pasa ...

### Key Offerings

- Differentiated offering from traditional online and offline software tools
- Provides a peer network that has built-in interactivity with social and motivational aspect
- Scalable solution that leverages the community and the web

### Potential

- Creation of a prescriptive program with 25% classroom time and 75% technology in which peers can work together online
- Many language-learning social networking sites exist, including LiveMocha, Mixxer, SharedTalk, etc.
  - LiveMocha, based on speed of growth and reviews, is proving to be best in class
- USA Learns is a government-funded ESL portal and will go live in September 2008

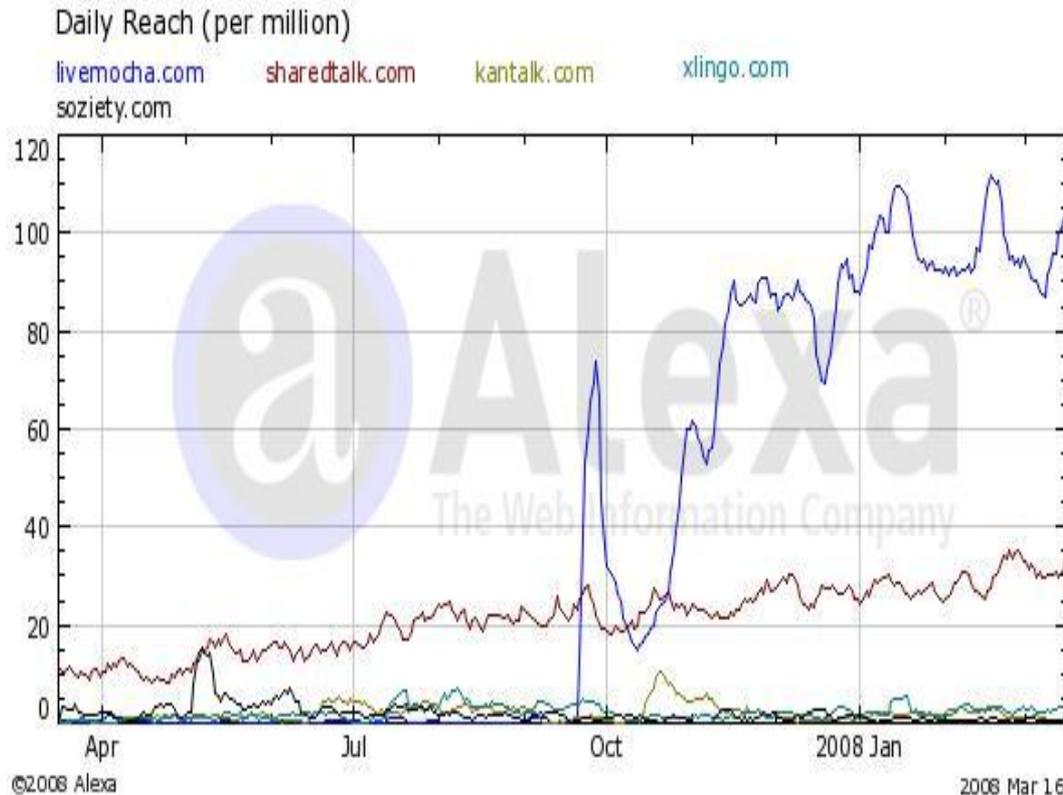
### Opportunity for Funders

- Fund curriculum analysis and assessment to determine quality of curriculum and drop-out rates and identify areas of improvement
- Fund pilot in CBOs/libraries/CCs
- Increase ESL-dedicated computer access in CBOs/libraries/CCs to encourage ESL study
- Merge offering with classroom learning to increase persistence

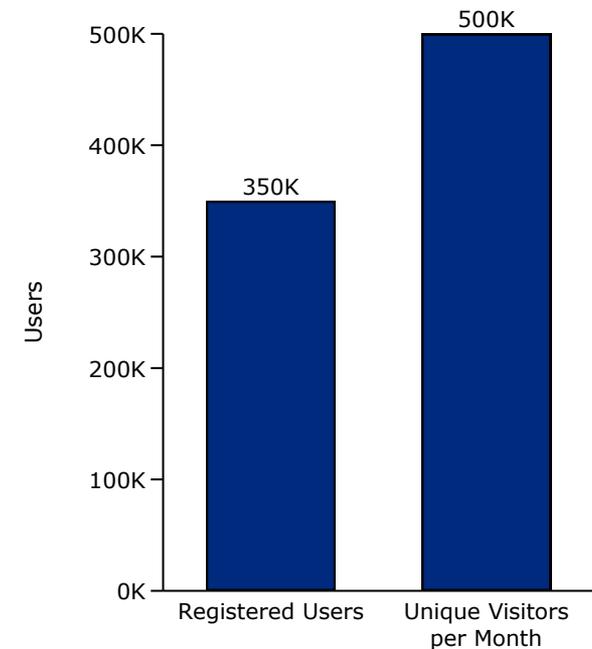
# What Are Other Potential Opportunities?

## LiveMocha Growth Has Been Rapid In 1<sup>st</sup> Year of Operation

**Daily Web Traffic**



**LiveMocha Current Traffic**

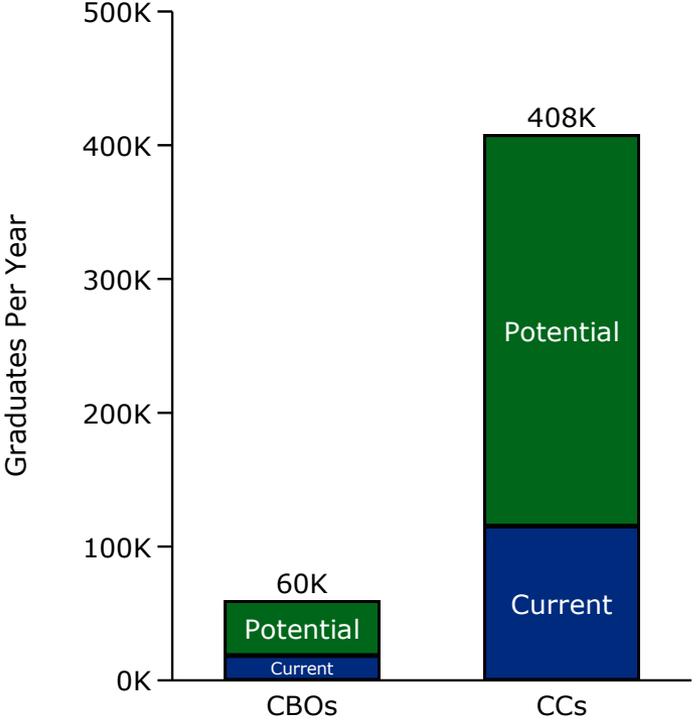


**Currently free of cost, subscription pricing plan for premium content is being developed, and ~\$10-\$30 per month could likely be negotiated down to similar \$6 per month cost for "M-Learning" application with no additional voice/data plan cost attached**

# What Are Other Potential Opportunities?

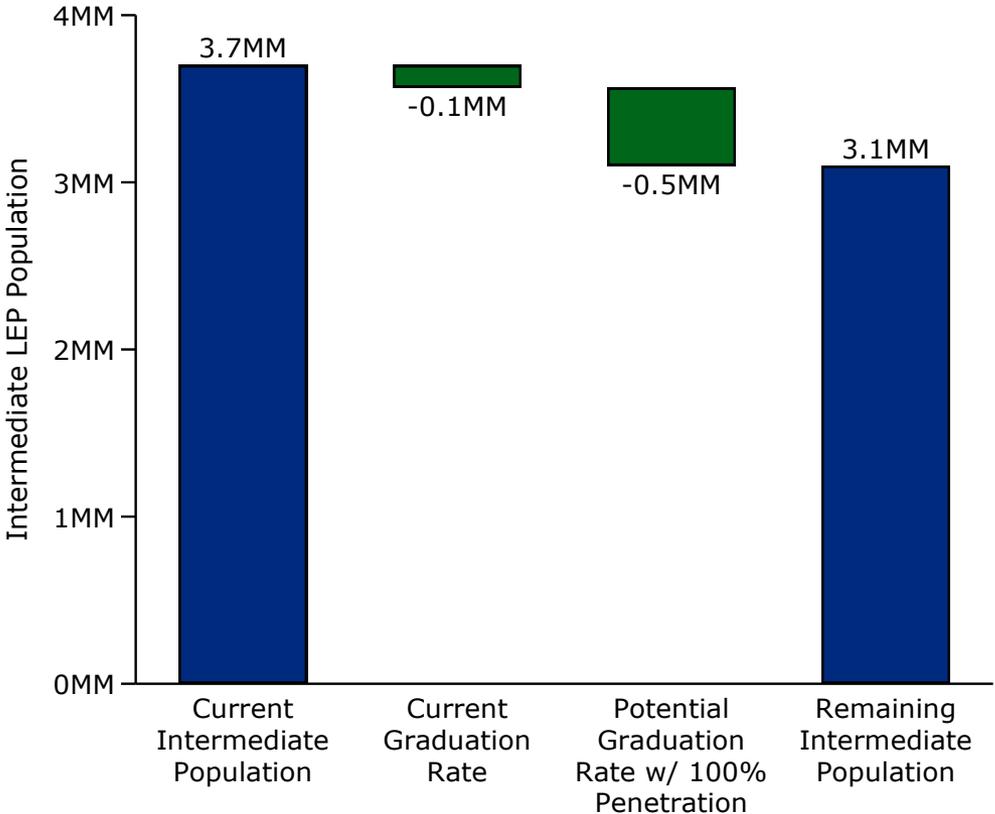
## Biggest Hurdle With “Not Well” Population is Size – Operating Within Current Funding Restrictions is Not Enough to Meaningfully Aid Segment

**Graduates from “Not Well” to “Well” per Year**



<b>Technology Tool Assumption</b>	\$36/year	\$72/year
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**Impact of Throughput Expansion Initiatives**



Note: Estimated tool cost of \$36 per class; Assume 1 class per year is taken by student at CBO while 2 classes per year are taken at Community College  
 Source: Parthenon Analysis

# Appendix

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# Appendix

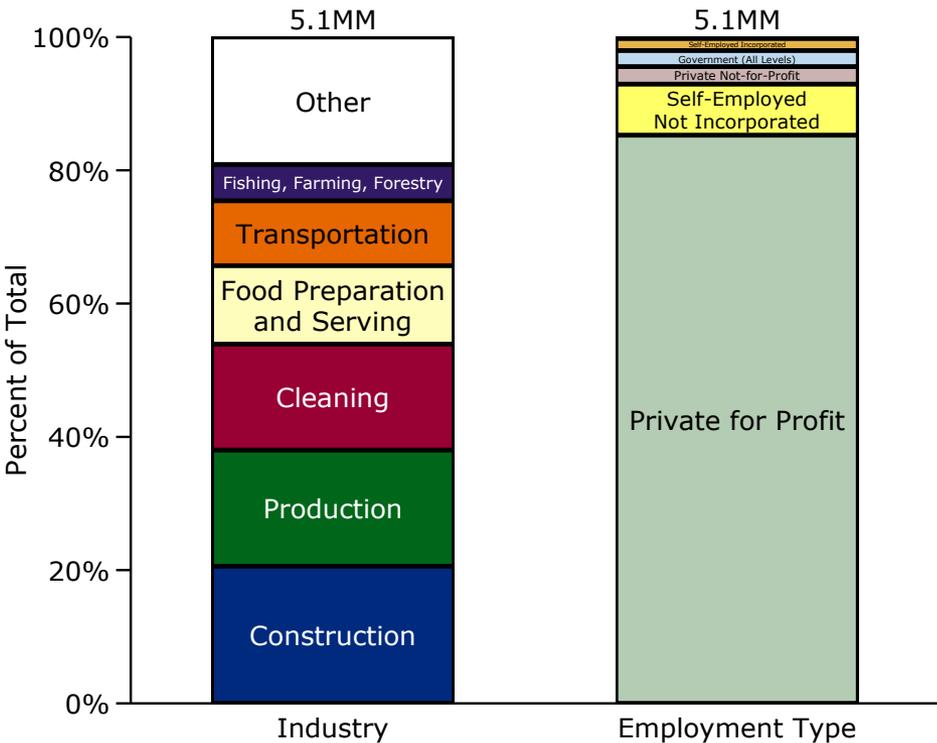
## Census and NRS Levels of ESL and Corresponding Skills

Census Level	National Reporting System (NRS) Level	Language Characteristics
<b>"Not at All"</b>	<ul style="list-style-type: none"> <li>• Beginning Literacy (SPL: 0-1)</li> <li>• Low Beginning (SPL: 2)</li> </ul>	<ul style="list-style-type: none"> <li>• Cannot speak or understand English beyond very basic greetings and simple phrases and questions</li> <li>• Limited to no written skills in ANY language</li> <li>• Functions with difficulty in social situations</li> <li>• Limited to no knowledge of computers or technology but may be able to handle routine entry-level jobs</li> </ul>
<b>"Not Well"</b>	<ul style="list-style-type: none"> <li>• High Beginning (SPL: 3)</li> <li>• Low Intermediate (SPL: 4)</li> <li>• High Intermediate (SPL: 5-6)</li> </ul>	<ul style="list-style-type: none"> <li>• Can understand common words, simple phrases, and questions about personal everyday activities</li> <li>• Can read most sight words and many other common words on familiar topics and write simple sentences</li> <li>• Can handle routine entry-level jobs requiring basic English oral with very simplistic written communication</li> <li>• May have limited knowledge or experience using computers</li> </ul>
<b>"Well"</b>	<ul style="list-style-type: none"> <li>• Advanced (SPL: 7)</li> </ul>	<ul style="list-style-type: none"> <li>• Can understand and communicate in a variety of context related to daily life and work with basic fluency of speech</li> <li>• Can read moderately complex text, using context and word analysis skills to understand vocabulary</li> <li>• Can write multi-paragraph text using some complex grammar and a variety of sentence structures</li> <li>• Can handle jobs that require routine interaction with the public</li> <li>• Can use common software and learn new basic applications</li> </ul>

# Appendix

## Target Population Breakdown by Industry and Employment Type

**Target Population Employment by Industry and Type (2006)**

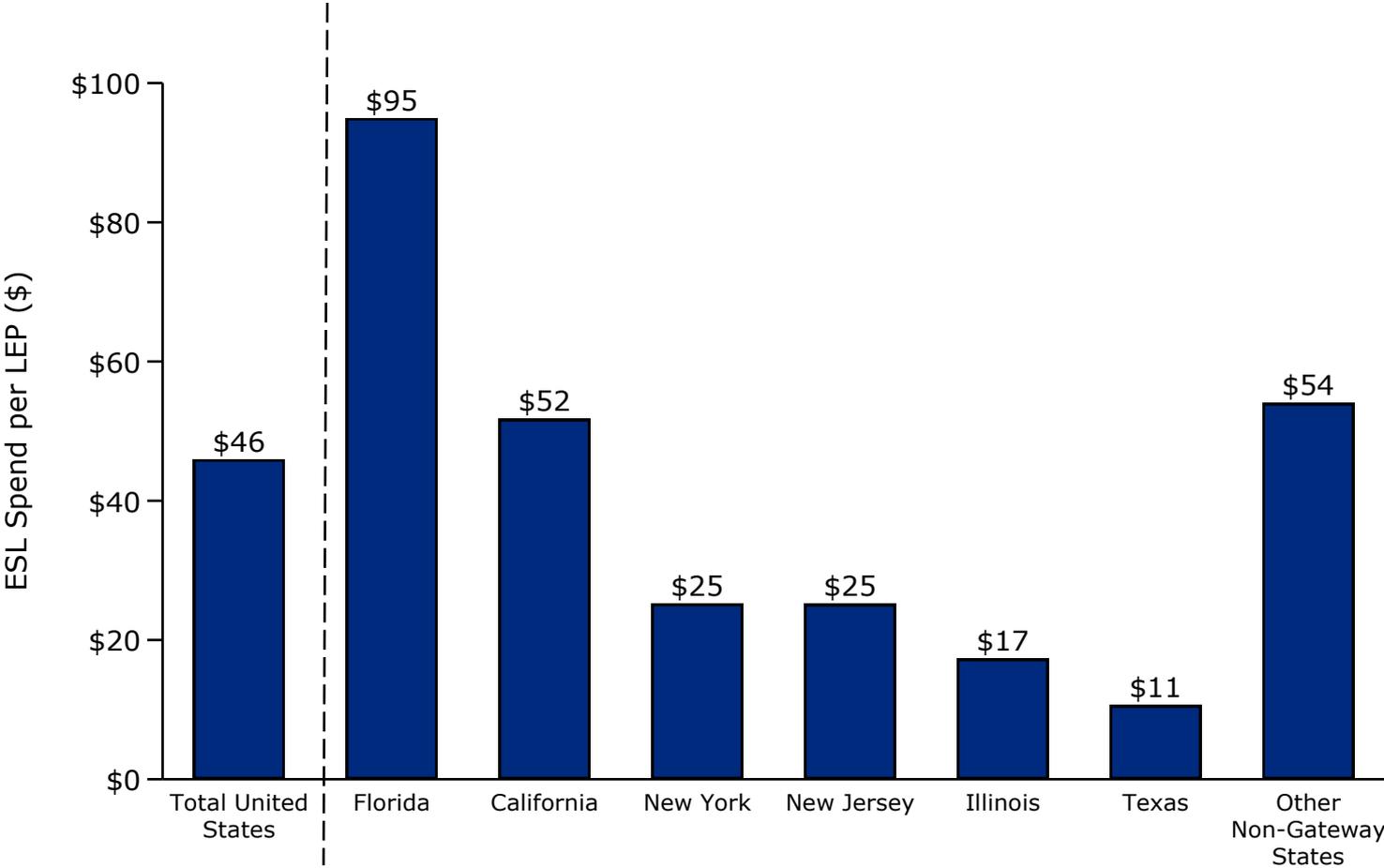


Note: Target population consists of those who speak English less than "Well", have less than or equal to a high school degree, and are 18 years or older and employed  
 Source: U.S. Census Bureau American Community Survey

# Appendix

## Funding for ESL Differs Across States

**Annual ESL Government Spending per LEP by State (2007)**



Source: U.S. Department of Education; U.S. Office of Vocational and Adult Educations; U.S. Census Bureau