

The Future of Work is Play: Global Shifts Suggest Rise in Productivity Games

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Abstract-- Shifts in global, societal, technological, economic, and socio-political trends will shape the future of work. The culmination of these distinct trends across multiple facets of societal and technological advancement will lead to an increased use of game mechanics in the workplace of the future. Over the last several years, several Microsoft teams have deployed “productivity games” to improve software engineering processes through the application of game mechanics. Augmenting a business process with game mechanics has led to significant productivity improvements. These lessons support the notion that games can – and will – be an important component of the workplace of the future.

Keywords-- productivity games, gamification, future trends, global shifts

I. INTRODUCTION

The Partnership for 21st Century Skills highlights the four Cs - critical thinking and problem solving, communication, collaboration, and creativity and innovation:

- More young children know how to play a computer game (58%) than swim (20%) or ride a bike (52%)
- 69% of children aged 2-5 can operate a computer mouse, but only 11% can tie their own shoelaces
- According to the ESAA, 64% of parents believe games are a positive part of their children’s lives [1].
- eMarketer expects the number of US social gamers to grow to 68.7 million in 2012, 29% of the Internet population playing social games by 2012 [2].

Play is an activity enjoyed for its own sake. It is our brain’s favorite way of learning and maneuvering. Because we think of play as the opposite of seriousness, we don’t notice that it governs most of society—political games, in-law games, money games, love games, advertising games, to list only a few spheres where gamesmanship is rampant.

The spirit of deep play is central to the life of each person, and also to society, inspiring the visual, musical, and verbal arts; exploration and discovery; war; law; and other elements of culture we’ve come to cherish (or dread). Swept up by the deepest states of play, one feels balanced, creative, focused [3].

One-fifth of the U.S. population has played a social game over the past three months, according to a new report issued by industry researcher The NPD Group. That translates to 56.8 million U.S. consumers. According to NPD, a significant portion of social gamers -- 35 percent -- are new to gaming.

II. LESSONS LEARNED AT MICROSOFT

Over the last several years, Microsoft has employed dozens of games and game mechanics in its software development process. Forrester, Forbes, and others have covered this work. Table 1 illustrates the areas where productivity games can be the most impactful. Focusing either on expanding skills in role, or “organizational citizenship behaviors” - OCB’s - that require core skills – is the best way to ensure the success of a productivity game. Player motivation is a key component of the success of a productivity game.

Table 1. Successful Game Deployment

	CORE	UNIQUE	EXPANDING SKILLS
IN ROLE BEHAVIOR			Most Impact
ORGANIZAITONAL CITIZENSHIP BEHAVIOR	Most Impact		

The global economy is in the midst of dramatic change. The information architecture and speed of transmission is radically transforming global society. Those who live in a rural village in an emerging market and now have internet access - or employees of a multi-national corporation, have felt the impact of the increased speed at which information now flows. These changes lay the groundwork for a future that involves – or perhaps even requires – the use of productivity games. Gaming, play, and fun offer a tremendous opportunity to engage the “gamer generation” as they enter the workforce. The spirit of play, fun, and creativity are key elements of a successful, innovative organization – and yet, they are getting lost in the high tech, high pressure, highly reactive world. The future looks to be a world where “playing at work” is not an oxymoron – or a demerit at performance review time.

III. A PRODUCTIVITY GAME CALLED “COMMUNICATE HOPE”

Perhaps it’s called the end of the world because it’s the end of the games [4]. The decision to implement a “Communicate Hope” productivity game for the Microsoft Lync 2010 beta program caused a redesign of the Feedback Portal to implement game play elements, support for ad-hoc feedback and a consistent site appearance that emphasized the focus on Microsoft Lync 2010, Microsoft IT’s involvement and “brand” of the productivity game.

The basic goal of a productivity game is to motivate and entice participants to complete productive work in order to participate in the game. With the emphasis on disaster relief, the specific goal of the Communicate Hope productivity game was to motivate participants to complete beta feedback tasks and earn points for completing those activities. Playing on behalf of a disaster relief agency team, the points earned by all team members determine the final distribution of the available sponsored funds. The goal was to appeal to the altruism of players and for them to view their participation in the Microsoft Lync 2010 beta program as a win-win (and –win!) opportunity that provides a fun experience for participants, generates actionable feedback to improve Microsoft Lync 2010 - and helps disaster relief agencies with much-needed donations.

Here are a few comments from Communicate Hope game players:

“Because it is such a huge opportunity to be part of a more generous action that could give more than what we could ever give thru personal gifts... This is an amazing and what a nice idea! I would like to say thanks you for this opportunity to give thru communicate hope game what we could never give without that! This is an opportunity to get the feeling to be useful thru this program! Thanks again.”

“The game really made it interesting and feels like there was added purpose to the beta [program].”

“It's cool to help Microsoft improve products and also help other people in need. It feels good!”

“Is a good cause and is a nice bonus for helping out internally - we get to help out externally too.”

“For a good cause and it seemed fun with teams competing against each other and being able to see to a degree your own contribution to that (points) - totally original and very cool.”

“It was an ingenious way to learn about the software and provided a fun environment to play in.”

“It is a way to reward the extra work of giving feedback and gives me a good feeling of having done something special - I love rewards like this and it seemed to me Microsoft in the past did not make a point of doing this. This is like a "thank you for your work", but it comes from the heart and not just from your mouth.”

“It is a fun way to know that my testing efforts were going to something more than a software product.”

IV. RETURN ON INVESTMENT OF COMMUNICATE HOPE

Participation in the Communicate Hope productivity game was voluntary. Not everyone participated in the game and this provided the opportunity to contrast the productive work contributed by “gamers” and “non-gamers”. Analyzing the beta feedback provided by the “gamers” compared to the “non-gamers” demonstrated the impact of the Communicate Hope game and the potential of productivity games. Fully, 67% of the gamers send ad-hoc feedback versus just 3% of the non-gamers. Also, for the ad-hoc “Send Us Feedback” and the

directed scenario surveys, gamers are about 10 times more likely to participate than the non-gamers. For the most heavily promoted survey, gamers are 2.4 times more likely to participate than the non-gamers.

Upon conclusion of the program, 97% of the participants said they would participate in another beta program. In previous beta programs, these numbers range from 50-75%.

V. THE LANGUAGE QUALITY GAME

The Windows Language Quality Game has been a successful Productivity Game. It addresses organizational citizenship behaviors by calling on employees within Microsoft to apply their core native language skills to help assess the quality of Windows translation efforts.

The traditional business process uses specific language vendors to perform translation work, and then a secondary vendor to assess the quality. The business challenge has been that, for some languages and locales, finding two independent vendors can be difficult and costly. To address this problem, the Language Quality Game was developed to encourage native speaking populations to do a final qualitative review of the Windows user interface and help identify any remaining language issues. The goal was to ensure a high quality language release and using the diverse population of native language speakers within Microsoft has enabled the pre-release software to be validated in a fun and cost-effective way. The list of Windows languages can be found on Microsoft.com. Table 2 illustrates the success that the Language Quality Game achieved as run against interim builds of Windows 7. A more detailed description of gameplay can be found below in a later section, but the goal of the game was to achieve reviews of screenshots and dialogs for translation accuracy and clarity. Native language speakers were encouraged to play from across Microsoft’s diverse, international population. The results here demonstrate an immense amount of effort applied to the game.

TABLE 1. Language Quality Game Statistics

Game Duration	One Month
Total Players	> 4,600
Total Screens Reviewed (Points Earned)	> 530,000
Average Screens per Player	119
Top Player Screen Reviews	> 9,300
Total Defect Reports	> 6,700

Success in the game was defined as the amount of coverage of screens across the 36 languages tested. With the incredible response, most languages had several reviewers provide feedback per screen. Because of the latency in reviewing the

feedback, defect reports were not included in players' scores. But, for the Windows International Test Team, defect reports were the most valuable output of the game.

Logistically, the massive amounts of feedback were handled by the international team with tools specially designed to display aggregated feedback. The "Moderator" role was filled on a per-language basis from the ranks of the international team, and allowed the review of multiple pieces of feedback per screen quickly and easily. Where there was obvious consensus from the game players, a defect report would be created. Reviewed screens lacking consensus were quickly reviewed, but at a lower priority and more quickly, such that the screens with the highest likelihood of fixable defects were handled quickly and efficiently.

VI. BLURRED WORK AND LIFE

Global collaboration, mobile connectivity, alternative employment and benefit policies have unleashed the 24/7 productivity of broader pools of talent with a wider range of work/life contexts. Digitally augmented social connections, converging business/consumer devices and applications will intermingle personal and work identities, fragment attention and communications, and complicate privacy and security issues.

The rise in social gaming is unprecedented. The application of game mechanics for work-related activity is inevitable. From a gamer's perspective, the elimination of the boundary between work and non-work is insignificant. If the game mechanics are first-class, then playing a well-designed game for work is no different than playing a game for entertainment.

We've seen statistics suggesting that 47% of workers work beyond regular business hours. 32% of workers do personal activities at work.[5] It's just as likely for someone to check their Farmville crops at work as it is to play a "game for work" at home. In this context, games keep people connected across various life roles.

VII. DIVERSE AND DISTRIBUTED WORKFORCE

The mosaic of diversity and a distributed workforce will create new forms of friction and synergy across a wide range of generational, cultural, behavioral, geographic, and language divides. Game play will open social connections across cultural and generational differences to improve productivity in new and innovative ways. If the world were a village of 100, "61 would be Asian (20 would be Chinese and 17 would be Indian), 14 would be African, 11 would be European, 9 would be Latin or South American, 5 would be North American, and none of the villagers would be from Australia, Oceania, or Antarctica." [6] – and across all cultures, 60 - 70 people in this village would be gamers! The Gamer Generation is entering the work force en masse, and collaborative play can neutralize cultural differences

VIII. SOCIAL PLATFORMS

Interoperable social platforms, pervasive mobile broadband, maturing business models and deepened enterprise participation will take the power of social networking to new heights. Enlightened organizations will redefine customer relationships to engage a "community" of employees, customers, and partners in cooperative processes to aggregate disparate resources and demands to create new value, while leaving those not savvy to the new means of participation far behind. The impact of collaborative play on relationship-building – across geographic, language, cultural, and organizational boundaries – will help differentiate successful companies – and successful workplaces – from those who are stuck using antiquated methods that do not employ productivity games and play in how they work, and how they engage with customers and partners.

IX. SMART AND CONNECTED TECHNOLOGY

Connected and pervasive processing power will be woven into the physical fabric of human existence, offering the promise of smart, responsive and self-optimizing objects, environments and processes. Digital information and social contexts will augment geo-physical reality. The fantastic growth of mobile gaming has illustrated that people can and will multi-task – to play while they are mobile. The ability to play games anywhere, particularly when those games help with productive output, will help spur growth in productivity games.

X. ARRIVAL OF EMERGING ECONOMY\IES

Emerging economies' dominance in GDP growth will continue to drive an eastward shift in wealth, trade and investment, and bring new stakes and rules of the game to the global economy. Cross-boundary innovation activities will surge to capture the opportunities offered by the burgeoning consumption and talent markets, making highly diverse, networked, and distributed teams and operations a way of life. Games and game play will help develop unique connections to break through cultural barriers. As an example, hundreds of millions of Chinese are playing games to help them learn the English language. There are 66 million active gamers in China. Many of the larger universities in India are using games to help educate.

XI. THE EFFICIENCY IMPERATIVE

As emerging countries take the center stage of the world's economic development and consume unprecedented levels natural resources to fuel their growth, resulting in further pressure on the energy, labor, and material cost structures for the rest of the world and persistent corporate practices in "doing more with less". Crowd sourcing through games saves money, as companies are able to use game mechanics to encourage partners and customers to help get work done.

XII. CONCLUSION

Generations of examples, from the oracle of Delphi to Nostradamus to Harold Camping and the Mayans, have taught lessons on the risks of predicting the future. A successful futurist, does not give a date, is well versed in the limits of their knowledge, and offers up statements or warnings rather than terror or calamity. Global shifts indicate clearly that the prevalence of games will continue to grow. It doesn't take Nostradamus to look at statistics on Farmville and Angry Birds and predict that gaming is big. The amalgamation of trends in social gaming, emerging economies, work/life, always-connected, and population trends lead to a conclusion that gaming will be an important part of the future workplace.

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