Survey Results Summary

Guild 360 Report on Mobile Learning

August, 2007

The eLearning Guild
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Visual analytics component developed using Tableau from Tableau Software.

Profile database and back-end survey system developed by Cyclone Interactive.

Product rating system developed by Dazzle Technologies.

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The eLearning Guild Research Pledge

Our goal is to provide the best research based on the best data. Indeed, with well over 25,000 e-Learning professionals – designers, developers, managers, and executives who are passionate about the art and science of
e-Learning – the Guild has an unmatched and enormously rich and varied pool from which to gather data.

But let us be very clear that this data represents one thing and one thing only: the preferences, opinions, loves, loathings, trials, and triumphs of eLearning Guild members. Does the information represent the e-Learning industry as a whole? Probably, but we cannot – and will not – make that claim.

And anyone else publishing articles or research that makes that claim – and makes it using a much smaller data set than we would ever consider using – is presumptuous at best.

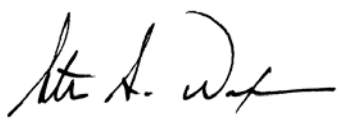
Here are the five articles of practice that drive eLearning Guild Research:

1. **Live, interactive, always-up-to-date.** In addition to providing members with truly useful visual analytics tools, the underlying data is *always* up to date and displayed in real time.
2. **Number of respondents.** Our research reflects the opinions of *thousands* of e-Learning professionals. The Guild has more, and better, data than is available any place else. *Indeed, we will never publish results from a survey unless we have received at least 750 fully-vetted responses.*
3. **No reliance on outside sources that will bias our reports.** With thousands of members updating their profiles and completing surveys, the Guild does not need to rely on outside sources for contacts to complete surveys.
4. **Funding**. The eLearning Guild funds its own research. We do not accept any form of sponsorship from vendors and/or suppliers for public research activities.
5. **Guaranteed Fresh.** Every 90 days we remind members to update their profile and survey information. If a member goes a year without updating information, we filter that information out of our live reports.

For the Guild's 360º Reports we carefully review respondents' data for accuracy and consistency. If we detect an anomaly, we contact that respondent and ask that he or she clarify his or her responses. If any issue cannot be resolved, we discard the data from this respondent and it is not included in our report.

The Guild is truly an amazing organization and I feel privileged to be a part of it. My goal is to leverage the depth, breadth, and spirit of the Guild's members to produce the gold standard in e-Learning research.

Sincerely,



Steven S. Wexler
Director of Research and Emerging Technologies

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Survey Results Summary

The following document comprises a "snapshot" summary of The eLearning Guild Mobile Learning survey as of August 14, 2007. As of this writing we have received 940 survey responses.

As with any printed report, the charts in this section become dated the moment a Guild member updates his or her profile and completes or updates the associated survey (Guild surveys are available 24/7 and we never remove them from our Website). We strongly encourage you to view up-to-the-minute, real-time results using the Guild's Direct Data Access portfolios.

In addition to viewing up-to-date information, you will also be able to find answers to *your* specific needs by filtering the information based on *your* specific requirements.

You can find information on Direct Data Access at http://www.elearningguild.com/360.

Information on how to acquire the full report (both printed and Direct Data Access components) can be found at https://www.elearningguild.com/360_purchase/index.cfm.

Survey Respondents' Demographics

Here is a demographic summary of the 940 eLearning Guild members who have completed the survey, as of this writing.

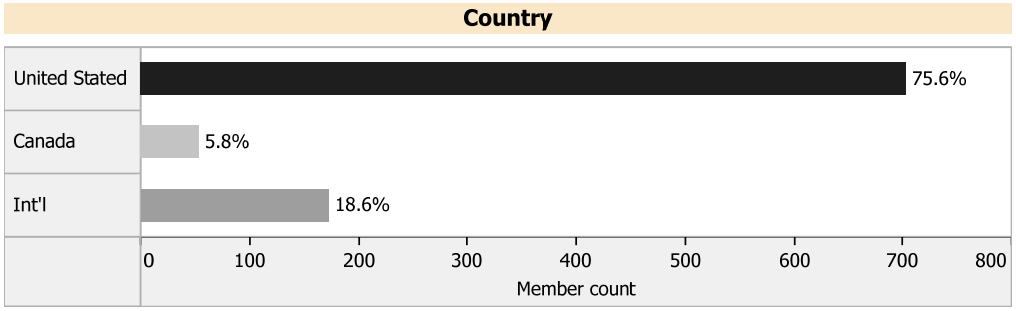


Figure 1 – Survey respondents broken down by Country.

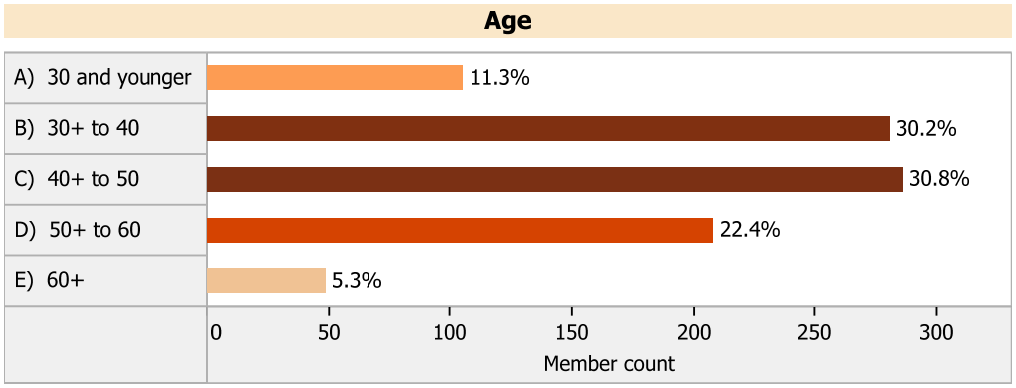


Figure 2 – Survey respondents broken down by Age.

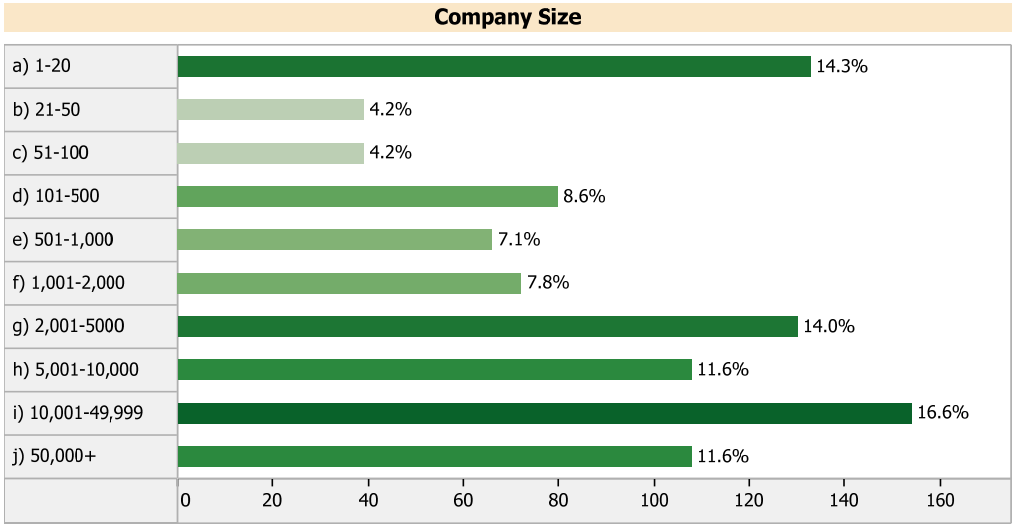


Figure 3 – Survey respondents broken down by Company Size.

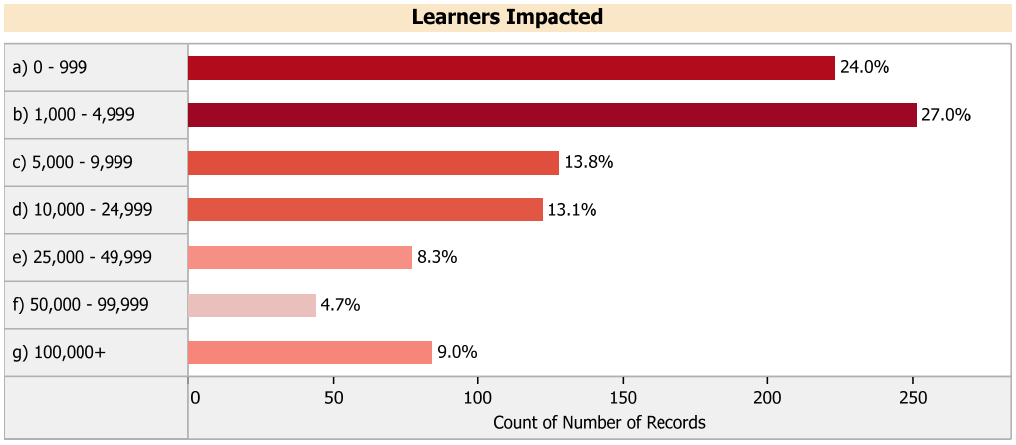


Figure 4 – Survey respondents broken down by Learners Impacted.

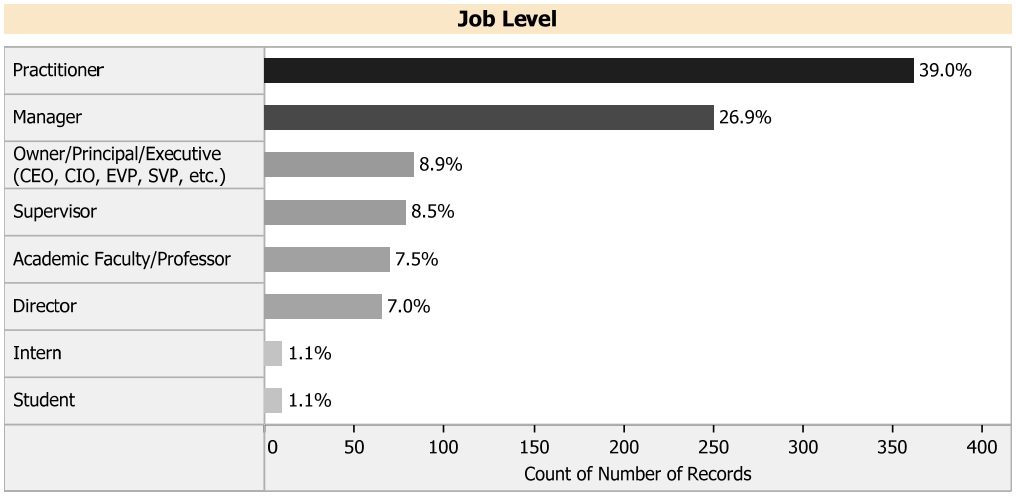


Figure 5 – Survey respondents broken down by Job Level.

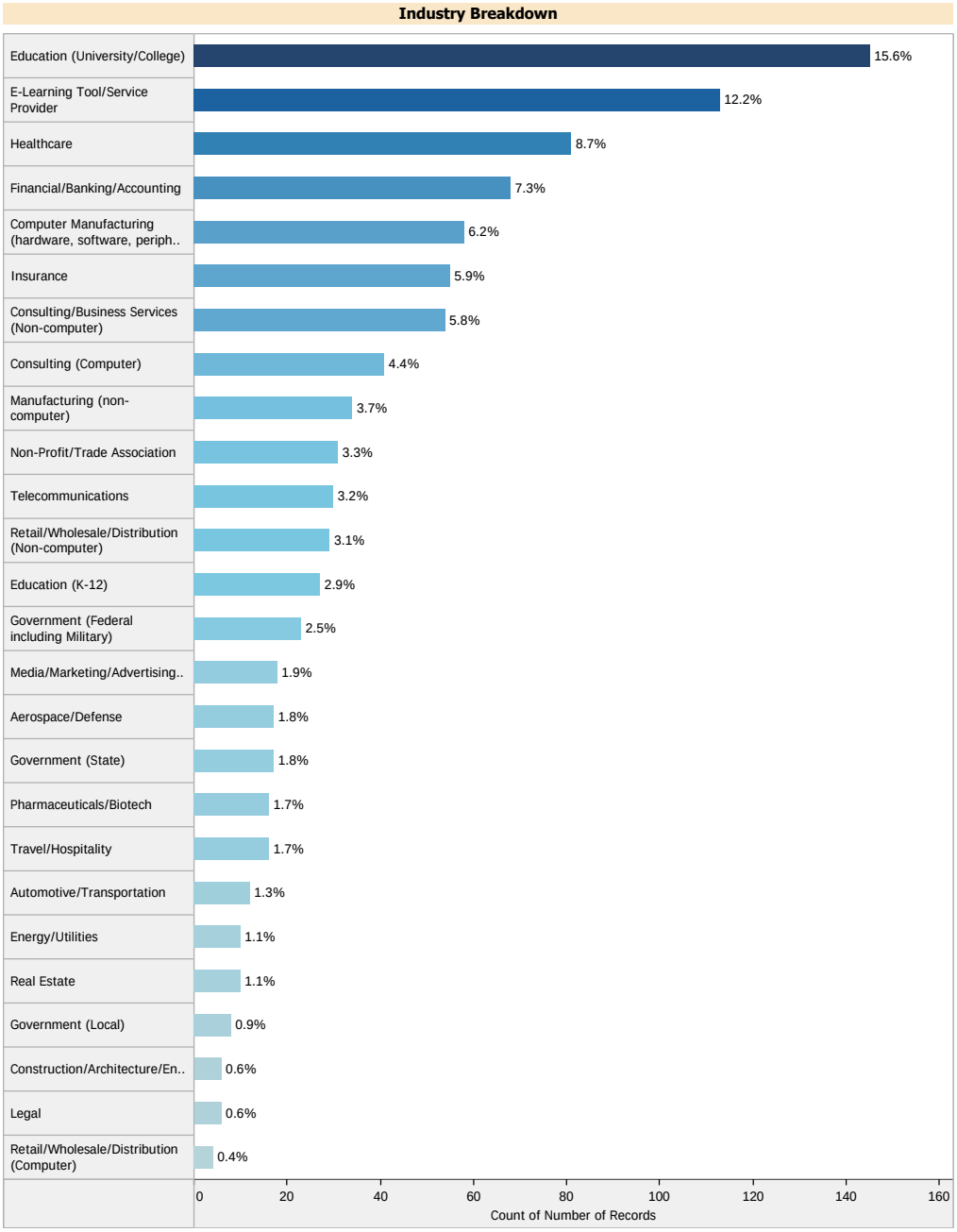


Figure 6 – Survey respondents broken down by Industry.

How many mobile devices (phone, media player, etc.) do you personally use?

Figure 7 shows personal mobile device use for all members that completed the survey.

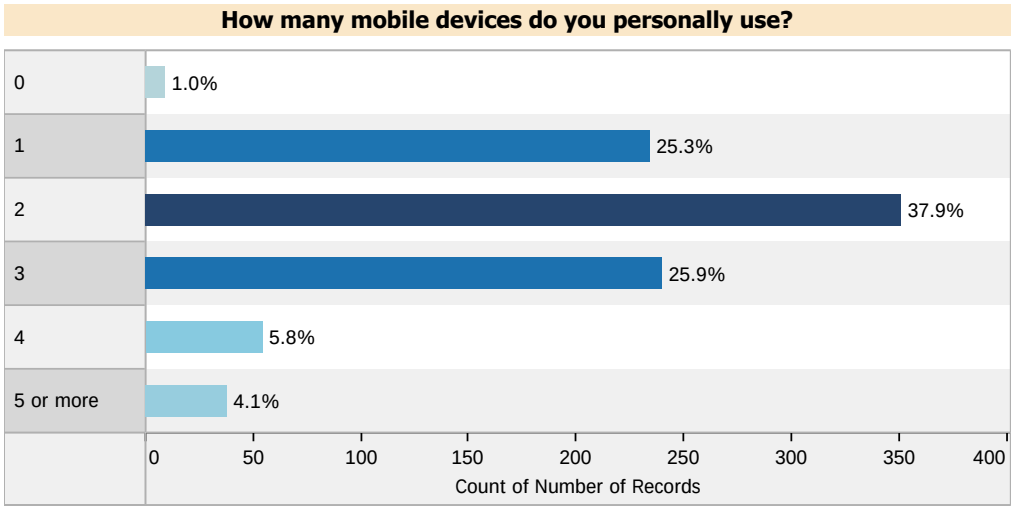


Figure 7 – Number of mobile devices members use.

Indicate the extent to which you use the following features with a mobile device

There are significant differences in frequency of use when we filter the results by country and age. Figure 8 shows feature use for all members.

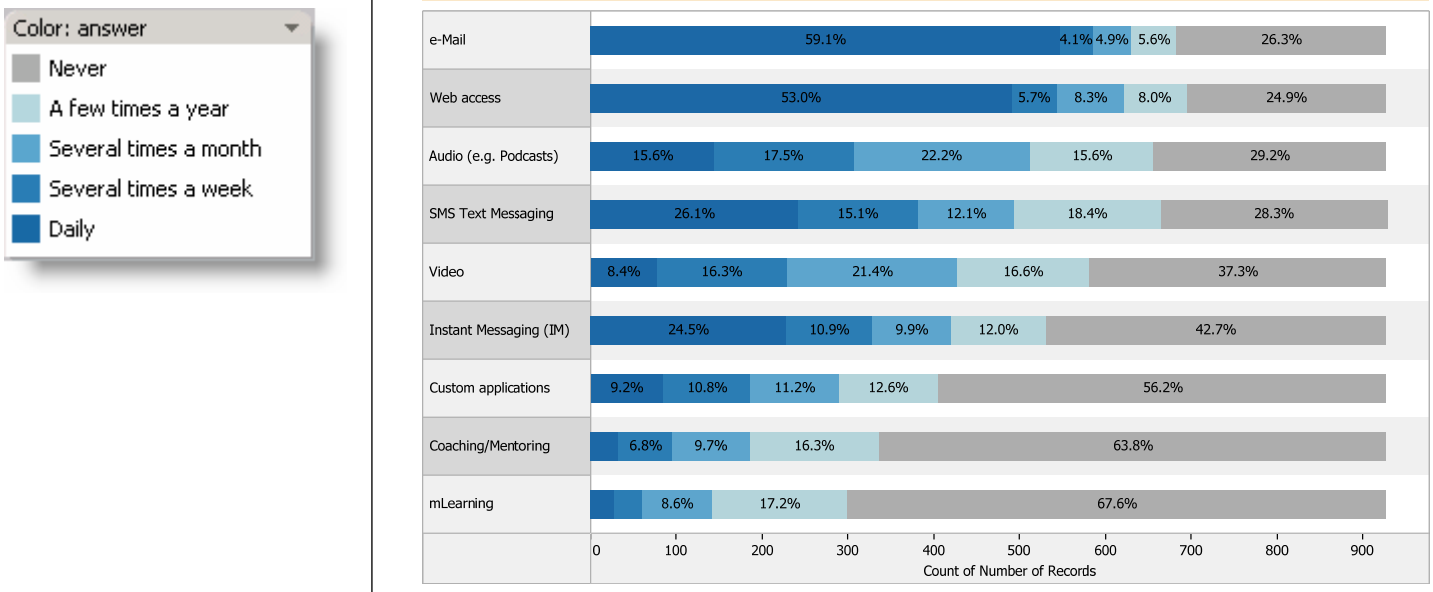


Figure 8 – Frequency of feature use for all members.

Figure 9 shows feature-use frequency broken down by country. Notice that members living outside the U.S. and Canada use all features more often, and use SMS Text Messaging very frequently.

Members living outside the U.S. and Canada use all features more often, especially Text Messaging.

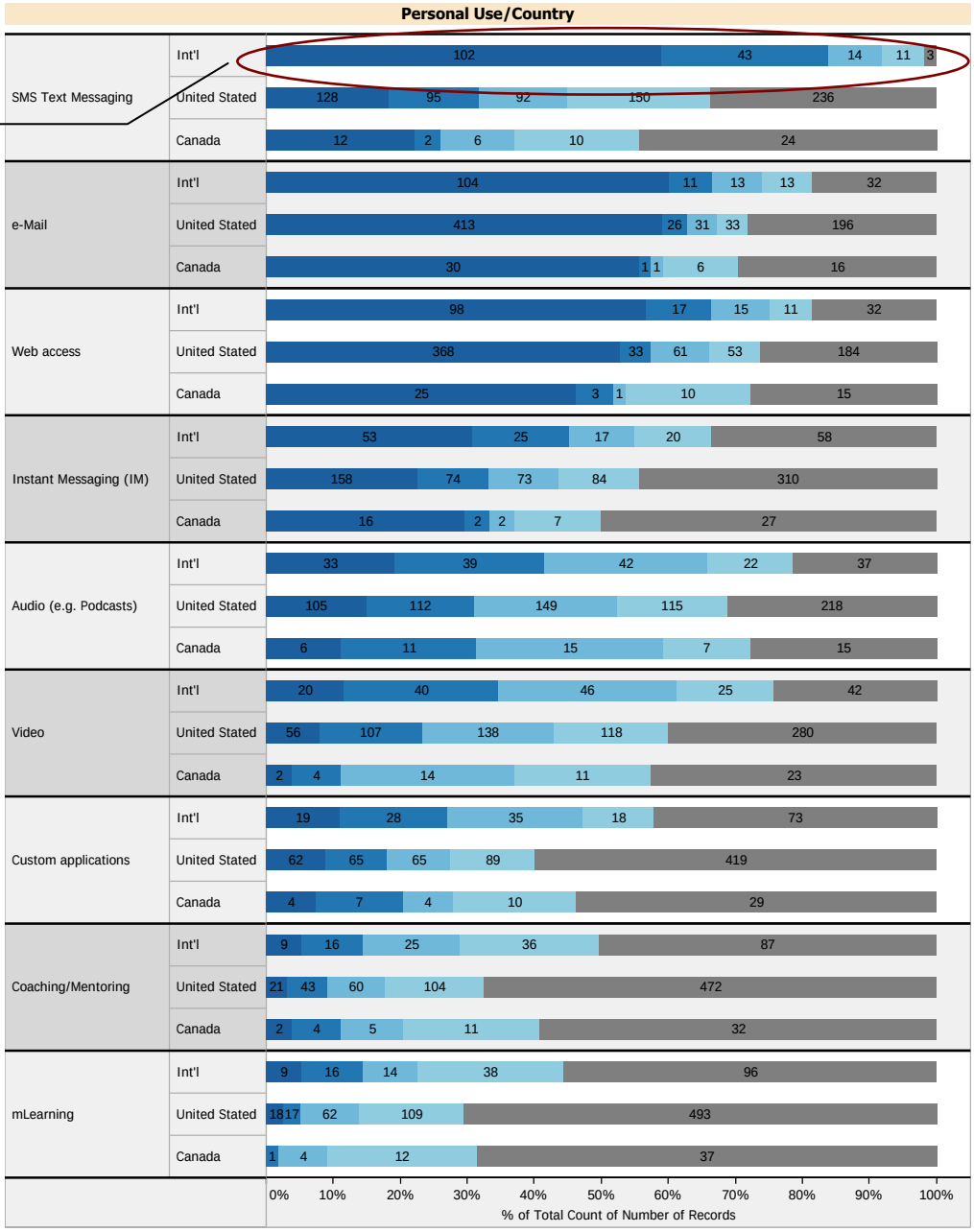


Figure 9 – Frequency of feature use broken down by country.

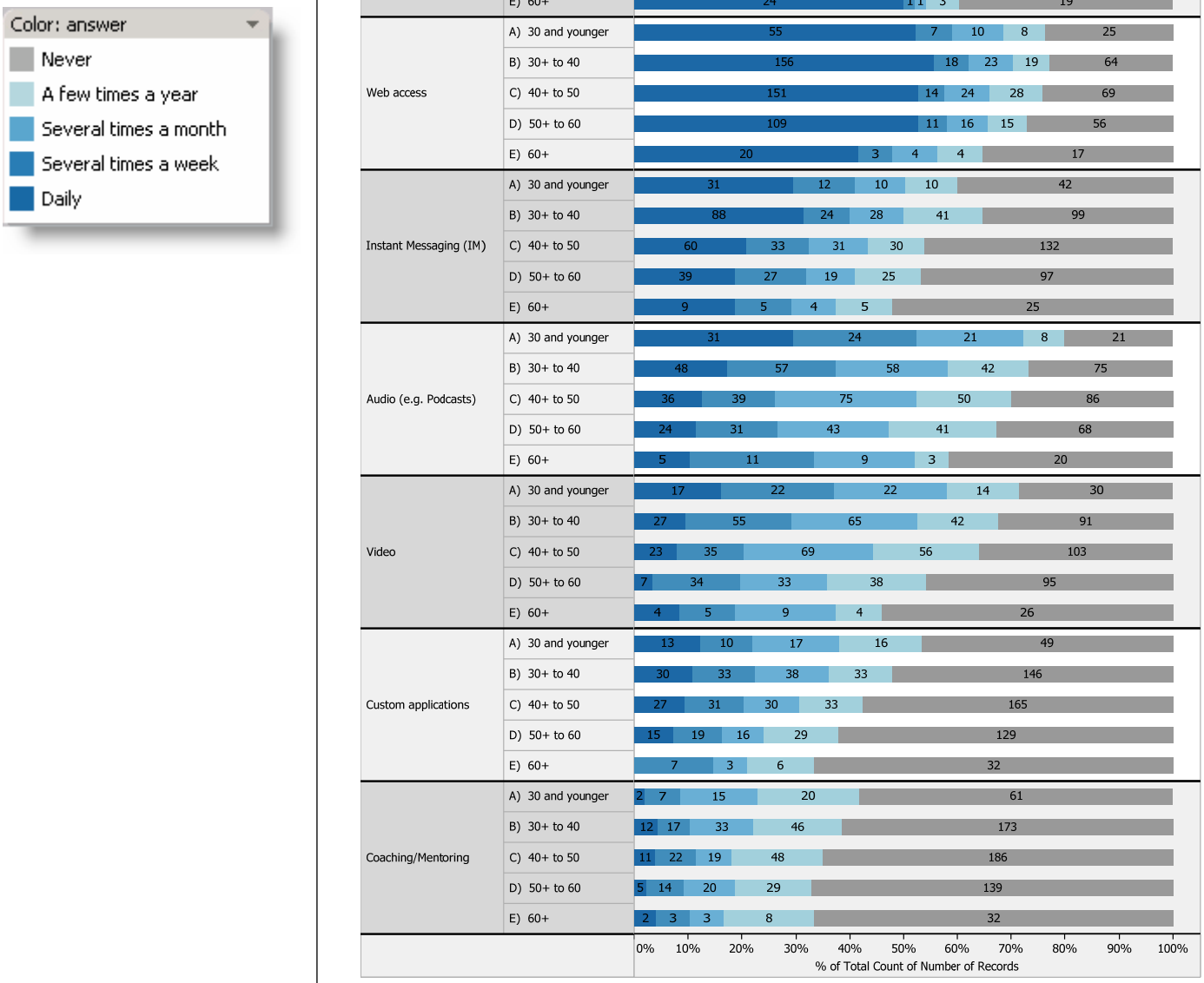


Figure 10 – Frequency of feature use broken down by age.

Frequency of use: Accurate measure or skewed by early adopter ebullience?

One concern voiced by my co-authors was whether the responses we've received accurately reflect the Guild, or are the members that take this survey pre-disposed towards "Mobile Devicedness."

As with all Guild surveys, the members who are passionate about a subject will be among the first to complete a survey on that subject, and our first week of data gathering is usually skewed towards people who have some type of vested interest in the subject matter. So although the first week to ten days of a survey may be skewed, as more and more members fill out the survey we start to see results that are indicative of the Guild as a whole, and as we publish this we are confident that our results are statistically significant.[1]

[1] The Guild does not publish survey results unless we achieve at least 95% confidence that our results are plus/minus 3.5%.

How do you personally use the following devices?

In Figure 11 we map device and feature use among Guild members for various devices.

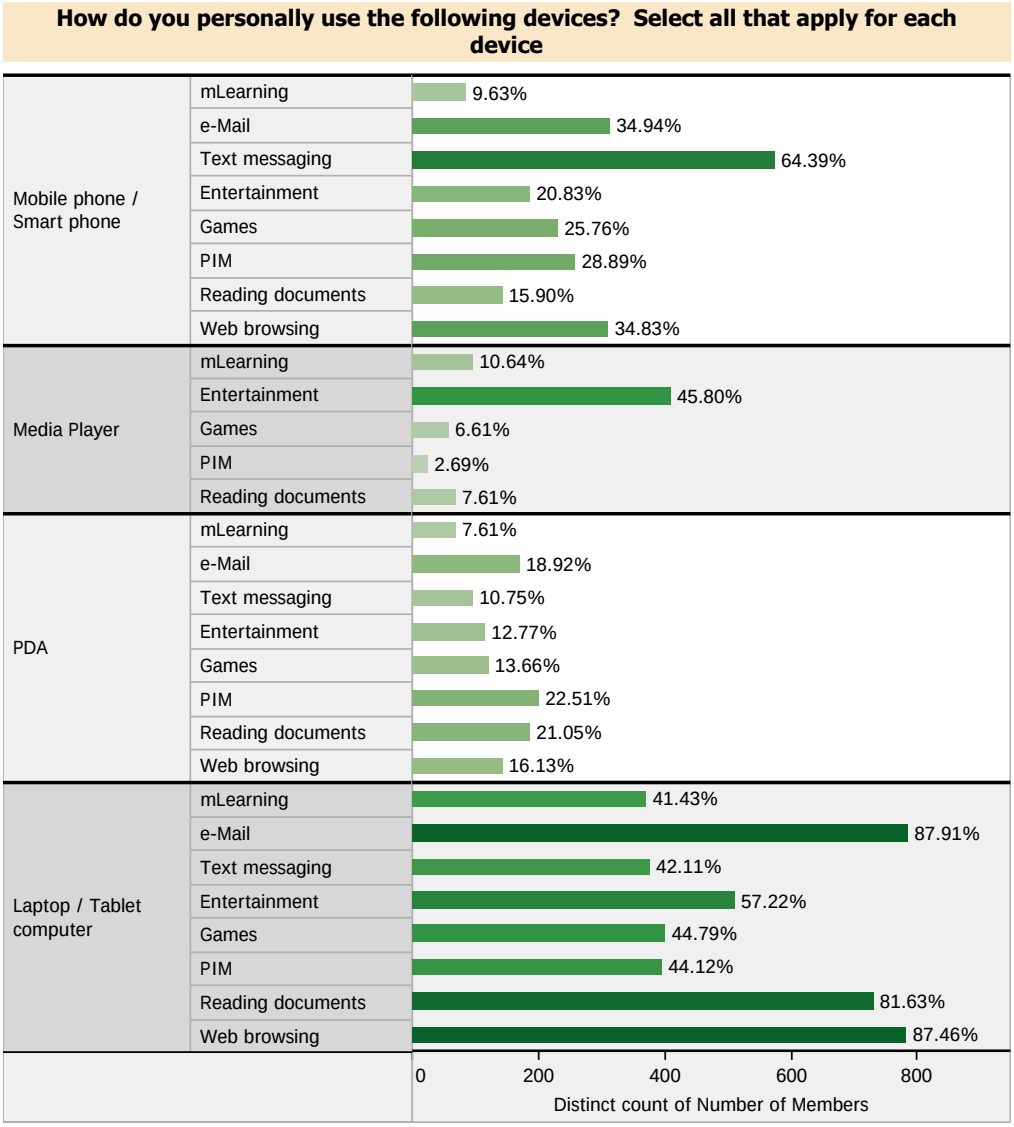


Figure 11 – Mapping feature to device for all members.

Phone and Feature use broken down by country

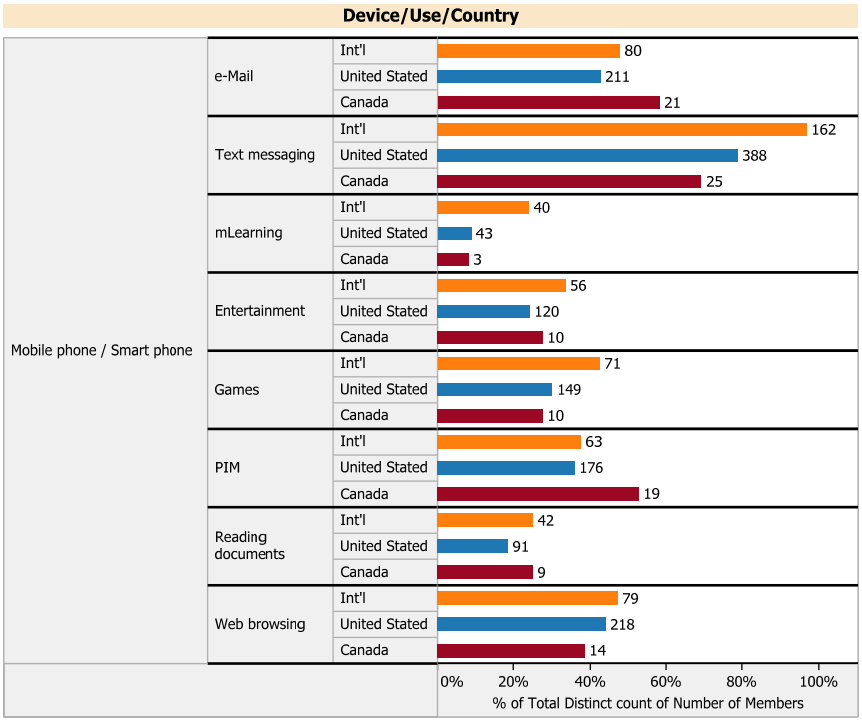


Figure 12 – Phone and feature use broken down by country.

Phone and Feature use broken down by age

In Figure 13 we see what features people have at least tried with their mobile phones.

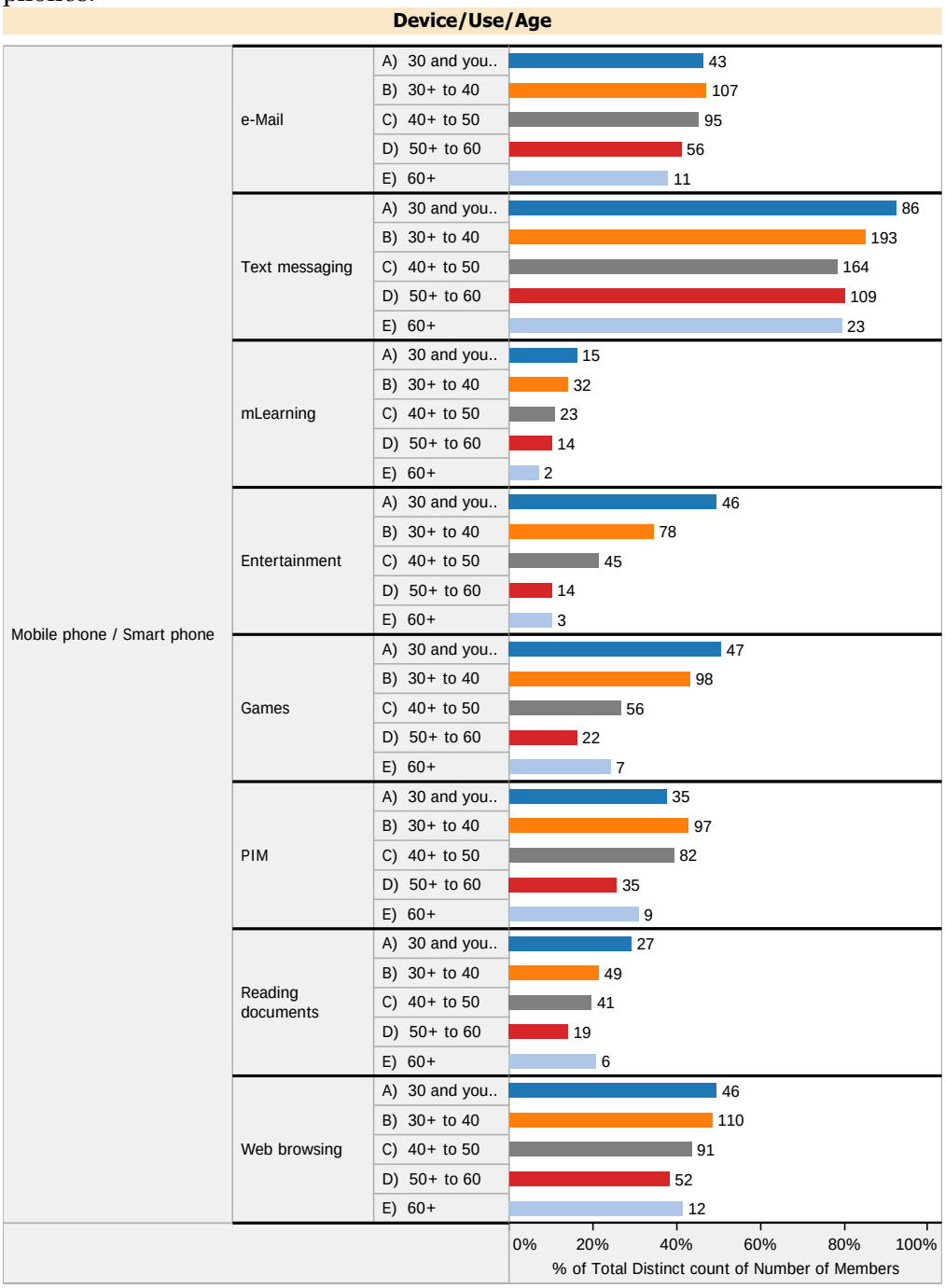


Figure 13 – Phone and feature use broken down by age.

At what stage are you with mobile learning in your organization?

Figure 14 shows how far along member organizations are with embracing m-Learning. It's important to note that that adoption of m-Learning varies widely in different countries and in difference industries.

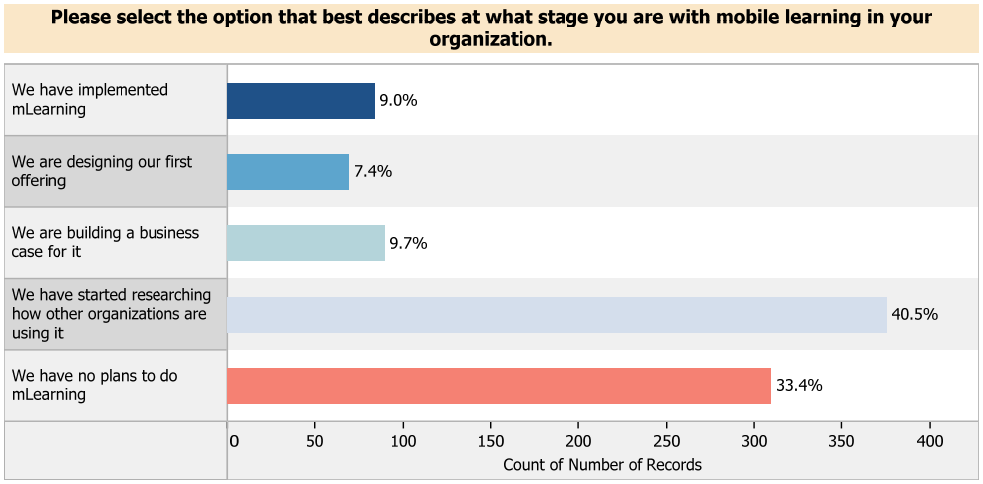


Figure 14 – Adoption of m-Learning for all member organizations.

Plans for the next 12 months

In Figure 15, we show 12-month plans for all members.

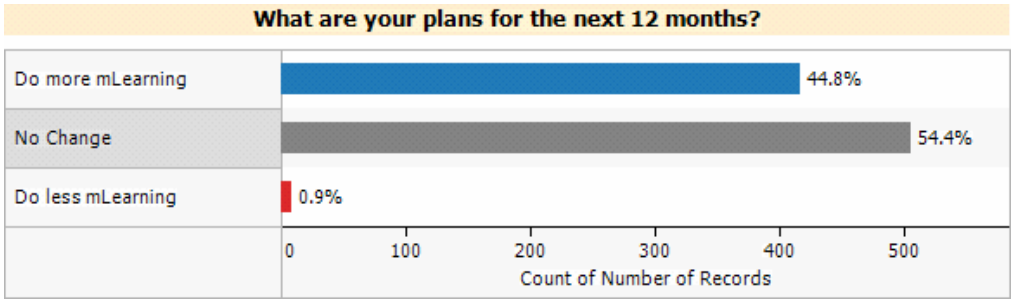


Figure 15 – M-Learning plans for the next 12 months.

Devices you use, or are considering using, for m-Learning

In Figure 16 we see which devices members use or are considering using for m-Learning.

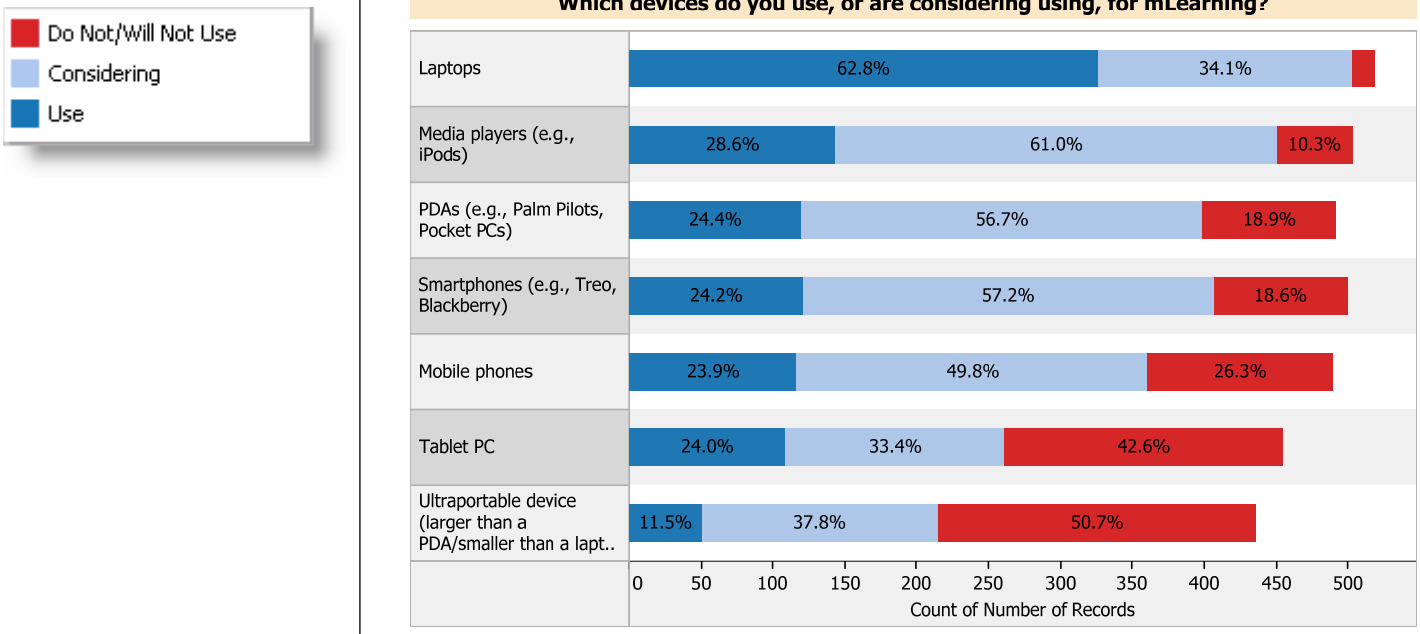


Figure 16 –Which devices do you/will you target for m-Learning?

Type of m-Learning Content

The types of content members offer, or plan to offer, through m-Learning differ significantly depending on industry and company size.

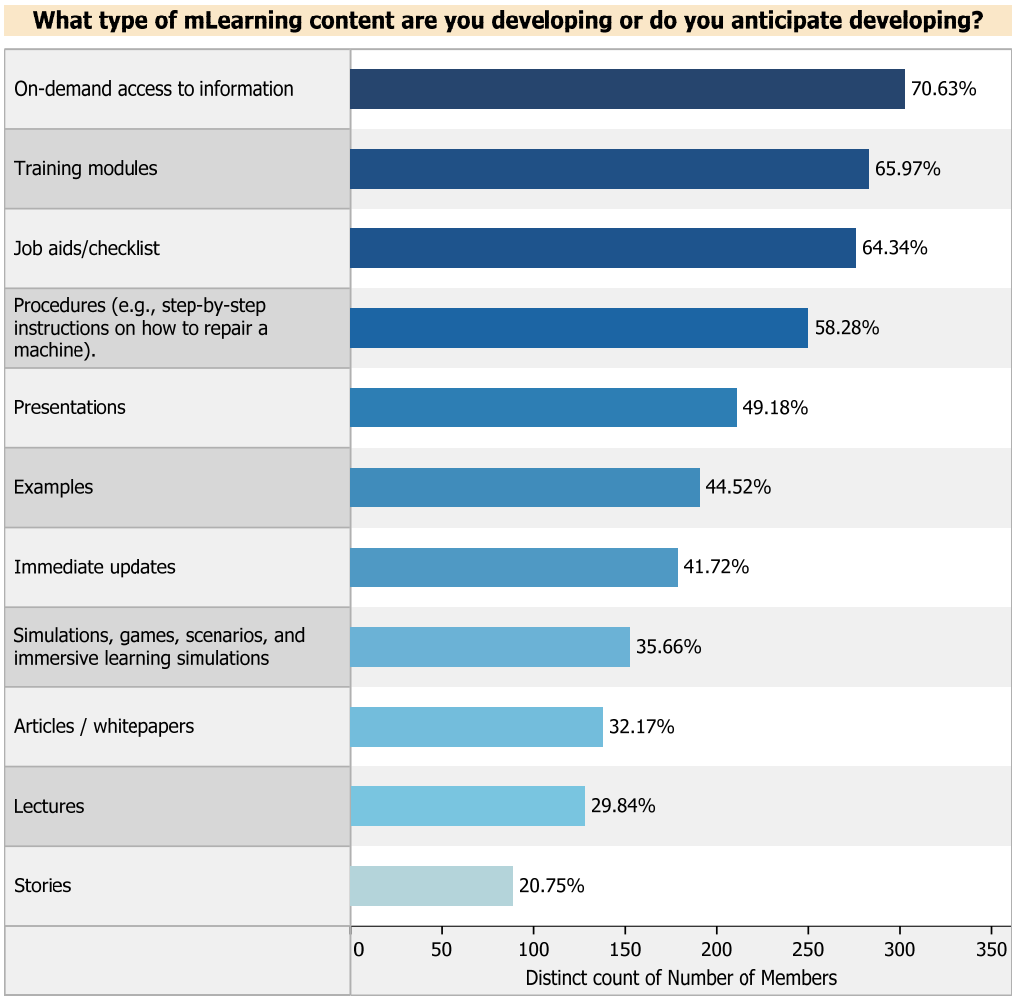


Figure 17 –Content type for all industries except education.

Contrast this with the members that work in education, as shown in Figure 18.

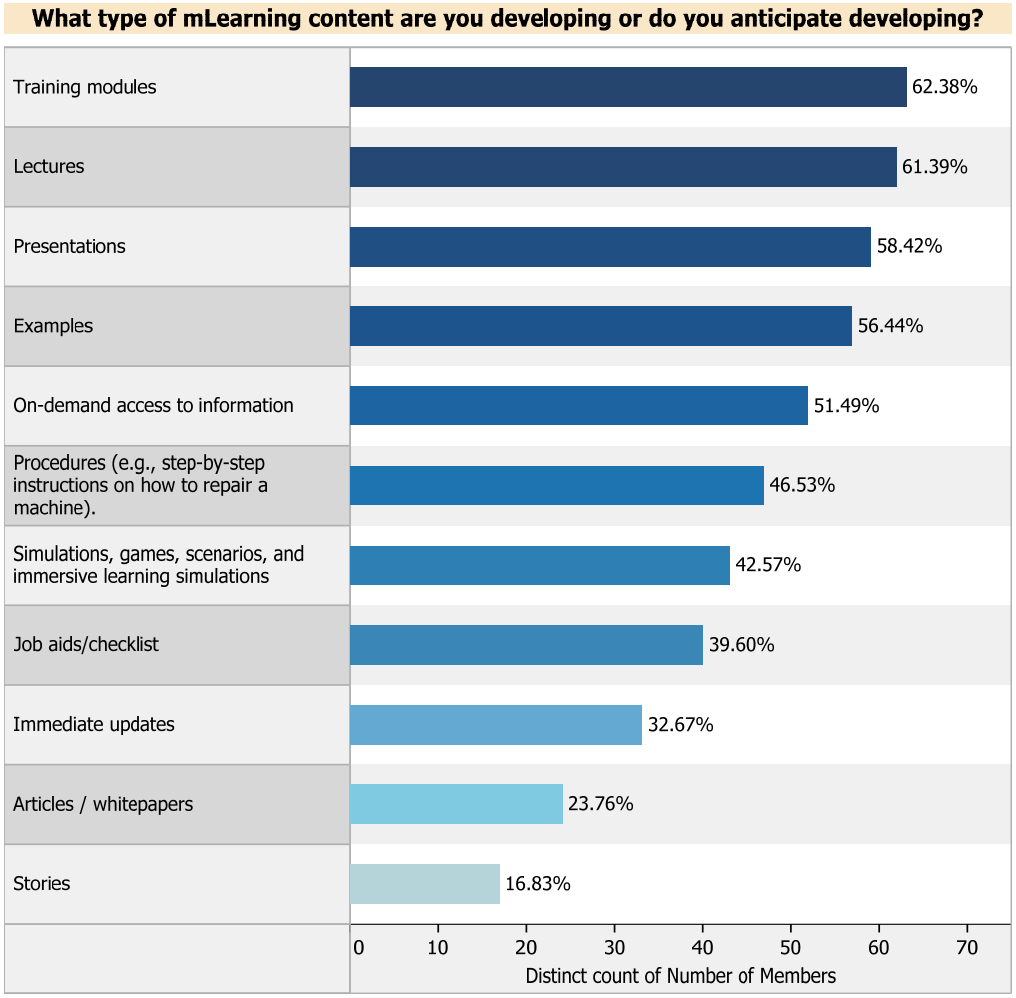


Figure 18 – Members working in education plan to offer less of everything.

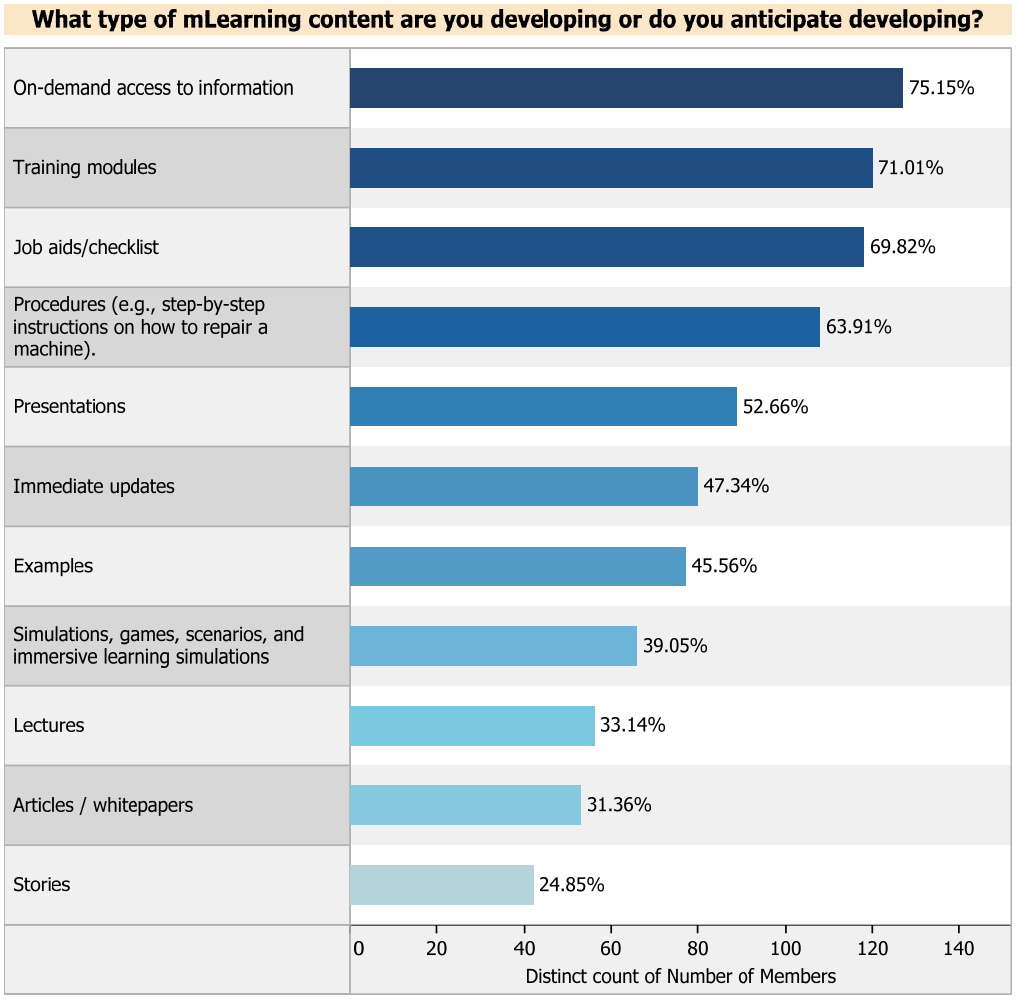


Figure 19 – Content type for corporations with more than 10,000 employees.

Audience

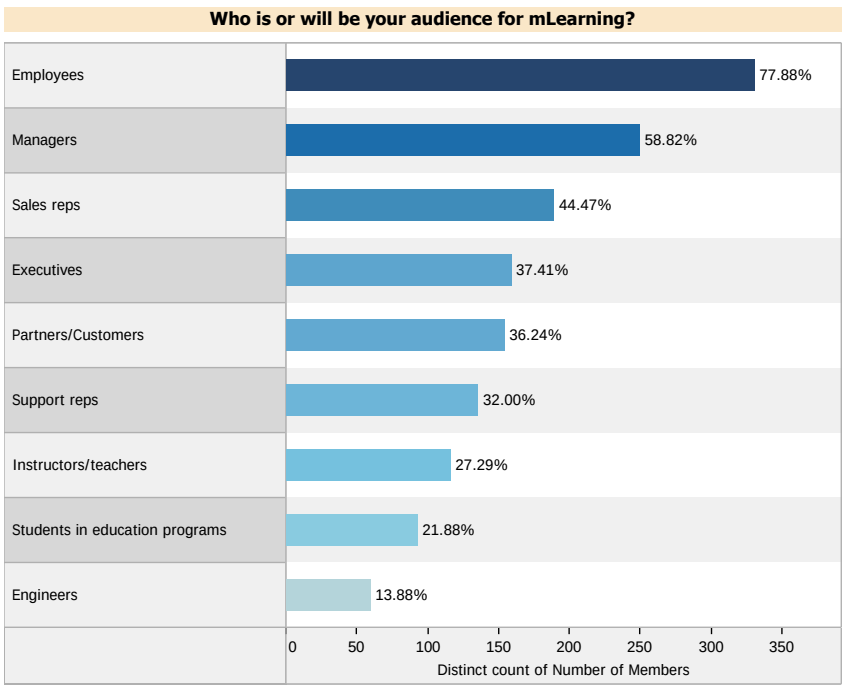


Figure 20 – Target audience of members working in corporate and government organizations.

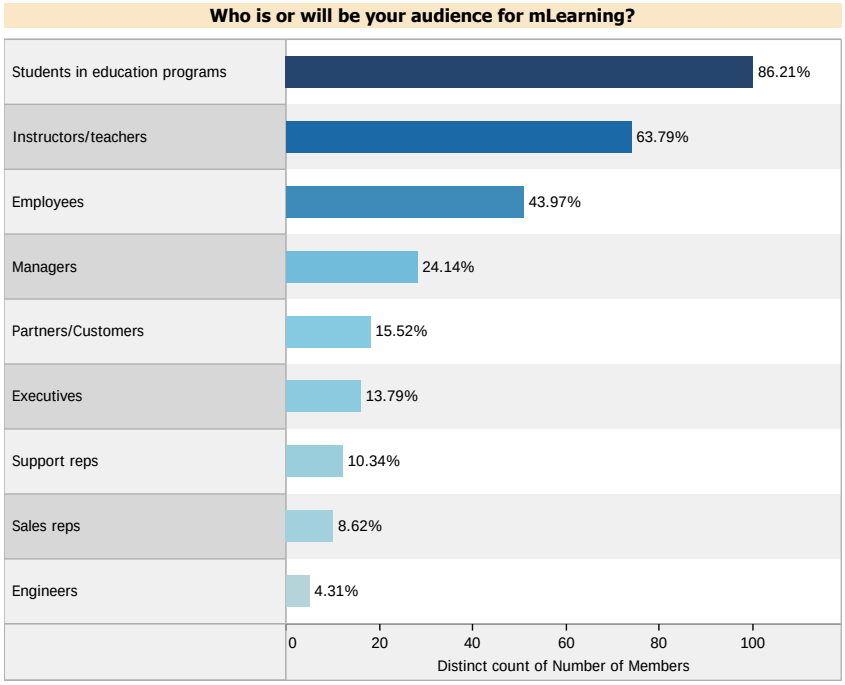


Figure 21 – Target audience of members working in education.

Approaches among m-Learning Implementers

In Figure 22 we see the approaches that m-Learning implementers in the U.S. and Canada use. (These are results from the approximately 9% of respondents that have implemented m-Learning).

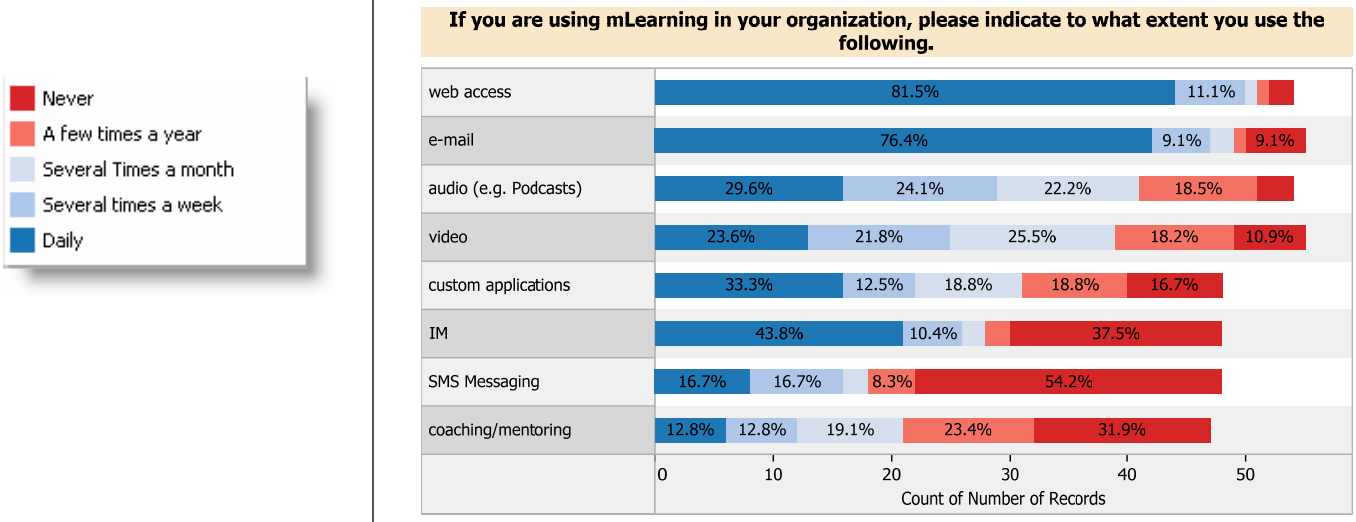


Figure 22 – Approaches to m-Learning among implementers in the U.S. and Canada.

Contrast this with responses from m-Learning implementers from other countries where we see a significantly greater user of audio, instant messaging, and text messaging (Figure 23).

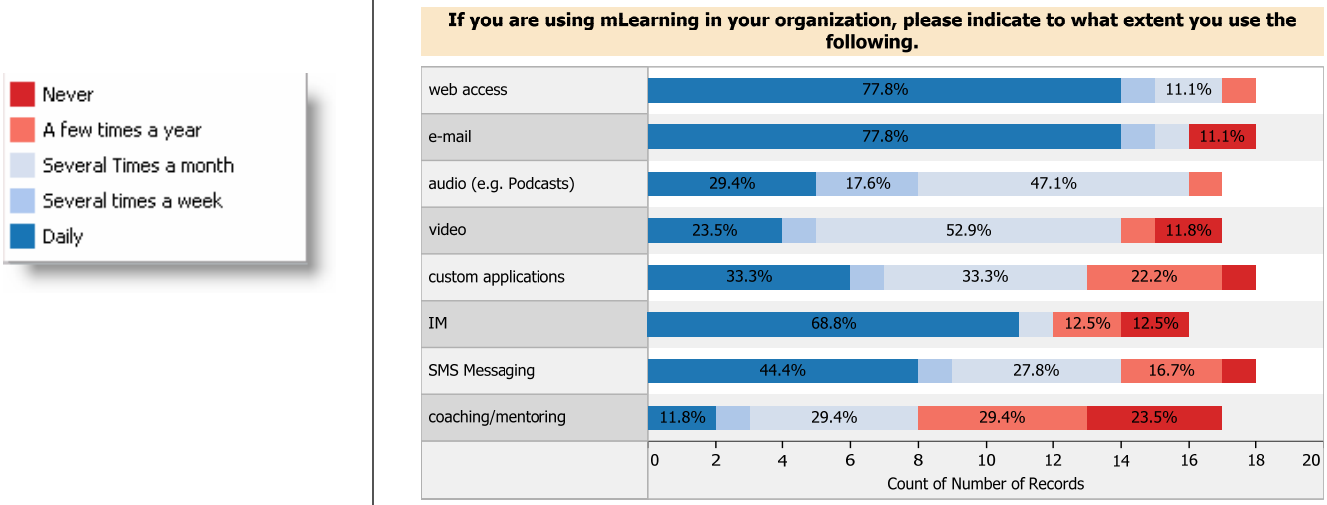


Figure 23 – Approaches to m-Learning among implementers outside the U.S. and Canada.

Percentage of learning that is m-Learning

While we are not surprised that 62.5% of members using m-Learning use it 10% or less of the time (at least so far), we were surprised to see that over 20% of members that engage in m-Learning use it more than one quarter of the time, as shown in Figure 24.

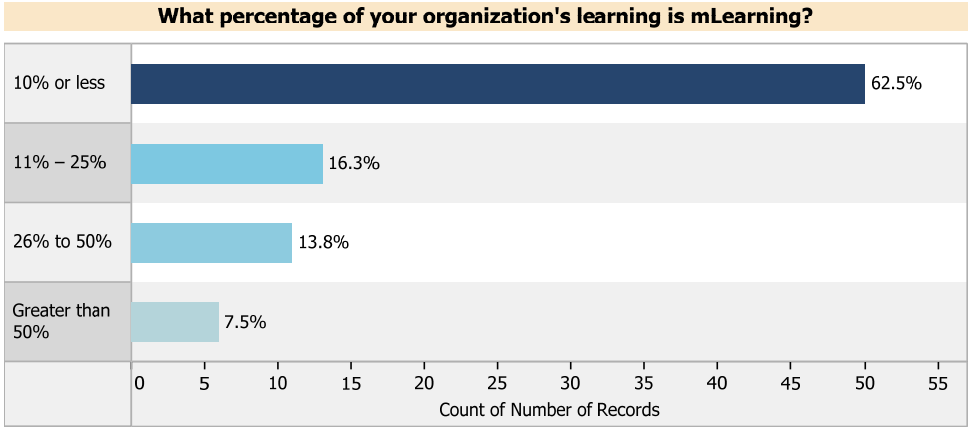


Figure 24 – Percentage of learning that is m-Learning.

Content specifically developed for mobile devices

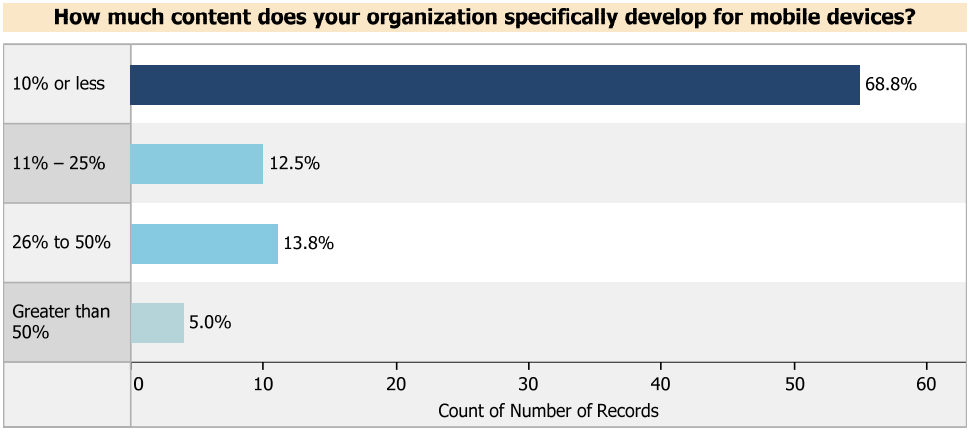


Figure 25 – Content developed specifically for mobile devices. These responses mirror those found in "Percentage of learning that is " above.

Barriers to adopting m-Learning

In Figure 26 we see responses from all members (those that have, those that have not but plan to, and those that won't).

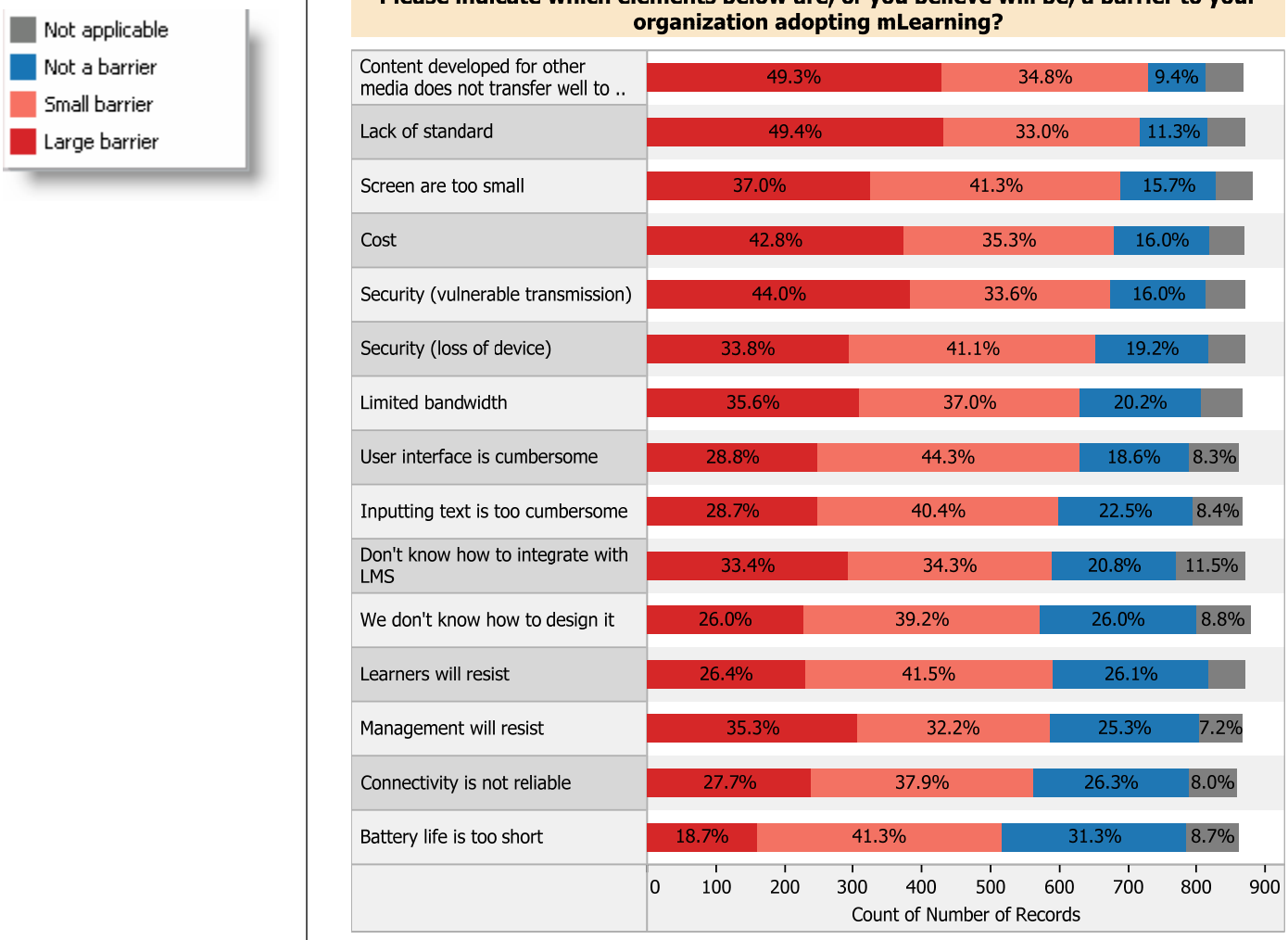


Figure 26 – Members cite many barriers to adopting m-Learning.

Has m-Learning helped or hurt?

In this question we ask members to indicate the degree to which m-Learning has helped or hurt their organizations.

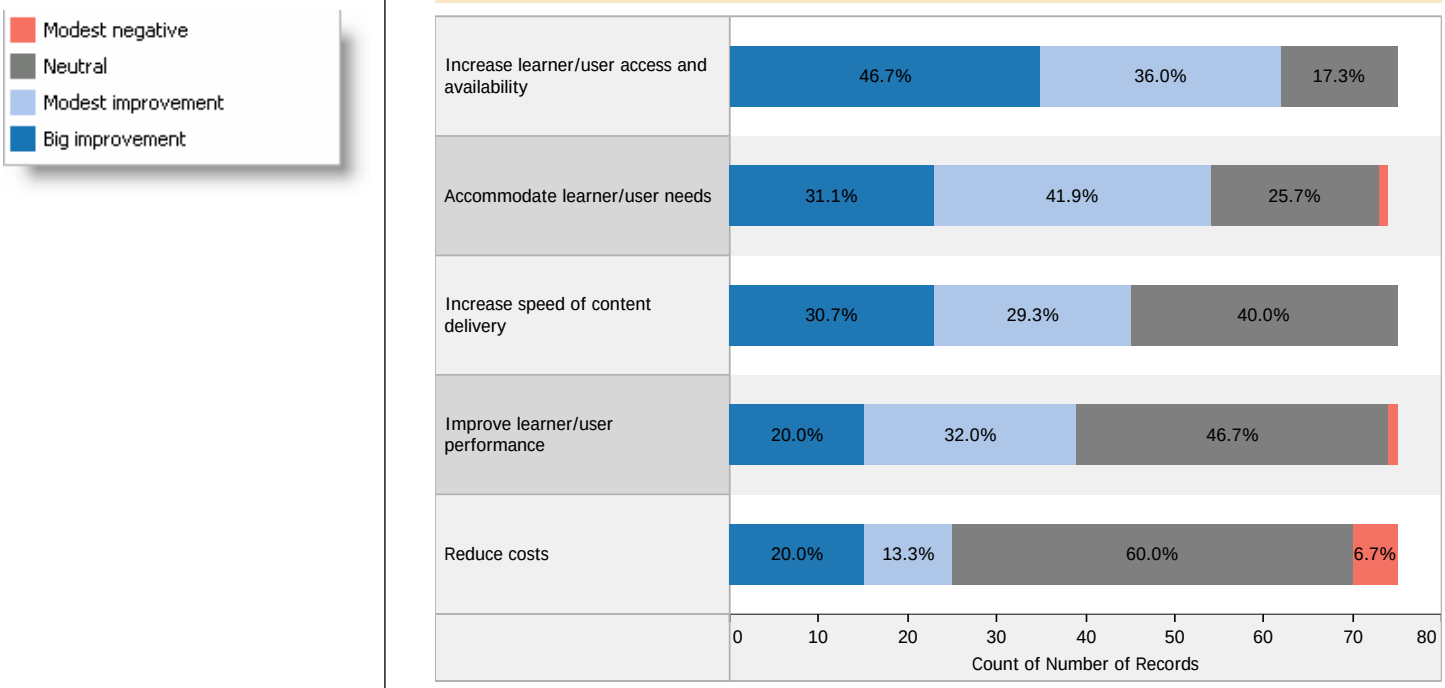


Figure 27 – Members that have implemented m-Learning indicate the extent to which they believe it has helped or hurt their organizations.

Return on Investment

In this question we ask members that have implemented m-Learning if they *believe* they received a good return on their investment. Figure 28 shows their responses.

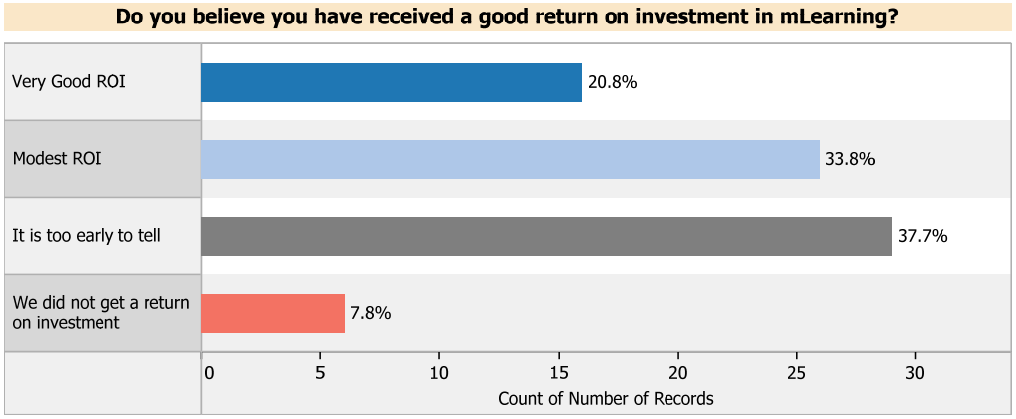


Figure 28 – Members that have implemented m-Learning report on ROI.

As with "Has m-Learning helped or hurt?" on page 22, these are early responses from early adopters, but the responses are very encouraging.

What have you emphasized to get people to embrace m-Learning?

In this question we ask members that have implemented m-Learning to tell us what they did to get learners and management to embrace m-Learning.

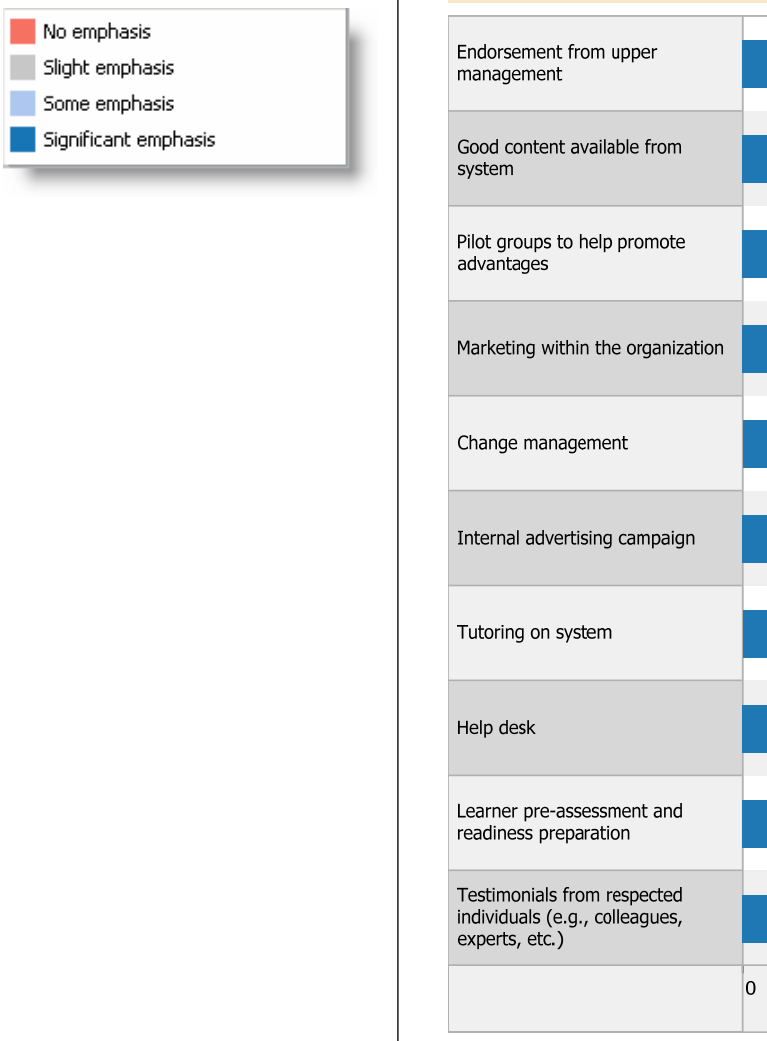


Figure 29 – Things members emphasized in order to get their organizations to embrace
m-Learning. Endorsement from upper management, Good content, and Pilot groups
promoting success lead the way.

Opinions and Beliefs

Those that have not

Figure 30 shows the beliefs and opinions of those that have not implemented m-Learning, but plan to do so.

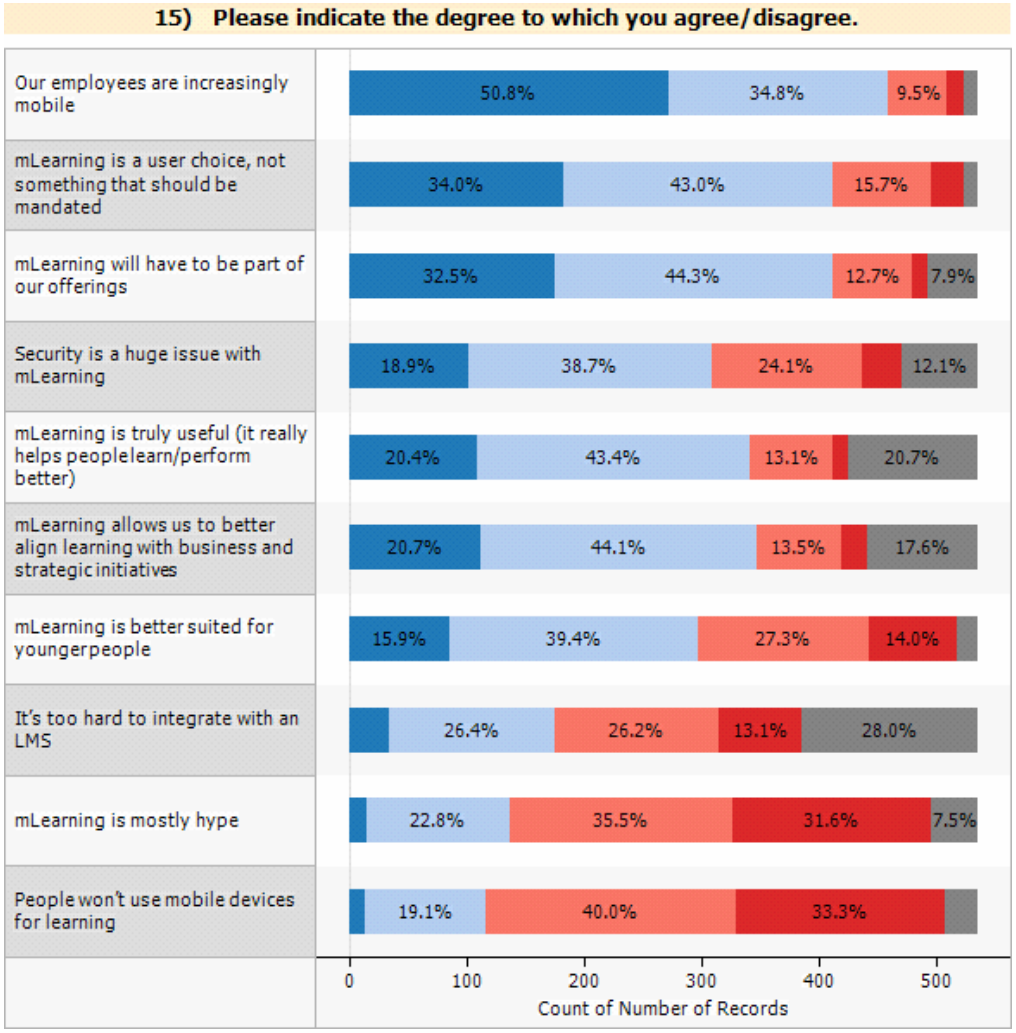
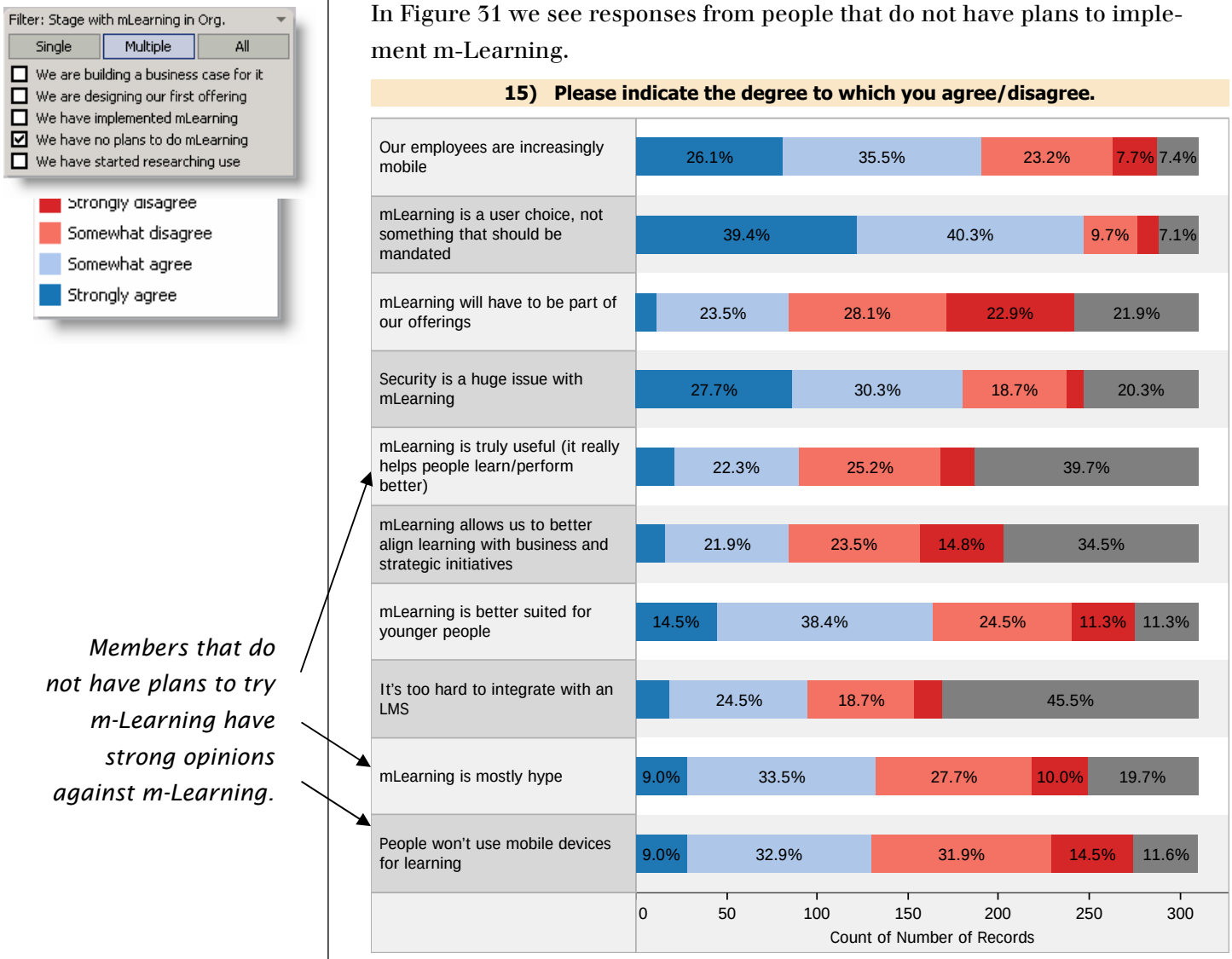


Figure 30 – Reponses from those that have not implemented m-Learning.

Those that will not

In Figure 31 we see responses from people that do not have plans to implement m-Learning.



Members that do not have plans to try m-Learning have strong opinions against m-Learning.

Figure 31 – Reponses from those that do not have plans to implement m-Learning.

Those that have

Contrast the responses above with those found in Figure 32, where we see results from people that have actually implemented m-Learning.

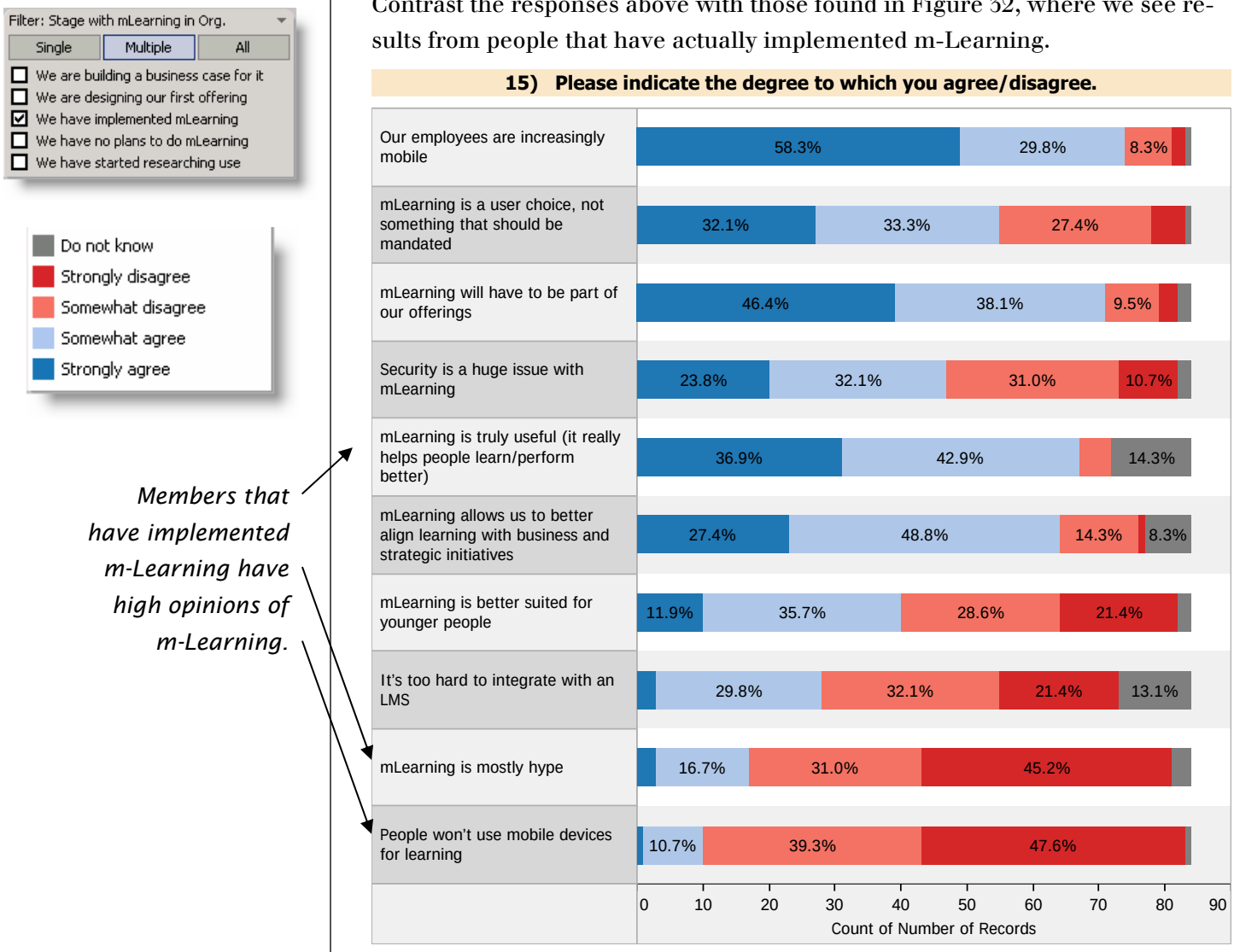


Figure 32 – Reponses from people who have actually implemented m-Learning vary significantly from those who have not (and even more so from those who will not.)

What members want

In Figure 33 we see which capabilities members want and how much they want them.

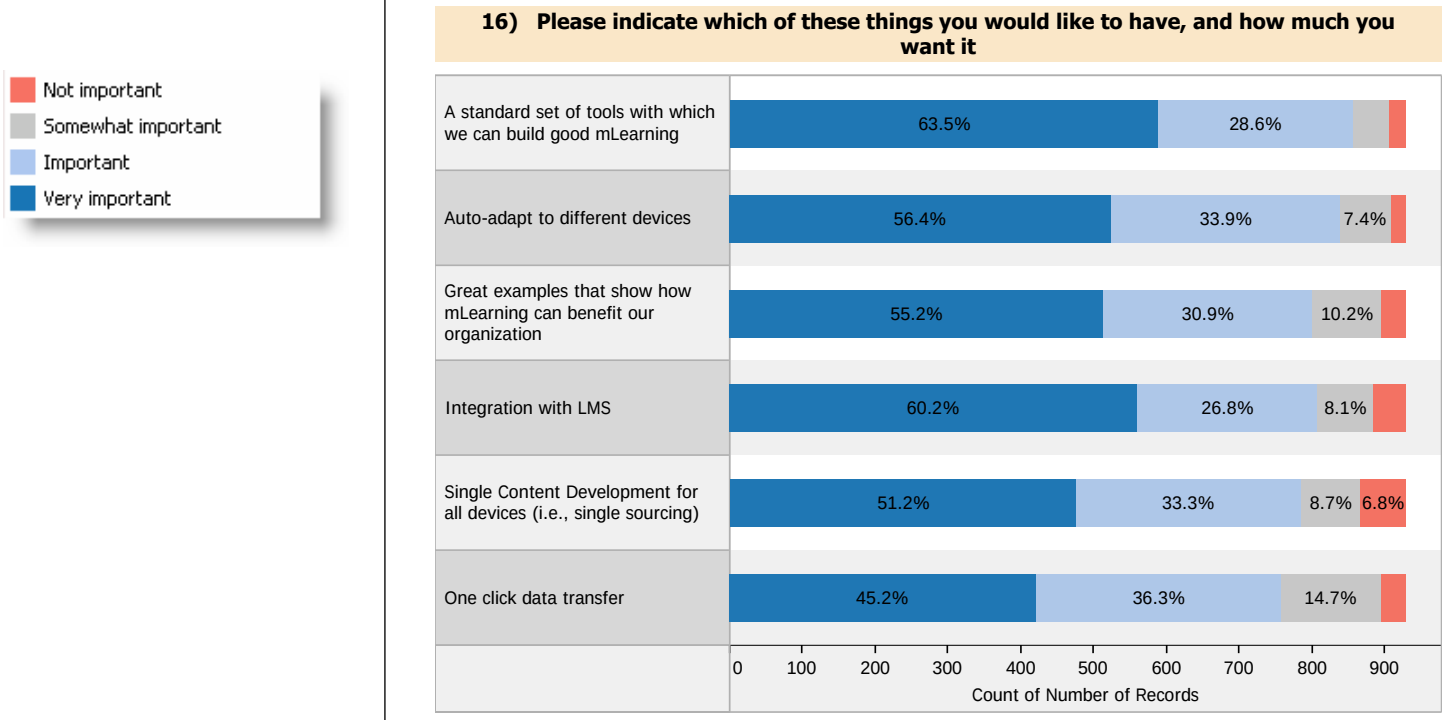


Figure 33 – What members want and how much they want it.

Resources

Web sites

Aclearn.net – Mobile learning

http://www.aclearn.net/display.cfm?page=958

The Community Learning Resource Website supports the adult and community learning (ACL) sector. It provides information, advice, and guidance to those working in the sector and is designed to complement the rollout of effective e-Learning and related support into ACL.

ADL Community

http://adlcommunity.net/

This community site evolved from the Advanced Distributed Learning (ADL) Initiative to support advanced distributed learning and to gain feedback from implementers. The intention is to bring together both resources (papers, examples, tutorials, etc.) and people with similar interests to establish a vibrant community where all work together to share and improve learning.

Ambient Insight

http://www.ambientinsight.com/

Ambient Insight is an integrity-based R&D firm specializing in performance technology, wireless productivity tools, and mobile learning products and services.

Australian Flexible Learning Network – Mobile learning

http://e-standards.flexiblelearning.net.au/topics/mlearn.htm#top

Contains recommendations for specific m-Learning standards, and other background information about m-Learning, and links to useful resources.

British Educational Communications and Technology Agency (BECTA)

http://www.becta.org.uk/

BECTA leads the national drive to improve learning through technology. We do this by working with industry to ensure we have the right technology for education in place. We also support the education sector to make the best use of technology so that every learner in the U.K. is able to benefit from its advantages and achieves the best they can.

Carnival of the Mobilists

http://mobili.st/

The Carnival of the Mobilists is a weekly collection of the Web's best blogging on mobile and wireless. Also check out the Blogroll for additional links.

dotMobi

http://pc.dev.mobi/node/201

This is a comprehensive guide to mobile Web development. It layers on the advice from the W3C's Mobile Web Initiative Mobile Web Best Practices 1.0 document, but takes it further.

EDUCAUSE – Mobile Learning

http://www.educause.edu/SEARCH/606

Articles, papers, reports, and more on mobile learning.

e-Learning Center – Mobile and Wireless Learning

http://www.e-learningcentre.co.uk/eclipse/Resources/mlearning.htm

This page provides links to resources (including links to projects) on mobile learning (or m-Learning) as well as wireless learning; listed in order of entry with the most recent first.

e-Learning News (ASTD)

http://www.astd.org/astd/Publications/Newsletters/elearn_news/2007/May/burger.htm

Article – *Walk this Way: Healthcare Leads the Way in Mobile Learning*

Findability

http://findability.org/2004/topics/pervasive.php

This site focuses on pervasive technologies, including location-awareness, RFID, wearables, and more.

Further Education Resources for Learning (FERL)

http://ferl.qia.org.uk/display.cfm?resID=8542&page=65&catID=192

FERL is a Web-based information service managed by the Quality Improvement Agency (QIA). We aim to support individuals and organizations within the Post-Compulsory Education sector to make effective use of ICT and e-Learning. This is in accordance with the QIA's charter to encourage innovation and excellence in the learning and skills sector.

Futurelab

http://www.futurelab.org.uk/resources/publications_reports_articles/literature_reviews/Literature_Review203/

Futurelab is passionate about transforming the way people learn. Tapping into the huge potential offered by digital and other technologies, they develop innovative resources and practices that support new approaches to learning for the 21st century.

Handheld Learning

http://www.handheldlearning.co.uk/component/option,com_frontpage/Itemid,1/

Handheld Learning promotes the use of mobile and ubiquitous technologies to enable transformational improvements in teaching and learning. Device agnostic, and a believer in open standards, we host international conferences, meetings, and online knowledge sharing that bring together the world's foremost thought leaders, opinion formers, decision makers, and practitioners. We are located in the UK in both London and Cambridge with a further facility in Madrid.

Home pages for mobile devices

Tools to easily build home pages for mobile devices.

mob5 at http://mob5.com

Winksite at http://www.winksite.com/site/index.cfm

mobiSiteGalore at http://www.mobisitegalore.com/

IEEE Computer Society - Distributed Systems Online

http://dsonline.computer.org/portal/site/dsonline/menuitem.20d6846e1c7ed783f1a516106bbe36ec/index.jsp?&pName=dso_level1_home&path=dsonline/archives&file=index.xml&xsl=generic.xsl&

IEEE Distributed Systems Online is a springboard for building a stronger distributed systems community and a forum for sharing ideas and discussing projects. In addition to the expert-authored articles, the site also contains digital library and media-center resources. Using the term "mobile learning" as a search term will retrieve at least 100 hits.

IEEE Pervasive Computing

http://www.computer.org/portal/site/pervasive//

This site is dedicated to catalyzing realization of the vision of pervasive or ubiquitous computing. The essence of this vision is the creation of environments saturated with computing and wireless communication, yet gracefully integrated with human users.

Infoplease

http://www.infoplease.com/ipa/A0873826.html

Provides Internet statistics on a worldwide basis. The cell phone usage by country may be of interest – http://www.infoplease.com/ipa/A0933605.html.

International Review of Research in Open and Distance Learning (IRRODL) – special issue on mobile learning

http://www.irrodl.org/index.php/irrodl/issue/view/29

Special issue on mobile learning – available in HMTL, PDF, and MP3 formats.

iPod in Education

http://213.232.94.135/ipodined/news.php

A site to help you find out about using iPods and Podcasting in Education.

Kaleidoscope report – Big issues with mobile learning

http://mlearning.noe-kaleido-scope.org/public/news/KALEIDOSCOPE%20REPORT_07_Big_Issues_In_Mobile_Learning.pdf

Edited by Mike Sharples. Kaleidoscope is the European research network shaping the scientific evolution of technology-enhanced learning; helping to build a dynamic knowledge-based economy for Europe, engaging social, economic, and political stakeholders at all levels.

Mackiev.com

http://www.mackiev.com/iphone/index.html

Recently announced: the release of This Day in History, an educational iPhone software application; the application is based on a widget by the same name from the company's World Book Multimedia Encyclopedia. It displays a calendar page for each historical event that happened on the same day.

MIT Media Lab

Wearable computing - http://www.media.mit.edu/wearables/index.html
MIThril Project - http://www.media.mit.edu/wearables/mithril/

The goal of the MIThril project is the development and prototyping of new techniques of human-computer interaction for body-worn applications.

mlearnopedia

http://www.mlearnopedia.com/

Contains a wealth of resources related to mobile learning – latest news, activities, development, documents, examples, reports, and more.

Mobile Browsers

Opera at http://www.opera.com/

Thunderhawk at http://www.bitstream.com/wireless/

Microsoft Deepfish at http://labs.live.com/deepfish/

Check existing content in one or several mobile browsers before redeveloping it.

Mobile Devices / SMS / IM Social Science Research

http://ist-socrates.berkeley.edu/~nalinik/mobile.html

This is a bibliography-in-progress on social science research about mobile devices, mobile phone uses, SMS/texting, and instant messaging; also contains links to books.

Mobile Learning and Pervasive Computing

http://www3.telus.net/~kdeanna/mlearning/

This Website provides a portal to the latest information on mobile learning and pervasive computing for trainers and educators at all levels, from elementary education through higher education.

Mobile Learning for the Learning Citizen

http://www.learningcitizen.net/mobile_learning.shtml

This site contains many resources, including two mobile learning projects – m-Learning Project and MOBIlearn (http://www.mobilearn.org/).

Mobility Site

http://www.mobilitysite.com/

Mobile news, reviews, and views. Check out the Resources section, which also contains tutorials.

NetworkWorld

http://www.networkworld.com/topics/pdas-r.html?GG_SMB=mobile&gclid=CLfXpPaukI0CFSHgXgodrleKkQ

The latest headlines from the mobile industry, technologies, and trends.

Northern Alberta Institute of Technology (NAIT)

http://www.nait.ca/MobileLearning/defaultST.asp

The Mobile Learning project provides industry-relevant curriculum in a new leading-edge fashion. Students involved in this exciting new initiative will have access to learning materials, fellow learners, and instructors anytime, any-

where. Download the final report from the Mobile Learning Pilot Project, *Harvesting Fragments of Time*.

Podclass.co.uk

http://podclass.co.uk/about.asp?aff_id=0

Converging technologies allow for the development and delivery of training in ways we could not have imagined only a few years ago. Podclass.co.uk seeks to build on new technologies to develop and distribute learning in new and exciting ways.

ProfCast

http://www.profcast.com/public/index.php

ProfCast is a versatile, powerful, yet very simple-to-use tool for recording presentations including PowerPoint and/or Keynote slides for creating enhanced Podcasts. It offers a free trial of the full product.

PRWeb – Press Release Newswire

http://www.prweb.com/releases/2007/08/prweb543992.htm

GoLive! Mobile announces a free, mobile version of Wikipedia Encyclopedia in a showcase of "Text-2-WAP" Technology. Free service aims to show the potency of combining text messaging with the mobile Web.

Quinnovation – articles by Clark Quinn

Delivering the Dream: Models for Intelligent Assistance (2004)

http://www.quinnovation.com/DeliveringModelsWP.pdf

Learning at Large: Situating learning in the bigger picture of action in the world (2004)

http://www.quinnovation.com/LearningAtLarge.pdf

Flexible Learning: Mobile Learning Objects (2002)

http://www.quinnovation.com/MLO-WP.pdf

mLearning: Mobile, Wireless, In-Your-Pocket Learning (2000)

http://www.linezine.com/2.1/features/cqmmwiyp.htm

RSS readers

Litefeeds at http://www.litefeeds.com/

Newstouch at http://www.newstouch.com/

NewsGator Go! at
http://www.newsgator.com/Individuals/NewsGatorGo/Default.aspx

RSS Toolbox (The Ultimate)

The Ultimate RSS Toolbox at http://mashable.com/2007/06/11/rss-toolbox/

Study Cell

http://studycell.com/home.html

Create your own mobile flashcards for your cell phone. Make and share your own downloads.

Tech.co.uk

http://www.tech.co.uk/news

Technology news first. The iPhone can now speak foreign languages and translate phrases thanks to a new talking translator from lastminute.com. See the news article at http://www.tech.co.uk/gadgets/phones/mobile-phones/news/iphone-now-speaks-foreign-languages?articleid=437234859

TecO Ubiquitous Computing

http://www.teco.uni-karlsruhe.de/%7Emichael/mobile/mobile.html

Ubiquitous and Mobile computing is one of two main research fields at TecO. The research focuses on HCI, context awareness, communication, and appliances. Some of the work was developed in cooperation with industrial partners. Research includes the following main topics: (1) Support for ubiquitous computing and handheld devices, (2) Mobile computing, HCI, and communication in ubiquitous computing, and (3) Context awareness, context fusion, and wearables.

Texterity

http://www.texterity.com/about/news/Texterity_Digital_Magazine_iPhone.html

A leading provider of digital publishing solutions, Texterity has launched a Beta version of the first digital magazine interface and portal designed for the Apple iPhone. This is the first time users will see a publisher's complete magazine, as originally published, on the iPhone. Texterity and a select group of publishers will offer free digital editions, designed for the iPhone's Safari browser, of over 20 different magazines for iPhone users to read and enjoy through Texterity's new digital magazine *iPhone portal*.

The eLearning Guild's Buyer's Guide

The eLearning Guild's Buyer's Guide contains a list of vendors and their associated tools that you may use to develop and deploy Mobile Learning. You can access the Buyer's Guide by logging into www.elearningguild.com and clicking My Reports from the menu along the left side of the screen.

W3C – Mobile Web Best Practices 1.0

http://www.w3.org/TR/mobile-bp/

This document specifies Best Practices for delivering Web content to mobile devices. The principal objective is to improve the user experience of the Web when accessed from such devices. The recommendations refer to delivered content and not to the processes by which it is created, nor to the devices or user agents to which it is delivered.

Webopedia – Text Messaging Abbreviations

http://www.webopedia.com/quick_ref/textmessageabbreviations.asp

A guide to understanding online chat and smiley faces.

Wikipedia – Mobile Learning

http://en.wikipedia.org/wiki/M-learning

A description of m-Learning, including history, scope, technologies, challenges, and more.

Wireless World Forum

http://www.w2forum.com/i/Home

Wireless World Forum is a business development and knowledge-share network of 13,429 senior executives in the wireless industry.

Organizations

Canadian Association for Distance Education Research (CIDER) – Mobile learning special interest group

http://cider.athabascau.ca/CIDERSIGs/mobilelearning/

Research into the use of wireless mobile devices to deliver instruction to learners anywhere and anytime.

Mobile Learning Network (MoLeNET)

http://www.molenet.org.uk/

The Mobile Learning Network (MoLeNET) is a unique collaborative approach to encouraging, supporting, expanding, and promoting mobile learning. Collaboration at UK national level involves colleges and the Learning and Skills Council (LSC) sharing the cost of projects introducing or expanding mobile learning and the Learning and Skills Network (LSN) providing a support program.

Books

Educating the Net Generation

Author: Diane G. Oblinger and James L. Oblinger (2005)

http://www.educause.edu/ir/library/pdf/pub7101a.pdf

Learning Unplugged

Author: Diane M. Gayeski (2002)

http://www.amazon.com/Learning-Unplugged-Diane-M-Gayeski/dp/0814471455/ref=sr_1_2/105-0671138-1349211?ie=UTF8&s=books&qid=1183156513&sr=1-2

mLearning: Mobile Learning and Performance in the Palm of your Hand

Author: David S. Metcalf II (2006)

http://www.amazon.com/M-Learning-Mobile-E-Learning-David-Metcalf/dp/0874259061/ref=pd_bbs_sr_1/105-0671138-1349211?ie=UTF8&s=books&qid=1183155632&sr=8-1#citing

Mobile Learning: A Handbook for Educators and Trainers

Editors: Agnes Kukulska-Hulme and John Traxler (2005)

http://www.amazon.com/Mobile-Learning-Handbook-Educators-Trainers/dp/0415357403/ref=pd_bxgy_b_text_b/105-0671138-1349211?ie=UTF8&qid=1183155632&sr=8-1

Mobile Learning: Essays on Philosophy, Psychology, and Education

Author:Kristoff Nyiri (2003)

http://www.amazon.com/Mobile-Learning-Philosophy-Psychology-Education/dp/3851656032/ref=sr_1_14/105-0671138-1349211?ie=UTF8&s=books&qid=1183155632&sr=8-14

SmartMobs: The Next Social Revolution

Author: Howard Rheingold (2002)

http://www.amazon.com/Smart-Mobs-Next-Social-Revolution/dp/0738208612/ref=pd_bbs_sr_1/105-0671138-1349211?ie=UTF8&s=books&qid=1183896803&sr=8-1

Examples

mlearnopedia

http://emerginged.com/mlearn/index.php?option=com_content&task=category&sectionid=5&id=17&Itemid=63

Examples of mobile learning.

m-Learning.net

http://home.m-learning.net/learn/iframe_page.htm

Examples of PDA-based m-Learning that you can execute on your PC.

PublichHealthGames.com

http://www.publichealthgames.com/games/panflu/

Mobile Panflu Prep is an interactive cell phone application to help prepare the public
for a pandemic flu. It is free to download on select cell phones from Cingular, Sprint, and T-Mobile.

Sify eLearning

http://www.sifyelearning.com/cisco_intro/qlm-pda-video.html

An example of PDA-based quick learning module for network configuration and performance support.

SonoSite Training and Education

http://sonositelearning.com/

SonoSite offers video refresher modules for clinical applications of ultrasound delivered on a video iPod. SonoSite made the initial videos free for downloading, but has moved to a charge model. You can view examples of their instructional videos.

Conferences

Handheld Learning 2007

Conference theme: Learning while mobile

London, England. October 10-12, 2007

http://www.handheldlearning2007.com/pages/home.php

Handheld Learning 2006

Conference theme: Education on the move

Access conference presentations from this site.

http://www.handheldlearning.co.uk/hl2006/

IADIS International Conference Mobile Learning 2007

http://www.mlearning-conf.org/

IEEE International Conference (7th) on Advanced Learning Technologies (ICALT 2007)

Conference theme: Distributed social and personal computing for learning and instruction

http://www.ask4research.info/icalt/2007/

International Conference (3rd) on Mobile and Computer Aided Learning (IMCL)

Amman, Jordan. April 16 - 18, 2008

http://209.61.205.141/default.htm

International Workshop on Mobile and Ubiquitous Technologies for Learning (MUTL) 2007

Papeete, French Polynesia (Tahiti). November 4 - 9, 2007

http://www.iaria.org/conferences2007/MUTL.html

mLearn 2007 – 6th World Conference on Mobile Learning

Conference theme: Making the connections

Melbourne, Australia. October 16 - 19, 2007

http://www.mlearn2007.org/

mLearn 2006 – 5th World Conference on Mobile Learning

Conference theme: Across generations and cultures

Link to some abstracts and presentations - http://www.mlearn2006.org/program/

mLearn 2005 – 4th World Conference on Mobile Learning

Conference theme: Mobile technology: The future of learning in your hands

Free access to full papers at http://www.mlearn.org.za/papers-full.html

mLearn 2004 – 3rd World Conference on Mobile Learning

Conference theme: Learning anytime everywhere

Free access to full papers at

http://www.mobilearn.org/download/events/mlearn_2004/MLEARN_%202004_book_of_conference_papers.pdf

mLearn 2003 – 2nd World Conference on Mobile Learning

Conference theme: Learning with mobile devices

Free access to full papers at

https://www.lsneducation.org.uk/user/order.aspx?code=041440&src=xoweb&cookie_test=true

UBICOMM 2008 – 2nd International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies

Cap Esteral, France. August 25-31, 2008

http://www.iaria.org/conferences2008/CfPUBICOMM08.html

Glossary of Terms

2G

Second-generation (2G) mobile telephone technology. 2G cannot normally transfer data, such as e-mail or software, other than the digital voice call itself and other basic data such as time and date, although **SMS** messaging is available for data transmission for some standards. 2G services are frequently referred as Personal Communications Service (PCS) in the United States. 2G technologies are either **TDMA**-based or **CDMA**-based standards, depending on the type of multiplexing used for signal exchange. Most 2G protocols offer data, fax, and Short Message Service (SMS), as well as different levels of encryption.

2.5G

See **General Packet Radio Service (GPRS)**.

3G

Third-generation (3G) mobile telephone technology. The services associated with 3G provide the ability to transfer both voice data (such as making a telephone call) and non-voice data (such as downloading information, exchanging e-mail, and **instant messaging**).

4G

Fourth-generation (4G) mobile telephone technology. When implemented, 4G will be the successor to **3G**. It will feature high-speed mobile wireless access with a very high data transmission speed, of the same order of magnitude as a local area network connection (10 Mbits/s and up). It also addresses the notion of pervasive networks, an entirely hypothetical concept in which the user can simultaneously connect to several wireless access technologies, and can move seamlessly between them.

802.11

The official designation for the wireless protocol known as Wi-Fi. Short for "wireless fidelity," Wi-Fi denotes a set of wireless LAN standards developed by working group 11 of the IEEE LAN/MAN Standards Committee (IEEE 802). The term is also used to refer to the original 802.11, which is now sometimes called "802.11 legacy." The 802.11 family currently includes six over-the-air standards that all use the same wireless internet protocol. 802.11b was the first widely accepted wireless networking standard, followed by 802.11a and 802.11g.

Bluetooth

An industrial specification for wireless personal area networks (see **PAN**) using radio frequencies to link enabled devices. A generic name used by computing and handset manufacturers for developing ad hoc local area network (LAN) interfaces used to deliver phone, e-mail, and Internet information to a cellular phone device. This short range radio technology expands wireless connectivity to personal and business mobile devices and enables users to interconnect mobile phones, computers, printers, digital cameras, and other electronic devices, without cables.

Code Division Multiple Access (CDMA)

A rival to the **TDMA** standard in the Americas, this standard was developed by QualComm, from which providers must license its use. CDMA carriers in the United States include Sprint PCS (which started as a **GSM** carrier), Alltel, and Verizon.

Context-aware computing

Refers to a general class of mobile systems that can sense their physical environment, *i.e.*, their context of use, and adapt their behavior accordingly. Such systems are a component of a ubiquitous computing or pervasive computing environment. Three important aspects of context are: (1) where you are; (2) who you are with; and (3) what resources are nearby. Although location is a primary capability, location-aware does not necessarily capture things of interest that are mobile or changing. In contrast, context-aware more generally includes nearby people, devices, lighting, noise level, network availability, and

even the social situation; e.g., whether you are with your family or a friend from school

Enhanced Data rates for Global Evolution (EDGE)

A digital mobile phone technology that acts as a bolt-on enhancement to **2G** and **GPRS** networks. This technology operates in both TDMA and GSM networks; allows Global System for Mobile Communications (GSM) operators to use existing GSM radio bands to offer wireless multimedia IP-based services and applications. EDGE is a superset to GPRS and can function on any network with GPRS deployed on it (provided the carrier implements the necessary upgrades).

General Packet Radio Services (GPRS)

A mobile data service available to users of GSM mobile phones. It is often described as "2.5G" — that is, it is a technology between the second generation (2G) and third generation (3G) of mobile telephony. It provides moderate-speed data transfer that is much faster than the traditional 9600 bps, by using unused TDMA channels in the GSM network.

Global Positioning System (GPS)

A satellite navigation system used for determining one's precise location on the earth, which also provides a highly accurate time reference almost anywhere on earth. The U.S. Department of Defense controls GPS, and it can be used by anyone, free of charge.

Global System for Mobile-telephones (GSM)

Most commonly used cell phone standard in the world. GSM systems are used in nearly two hundred countries, with six hundred million subscribers worldwide. It originated in Europe and can now be found in Africa, Asia, Australia, and North America. Originally utilizing the 900 Mhz spectrum, GSM providers in parts of Europe, Africa, and Asia later added additional capacity at 1800 Mhz. In North America, GSM service is currently available only at 1900 Mhz. Most cell phone manufacturers offer dual-band (900 and 1900 Mhz) or tri-band (900, 1800, and 1900 Mhz) phones that will work in most places GSM systems are found.

Instant Messaging (IM)

A client that hooks up a user to an instant messaging service. Instant messaging differs from e-mail in that conversations happen in real time. Most services offer a "presence awareness" feature, indicating whether people on one's list of contacts are currently online and available to chat. Generally, both parties in the conversation see each line of text right after they type it (line by line), thus making it more like a telephone conversation than exchanging letters.

Integrated Dispatch Enhanced Network (iDEN)

A hybrid of TDMA digital cell phone and two-way radio. Providers are limited (e.g., NEXTEL in the United States). Motorola is the exclusive producer of phone equipment, as it is the company that created the standard by blending its historic experience with handheld radios with its expertise in cellular technology.

Multimedia Messaging Service (MMS)

The evolution of Short Message Service (SMS, which is a text-only messaging technology for mobile networks). It allows the sending and receiving of multimedia messages such as graphics, video, and audio clips.

MP3

An audio compression format capable of a great reduction in the amount of data required to reproduce audio while sounding like a faithful reproduction of the original uncompressed audio to most listeners.

Personal Area Network (PAN)

A network for communication among computer devices (including telephones and personal digital assistants) close to one person, where the devices may or may not belong to the person in question. The reach of a PAN is typically a few meters. You can use PANs for communication among the personal devices themselves (intrapersonal communication) or for connecting to a higher-level network and the Internet.

Personal Digital Assistant (PDA)

An electronic device which can include some of the functionality of a computer, a cell phone, a music player, and a camera.

Personal Digital Cellular (PDC)

Behind GSM and D-AMPS, the world's mostly widely used digital system. Its use is limited to Japan.

Personal Handyphone System (PHS)

A newer Japanese standard especially designed for high-speed data transmission up to 32 Kbps. Some installations may also be found in parts of China, Thailand, and Taiwan.

Podcast

A Podcast is a digital media file, or a series of such files, that is distributed over the Internet using syndication feeds for playback on portable media players and personal computers.

Radio Frequency Identification (RFID)

A method of remotely storing and retrieving data. An RFID tag is a small object, such as an adhesive sticker that can be attached to or incorporated into a product. RFID tags contain antennas to enable them to receive and respond to radio-frequency queries from an RFID transceiver.

Really Simple Syndication (RSS)

A family of Web feed formats used to publish frequently updated content such as blog entries, news headlines, or Podcasts.

Short Message Service (SMS)

Available on most digital mobile phones, a service that permits the sending of short messages (also known as SMSs, text messages, messages, or simply texts or even txts) between mobile phones and other handheld devices. Originally designed as part of the GSM digital mobile phone standard, SMS is now available on a wide range of networks, including 3G networks.

Smartphone

Any handheld device that integrates personal information management and mobile phone capabilities in the same device. Often, this includes adding phone functions to already capable PDAs or putting "smart" capabilities, such as PDA functions, into a mobile phone. The key feature of a smartphone is that one can install additional applications to the device. Features tend to include Internet access, e-mail access, scheduling software, built-in camera, contact management, and occasionally the ability to read files in a variety of formats including Macromedia Flash and Microsoft Office applications.

Time Division Multiple Access (TDMA)

The first digital network widely used in the Americas, this system is the core of major U.S. wireless networks. The increasing growth of GSM and CDMA in the Americas is predicted to bring an end to TDMA.

Ubiquitous

Being present everywhere at once.

Universal Mobile Telecommunications System (UMTS)

One of the third-generation (3G) mobile phone technologies. It uses W-CDMA as the underlying standard. UMTS is sometimes marketed as 3GSM, emphasizing the combination of the 3G nature of the technology and the GSM standard, which it was designed to succeed.

Wideband Code Division Multiple Access (w-CDMA)

A wideband spread-spectrum **3G** mobile telecommunications air interface allied with the **GSM** standard. W-CDMA is the technology behind **UMTS.** Networks using W-CDMA are a form of cellular network.

Wi-Fi

Short for **wi**reless **fi**delity, and is meant to be used generically when referring of any type of 802.11 network. *See* 802.11.

Worldwide Interoperability for Microwave Access (WiMAX)

The domain of working group Number 16 of the IEEE 802 (IEEE 802.16) that specializes in point-to-multipoint broadband wireless access. Predictions suggest that WiMAX will take over the 3G networks and become the 4G wireless technology.