EXECUTIVE SUMMARY

RESEARCH QUESTION

Describe innovative and creative approaches to on-the-go learning and how organizations are using them.

INTRODUCTION

As the landscape of technology changes, businesses are seeking the best ways to incorporate on-the-go learning into educating employees. Recognizing this, when using mobile education for knowledge transfer it is beneficial to look at companies successfully implementing such training and what they are doing in terms of utilizing innovation and newest trends of on-the-go learning. The purpose of this article is to offer a snapshot of what is on the forefront of mobile learning and the organizations putting these approaches into practice.

FUTURE TRENDS IN MOBILE LEARNING

> **Gamification: Games, Simulations and Augmented Learning Environments**

- Gamification mechanisms are proving to be one of the most important ways to engage people.[1]
- It can appeal to learners of all ages and fun aspects lower resistance to learning.
- Games can be used to teach a variety of subjects because it's suited to different domains of learning including knowledge, skills, attitudes, and beliefs.
- Encourages experimentation, which often leads to innovative thinking and is less stressful than traditional learning with lectures and formal tests.
- Gamification can also be used to encourage a competitive spirit and teamwork.

Cricket Communications, since launching its Mobile Cricket University in 2012, has heavily emphasized game mechanics when implementing training for their retail sales personnel. Utilizing the game platform, CellCast created by OnPoint Digital, Cricket created formal learning assignments that were linked to a point system gauging overall performance on an individual level as well as on a group level which was presented on system leader-boards and automated messages (see appendix). High achievers were subsequently rewarded based on their performance scores. The initiative allowed Cricket to obtain feedback, attain higher training completion rates, and impart learning without removing sales people from their physical locations of employment.[2]

> **Personalization: the Self-learning Technology & Adaptive e-Learning Design**

More systems are becoming self-learning and adaptive to the learner by responding to the situation and needs of the learner. Using internal Learning Management System (LMS) data with externally sourced data, consolidation tools direct learning opportunities to people more efficiently increasing personalization and providing what is needed when it is needed. Experience API, commonly referred to as "Tin Can," is the industry leader in this field and encompasses four components:

    1. Learning Profiles-describe user preferences, competencies, and experiences.
    2. Content Brokering-discovering, describing, and delivering content.
    3. Competency Infrastructure-defining appropriate learning standards.
    4. Experience Tracking- feedback of individuals utilizing learning systems[3]

Furthermore, alert systems notifying users of compatible learning modules brokered with Tin Can API can contribute to a personalized track for mobile training.[4] This can be a huge plus as the technology can also customize publicly available information such as MOOCs based on relevancy and needs of learners to give them access to applicable knowledge. An example of Tin Can in use is Tappestry, an LMS that collects relevant usage information such as knowledge, photos, people, ratings, and categories accessed by users while also

connecting to social networks. This can then be developed into a community of practice, with members sharing interests on topics and accessing valuable pear content.[5]

➢ **Wearable Technology**

- Mobile, wearable devices offer continuous feedback and can drive task-specific improvements via training, information, and job assistance.
- Gesture recognition and analysis technology assess physical performance of activities for improvement.
- Direct applications exist for in-the-moment and on-the-job performance improvement to immediately alert workers when they are performing a task incorrectly (or unsafely) through motion-sensor technologies like accelerometers, gyroscopes, compasses, and pressure-sensors.[6]

Some organizations are already taking lead in this approach. The School of Medicine at the University of California, Irvine has issued Google Glass to all students for anatomy and clinic skill training. During hospital rotations, students use the hands-free capability to access real-time information and appropriate medical knowledge.[7]

➢ **Asynchronous Learning to Maximize Human Interface**

- Asynchronous learning makes updated information available and accessible at all times and not limited to specific classes or timeframes which is a key factor in assuring information will be accessed and used by employees[8].
- Utilizing automated messages and reminders, employees can be alerted when new updates are available for training.

In practice, T-Mobile used this approach to address an issue when customer service reps complained that product updates took too long to access. The firm moved to an asynchronous module where reps could attain information anytime. T-Mobile also created forums and communities for real time learning to encourage knowledge sharing.[9]

➢ **Social Learning**

Social Network Sites (SNS) are web-based services allowing users to construct profiles as a means of interacting with other members while enabling visualization of contacts' network within the SNS.[10] These sites allow users to learn detailed information about contacts, share knowledge with specific or unspecified people, and build online human-relationships. Adding to this, focused learning groups can be created to exchange knowledge and tackle tasks. The social learning approach has been identified as perhaps the best approach impacting performance through training[11] partially because it takes advantage of existing tacit knowledge within an organization.[12] SkillSoft uses this approach to mix access to expert learning, internal organizational expertise, and a digital library collection of over 30,000 publications and 2000 videos together in order to create a superior online learning forum[13].

CONCLUSION

Gamification and Social Learning are both the most practical methodologies and also most likely to achieve superior learning objectives. While on-the-go learning continually evolves, these two areas have shown to be successful in both fostering active workforce participation and knowledge sharing. Resources may be best served in improving these facets of training within an organization instead of focusing on other cutting-edge approaches.

References:

[1] Kapp, Karl. (2014). 10 Best practices for implementing gamification. https://www.td.org/Publications /Blogs/Learning-Technologies-Blog/2014/02/10-Best-Practices-for-Implementing-Gamification

[2] Kapp, Kar. (2014).The gamification of mlearning. http://www.learningsolutionsmag.com/articles/1258/the-gamification-of-mlearning-part-3-of-3

[3] Freifeld, Lori. (2012) What is experience API? Retreived from http://web.b.ebscohost.com.proxy.library .cornell.edu /ehost/detail/detail?vid=7&sid=0b5658d2-03b5-47a2-9974-57670547a6ea%40sessionmgr 110&hid=102&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#db=bth&AN=83755751

[4] Radwan, Nouran M; Senousy, M Badr; M, Alaa El Din. International Journal of e-Education, e-Business, e-Management and e-Learning 4.5 (Oct 2014): 361-375

[5] http://tincanapi.com/use-cases/. Tappestry.

[6] Najjar, L. J., Thompson, C., & Ockerman, J. J. (1999). Using a wearable computer for continuous learning and support. *Mobile Networks and Applications, 4*(1), 69-74. Retrieved from http://search.proquest.com/docview/205074427?accountid=10267

[7] Bartlett-Bragg, A. (2014). Wearable technologies: Shaping the future of learning. Training & Development, 41(3), 12-14. Retrieved from http://search.proquest.com/docview/1548800496?accountid=10267

[8] Isaias, Pedro; Issa, TomayessView Profile; Pena, NunoView Profile. Journal of Information Systems Education25.1 (Spring 2014): 45-60.

[9] Casuto, Simon. (2014). How four companies are blending platforms for elearning success. http://elearningmind. com /four-companies-blending-elearning/

[10] Yokoyama, M. H., & Sekiguchi, T. (2014). The use of social network sites in the workplace: A case study in brazilian companies. *Brazilian Business Review, 11*(2), 87-114. Retrieved from http://search.proquest.com/docview/1541487881?accountid=10267

[11] Interview, Brad Bell, Cornell Professor of Training and Development

[12] State of the Industry Study: A Pulse on Social Learning. HCM Advisory Group. (2013)

[13] SkillSoft wins 'best IT content' and 'best social learning tool; named finalist in 5 categories for the best of elearning! awards. (2011, Sep 30). *Business Wire* Retrieved from http://search.proquest.com/docview/894845588?accountid=102

Appendix A:

Cricket Communications' use of Gamification for Learning

List of Active Games

Learning Assignments
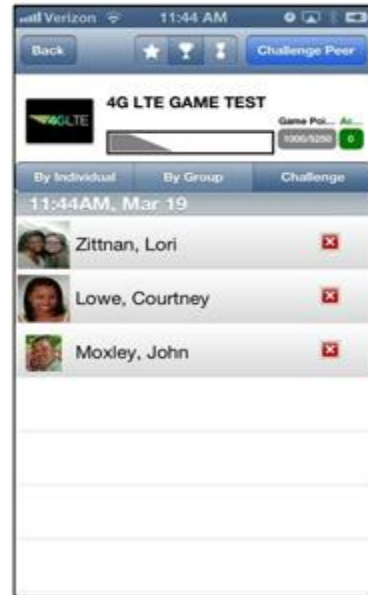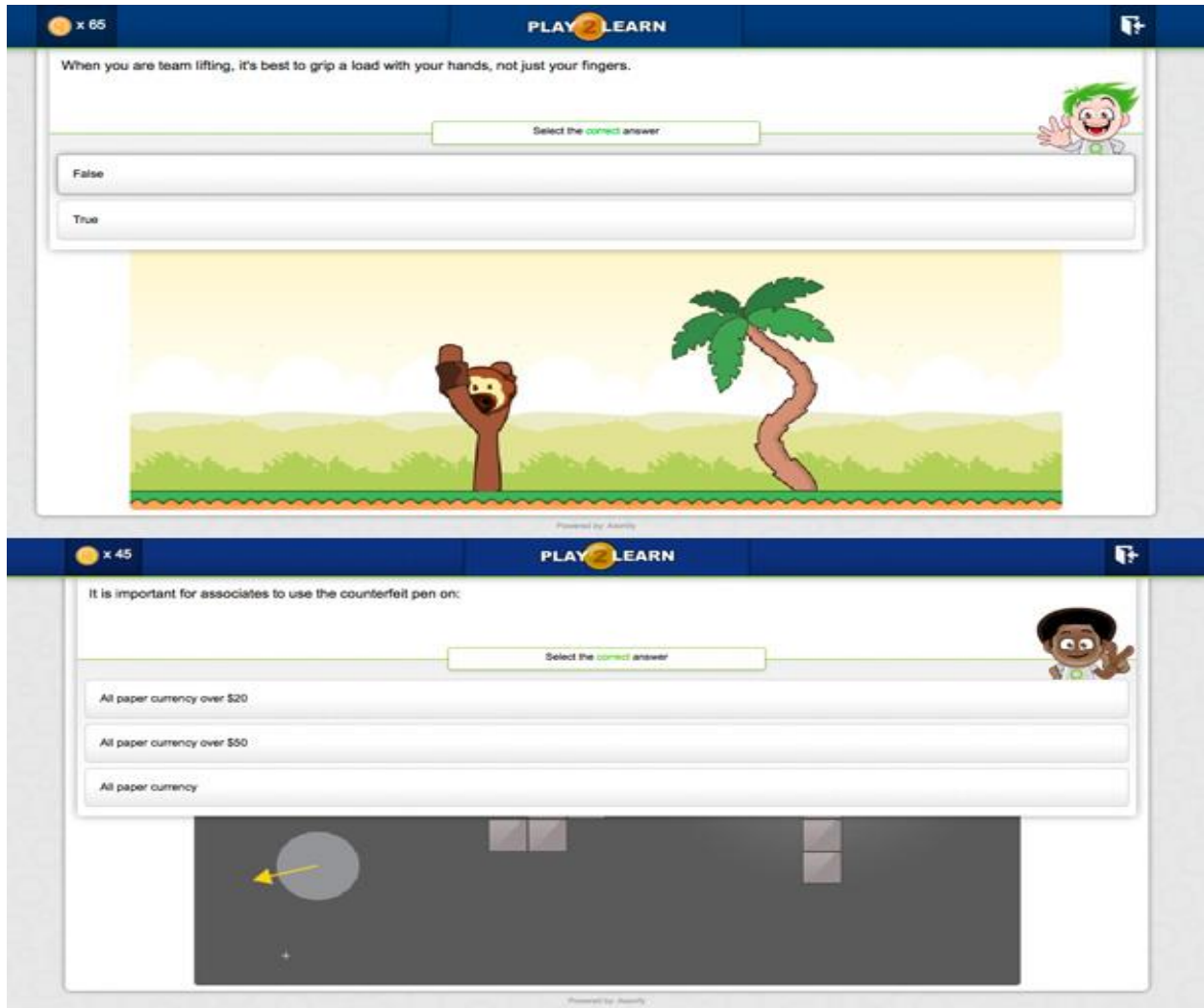

Points Earned via Completions

A listing of active games, learning assignments, and course materials are available from the mobile device.

Master Leader Board

Group Leader Board

Challenge Leader Board

Several different types of leaderboards are available so learners can compete at the level where they feel most comfortable; they range from individual to group.[1]

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[1] Kapp, Kar. (2014).The gamification of mlearning. http://www.learningsolutionsmag.com/articles/1258/the-gamification-of-mlearning-part-3-of-3

Appendix B:

An Example of Gamification in Use: PEP BOYS[2]

With Pep Boys gamification platform, Axonify, employees receive monthly safety and loss prevention training reinforcement everyday via a quiz-type game. (See Figures 1 and 2 for screen shots from the game.) Quick, targeted questions are asked related to risk, loss prevention, safety, and operational policies and procedures—standard questions in these areas. If they answer correctly, they play a slot-machine game titled "Quiz to Win" for a chance to win cash prizes. If they answer incorrectly, the system immediately presents a short training piece designed to specifically address the topic covered in the initial question. Questions are repeated at various intervals until the associate demonstrates mastery of the topic. The entire process takes 30-90 seconds each day and associates do it either at the beginning of a shift or during downtime throughout the day.

Figures 1, 2: **Every day, learners answer questions presented on the gamified platform**

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[2] All content quoted and taken from http://www.learningsolutionsmag.com/articles/1206/the-gamification-of-retail-safety-and-loss-prevention-training

Appendix C:

Tin Can API-Explained[3]

Asynchronous Learning Spectrum

As opposed to traditional or synchronous training that stresses one-way flow of information in a systematic start to finish series of modules, asynchronous training is based on the idea of accessing knowledge at any time as needed for learning or for undertaking specific tasks. This on demand methodology is much more useful and practical for certain specific applications such as updating product knowledge and dealing with customer inquiries.
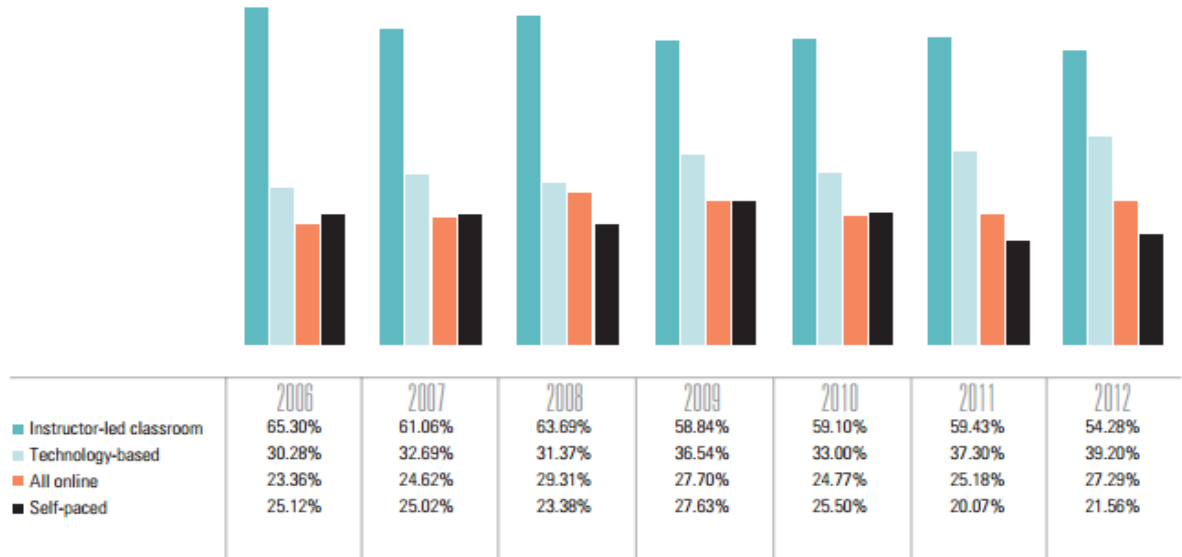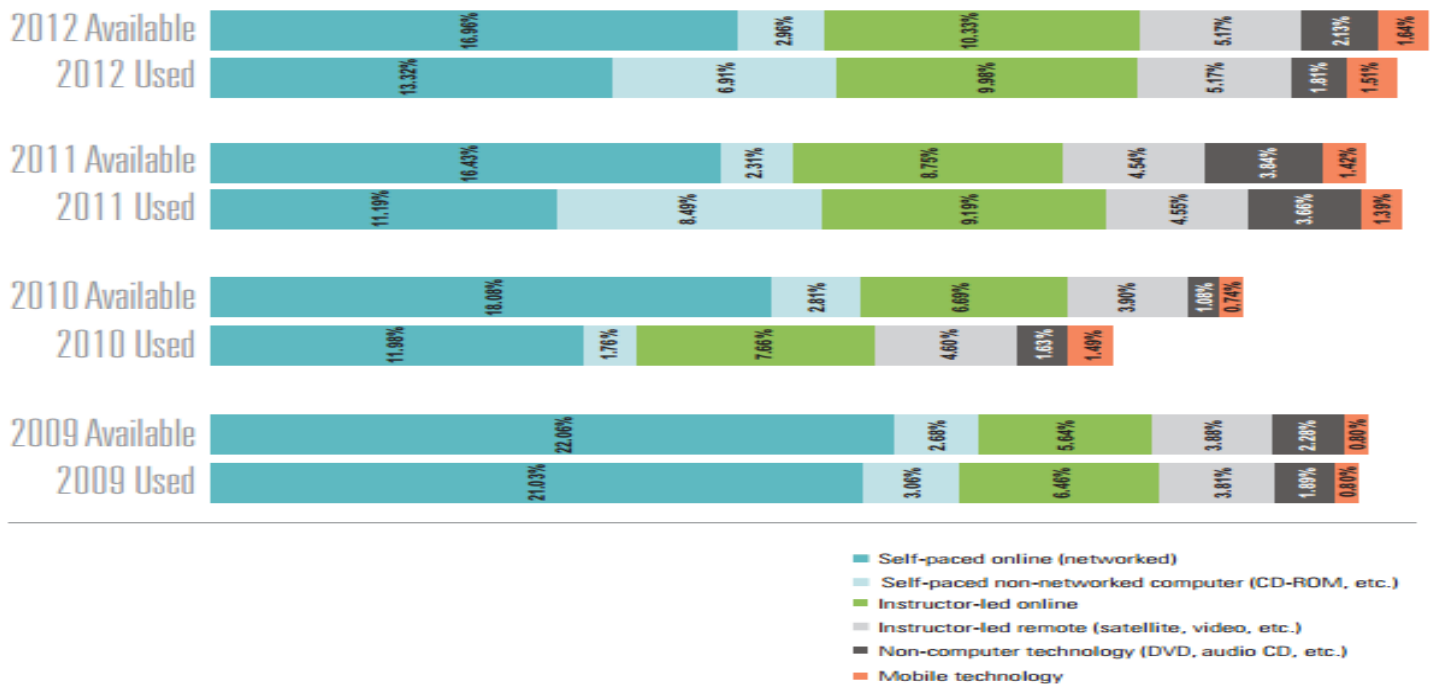

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[3] Content taken from http://elearninginfographics.com/tag/tin-can-api-infographic/
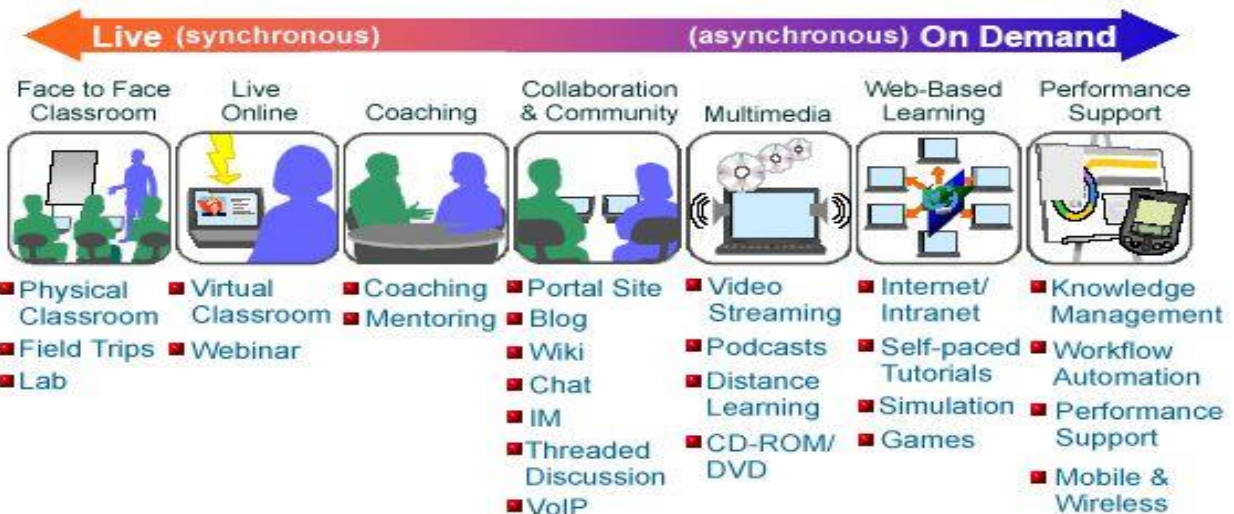
Appendix D:

<u>**Snapshot of How Companies are Investing in Learning and Training**</u>

	2006	2007	2008	2009	2010	2011	2012
■ Instructor-led classroom	65.30%	61.06%	63.69%	58.84%	59.10%	59.43%	54.28%
■ Technology-based	30.28%	32.69%	31.37%	36.54%	33.00%	37.30%	39.20%
■ All online	23.36%	24.62%	29.31%	27.70%	24.77%	25.18%	27.29%
■ Self-paced	25.12%	25.02%	23.38%	27.63%	25.50%	20.07%	21.56%

Trends in types of training

Training available versus what is actually used[4]

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[4] State of the Industry Study: A Pulse on Social Learning. HCM Advisory Group. (2013)