GAME-BASED LEARNING
AND GAMIFICATION

GUIDANCE FROM THE EXPERTS

insync HUB

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BY MICHELE ISRAEL
The notion might defy standard logic, but having fun while learning is a good thing. It’s evidence-based: enjoyment heightens engagement and retention — an excellent reason to include gameplay in our blended learning campaigns.

Gamification and game-based learning have become primary teaching tools in digital learning environments. It’s no wonder: they represent all that is motivating, from internal rewards, to teamwork and collegial support, to the occasional tangible gift once mastery is achieved. The combination of these benefits successfully builds knowledge and skills that influence productivity.

Game-based learning and gamification must be thoughtfully designed, drawing on the psychology of play and its usefulness as a learning strategy. InSync Training tapped into the expertise of fourteen experts for advice and guidance on game-based learning and gamification.
DEFINING THE METHODS

There is a clear difference between game-based learning and gamification (both, however, are fun!). This distinction drives the construct of gameplay in the learning experience.

GAME-BASED LEARNING is the integration of actual games into the learning process — usually to teach a specific skill or meet a specific objective. This method gives learners the opportunity to become immersed in the learning process and to have fun while doing so.

GAMIFICATION, within the blended learning context, is the concept of applying game-based approaches and mechanics to non-game activities to promote learner participation and motivation. The goal of gamification is to inspire learners to participate and interact with other learners in an activity- or goal-oriented community.

Our contributing experts deepen these definitions.

ON GAME-BASED LEARNING

**PHELPS:** Game-based learning involves using game-like interactions, simulation strategies, or structures to support pedagogical goals and outcomes.

**LONG-WHEELER:** When you use a game or game design as part of your instructional materials, you’re engaged in game-based learning. Common examples of this include using Minecraft to teach math, programming, geography, etc., or using sports to teach teamwork and other social skills. There are certainly more times we’re learning through a game than for which we give credit.

**COULSON:** It “gamifies” FUN learning environments, allowing for self-paced learning while creating intrinsic motivation through competition and choice.
ON GAMIFICATION

KAPP: Gamification is using game-based mechanics, aesthetics, and game thinking to engage people, motivate action, promote learning, and solve problems. In other words, it is the use of parts, elements, or techniques from games in the delivery of instruction. Gamification should be about the use of the intrinsically motivating and deep elements of games, such as challenge, mystery, story, constructive feedback (meaningful consequences), strategy, socialization, and other elements that make games inherently engaging.

SLOTA: Gamification is the application of Skinnerian behavioral principles to a particular learning experience, often via a token economy. Player behaviors are encouraged with specific reinforcers (e.g., points, badges, scores, grades), contingent upon exhibiting a particular skill or completing a particular task. Such reinforcement is usually tracked on a leaderboard or some other display of relative standing compared to peers.

Unlike game-based learning, the goal of gamification is to layer particular game mechanics (actions, processes, and control mechanisms used to gamify an activity) on top of an existing instructional activity or learning environment, rather than designing a full, novel game experience intended for instructional purposes.

THOMAS: Gamification is the application of adding a gamified element layer to an existing learning system or program. Game design elements can be added as an afterthought. Or the elements can be built in during the design of a new learning implementation. These elements are designed to improve user engagement by using core compulsion events that make people want to participate in the gameplay. The participation should be designed not only to motivate the learner to play, but also to assist in the comprehension of the learning event.

ROLES IN THE SUPPORT OF LEARNING

Using games for teaching and learning is not a new idea. There is much research supporting the power of play in skills and knowledge development. It is proven to strengthen memory, improve cognitive function, and encourage collaboration, all among a broad array of positive results.
Dr. Diana Oblinger, president emeritus of Educause, captures the value of digital games for learners:

*Although definitions vary, digital games provide visual information to one or more players, accept input from the player(s), and use a set of programmed rules. Unlike traditional games, the rules are programmed into the code, not described in an instruction manual. The sensory interface and story add emotional appeal, as well. Digital games are complex, require collaboration with others, and involve developing values, insights, and new knowledge. They provide immersive virtual worlds, augmented by a complex external environment that involves communities of practice, buying and selling of game items, blogs, and developer communities. In many ways, games have become complex learning systems. (Oblinger, 2006)*

Game-based learning and gamification, while differently structured, share elements that propel learning. For example, they motivate, involve, and challenge users; ask participants to use prior knowledge to tackle incremental complexity; respond to learners’ needs for intrinsic and extrinsic rewards; and hone competencies to use beyond the learning environment.

With regard to game-based learning’s role in blended learning, our experts concur that it:

- Reminds participants of what they have learned and highlights their accomplishments along the learning journey;
- Can make complex concepts easier to understand; and
- Provides in-class activities that invite participants to practice and demonstrate the topics they have been learning.

Moreover, a well-designed and thoughtfully implemented game-based learning asset incorporates layered strategies that engage learners in multi-faceted ways.

**SLOTA:** Game-based learning for face-to-face, blended, and fully online learning is rooted in the construction of playful environments where learners can interact with core content, then work with a more knowledgeable other to understand how and why core content transfers to real world thought and action (Vygotsky 1933/1976). It largely has the same instructional role as gamification: the two are useful instructional frameworks but not, in and of themselves, solutions to the wide-reaching challenges facing formal and informal education. Unlike gamification, however, game-based learning tends to grow out of more contemporary theories of thinking and learning (e.g., social learning, information processing, situated cognition), which makes instruction more efficient, increases engagement, and leads to external, user-generated content creation (e.g., group analysis and reflection).
**KAPP:** Game-based learning works best when it is delivered using a three-part method. The first is to inform the learners what they should focus on while playing the game, what general outcomes are expected, and/or what techniques they should use. This can be done online or in a classroom. It is a good introduction to the game to be played. Next, the learners should play the game. This can be done online (if an online game), or face-to-face in groups. Then, after the game, there needs to be a time of reflection: learners need to think about what they learned. This can be done online or via a virtual classroom. So game-based learning lends itself really well to blended learning because each of the three parts can be delivered via a different medium. The learner can use the space between the learning events to reflect on and process the information.

**PHELPS:** I think the big win here is the idea of tinkering and simulation. A game-based style is to define a problem as a complex system of interlinking parts, and allow the learner to PLAY with the parts. Learners negotiate the parts as they ask themselves: “What happens if I do this or that? Or solve it this or that way?” Basically, participants reinforce a scientific learn-by-trial and learn-by-doing approach. Games have an ability to provide levels of interaction and meaning deep on Bloom’s scale, as opposed to superficial memorization. When games are used well, it’s impossible not to internalize the solution.

**MACKAY:** Game-based learning is a tool best used to explore specific learning outcomes, or when problem solving, critical thinking, and ethics come into question. Games for learning become specifically useful in creating the opportunity to visualize environments that cannot be visited in reality; for instance, the inside of a live blood cell, or in the case of pilot training, experiencing what happens when a plane crashes. The granular data gathered from gameplay are also immensely useful in determining the before and after activities outside of the gameplay experience, particularly when compared over a temporal period of several gameplay sessions and attempts, or a specific amount of time.
Gamification tends to:

- Heighten learner engagement, especially with topics that may not typically be interesting or appealing;
- Offer participants reminders about what they have learned, as well as highlight their achievements and progress;
- Motivate people to learn better; and
- Encourage peer-to-peer collaboration, knowledge sharing, etc.

**PHELPS:** Generally speaking, there are some elements of curricula that tend to fall into areas where there are task-oriented activities or tracking mechanisms. Gamification may provide additional benefit here in terms of motivating the initial use of certain tools, daily habits, practices, etc. What should NOT happen, though, is anything that seems to replace the core motivation and context of the learner with a gamification goal, i.e., the replacement of points or currencies vs. feeling of accomplishment for the sake of learning.

**SKOCKO:** When properly implemented, gamification does not impede the learning process for those uninterested in the game mechanics, while it enhances the experience for those who enjoy the storyline and gamified outcomes.

**SCRAGG:** Gamification can help smooth the lines between face-to-face and distance learning experiences, particularly for the social aspect of learning. A course or learning experience that incorporates teams, for example, could leverage a gamified structure to influence individual and collective learning objectives and targeted outcomes.

**THOMAS:** Gamification can play a role in blended learning at any point in the learning program. A gamification event can be interspersed to motivate the learner to complete all of the various learning events that are included in the instruction before the learning begins (preassigned learning artifacts), during the learning events (synchronous or asynchronous), or after.

**CONVINCING STAKEHOLDERS**

Gameplay is becoming more prevalent in workplace learning. It captures learners’ attention; participants attest to how it fortifies their abilities. Game playing leads to practical and memorable learning experiences.

Yet, even with this success, there are doubters. They wonder how games are effective: How do they contribute to the bottom line? How do they increase productivity? What capabilities can they possibly build? These are logical questions. And there logical (even research-based) answers.
Critical theories about play initially emerged from the study of child development. Among the most recognized researchers in the field was Russian psychologist Lev Vygotsky. He theorized that the social element of play (relationships and interactions) was a primary contributor to the shaping of children’s mental thought, language, and reasoning processes.

Vygotsky furthered his work by defining what he called the Zone of Proximal Development — the area between the tasks that a learner can do unaided and the tasks a learner cannot do at all. Tasks in the Zone of Proximal Development are those that the learner can do with assistance via scaffolding. Vygotsky claims that all learning occurs within the Zone of Proximal Development.

Why discuss these two theories in the context of game-based learning and gamification? Because they are equally as relevant to how adults learn. And as such, have implications for the design and use of gaming in a blended learning environment.

Susan Gebhard, assistant professor of education at the University of North Carolina, excellently frames this connection to the broad aspects of instructional technology:

Whatever the age of the learner, instructional design must be relevant, authentic, and challenging enough so that interactions occur within the Zone of Proximal Development. (Ormrod, 2004). Technology should be intentionally integrated into guided learning opportunities that offer technology-assisted situations in which students are supported in the construction of relevant understanding within an authentic context.

The use of technology enables students to transform socially acquired knowledge into personally meaningful understanding. Various technology applications support social constructivism by enhancing students’ reasoning and critical thinking skills, providing opportunities for problem solving, affording a means of information retrieval and dissemination, enhancing collaborative learning within the zone of proximal development. (Gebhard, 2008)
Gamification and game-based learning mirror the technology elements Gebhard describes. They are incredible learning tools because they let players progress at their rate and assist them in playing at the optimal limit of their ability, as per Vygotsky’s theory.

Serious games symbolize an evolution of play in learning. They are the types of gamification and game-based learning events that do what was described earlier: develop or enhance skills while still remaining fun. The term serious games appeals to adult learners (they tend not to think of this gaming as play) who want to apply higher-order skills to a realistic set of complex conditions, coupled with social collaboration, which games often provide.

Research, theory, and positive outcomes of gameplay are not always enough to convince diverse stakeholders of the value of game-based learning and gamification. For some, the evidence must be more concrete. Hearing from experts in the field can be more convincing.

**Bringing Stakeholders into the Fold: Recommendations**

Our experts build on the evidence supporting the effect of play in the learning environment, thus providing additional evidence about the merits of game-based learning and gamification that might be even more compelling to those who are unsure.

**KAPP:** Sometimes the best way is to avoid the words game or gamification is to just call it an interactive learning activity. Or, my favorite: Genuine Authentic Memory Enhancement System (GAMES!).

The [ultimate] goal is getting learners to interact with content. So what you call it matters less than what the learners are doing. You want the learners being active. We know from research that action-based learning — where learners are heavily involved with manipulating concepts and ideas — leads to deeper learning.

So whether it’s a game or gamification or an activity to make the learner do something, stakeholders often care more about outcomes than methods. So focus on the outcome of interactive learning and you’ll be able to help them understand games and gamification.

**LONG-WHEELER:** Collecting data and showcasing successful implementation are crucial [when seeking stakeholder buy in]. Unfortunately, there is significant stigma around using games as teaching and learning tools, so the more positive examples we can champion, the better. Especially if we have data (and literature) as evidence to back up our claims.
**PHELPS:** First, separate game-based learning and gamification: the latter is not gameful or playful learning. The term gamification has been coopted to represent a kind of layering approach where the game element is not intrinsically a part of the lesson or material. Second, is to make clear the role of such an approach is to HELP and AUGMENT the instructor for the benefit of the student, not to REPLACE either.

**ŁAIS:** Games are part of the everyday environment of new generations. Gamification has been present in our life for years. We always want to achieve something, to have better status or to behave for better rewards. Gamification and game-based learning approaches are very engaging. They also have an emotional dimension.

**SLOTA:** Broadly speaking, it can be difficult to get key stakeholders on the same page regarding gamification and/or game-based learning (depending on individual familiarity with gaming/games). The best course of action is multi-pronged.

Ideally, stakeholders should be made aware of general definitions and the mechanics associated with gaming through personal play. That is, putting stakeholders in control of varied game contexts, asking them to explore, and conducting a group debrief. We discuss 1:1 design (i.e., a 1:1 ratio of game and learning objectives) and frequently have stakeholders map objectives as part of the learning process (i.e., having them write potential game objectives to match their instructional goals; for instance, pairing the “read Latin” learning objective with decoding an ancient artifact inscribed with Latin text). We further have them consider how/why a game might suit a specific instructional need and how different game mechanics can convey the essence of different subject areas/skills.
MEASURING IMPACT

As with other learning tools, objectives should frame any type of gamification to ensure that learning expectations are clearly defined and logically aligned within an overall training program (and synced to business objectives and needs, where relevant).

Learners must recognize that the learning games have meaning and purpose in the workplace; and thus need to know what success looks like in that context. Establishing measurable outcomes follows once success is named.

When objectives and outcomes are established, a variety of measures (quantitative, qualitative, formative, reflective) can be put in place to determine whether objectives have been met.

Additionally, immediate feedback mechanisms embedded in the gameplay allow learners to continuously assess their progress against set objectives. This feedback can be tracked to determine how learners are faring (obstacles faced, objectives not met, tasks that need to propel learner gains, etc.).

We know from our game-based learning and gamification professionals that there are myriad other ways to measure achievement.

THOMAS: The beauty of gamification and game-based learning is that they can both be designed with measures built into the learning program. Game systems can measure on the spot if learners understand a sequence of events, or when they should apply a procedure or employ a technique.

For example, if a learner does not select the correct sequence during a game simulation, then he or she might need to redo the learning scenario. Or, a learner can attempt to level up in a game-based learning video, but if learning doesn’t occur, he or she must remain at the current level. Video games or board games can be designed to create new scenarios for the current level to allow the learner to try again.

Failing (productive failure, failing forward) can become fun, and trying again can be something that the learner wants to do.

SPECTOR: I have worked hand-in-hand with a teacher to create a gamified formative assessment model. Students in her multi-level classroom saw their progression and what they needed to do in order to reach the next level. The teacher presented her model to fellow teachers, admin, etc., to demonstrate the impact on student learning.

KAPP: You measure the impact just like you would any other learning intervention. You take a baseline measure of metrics that matter to the organization, i.e., business metrics, and then measure the change in these metrics after the learning intervention. If you really want to be rigorous, set up two control groups of learners: one that receives a different intervention, and one that experiences the same learning intervention it has always received. Then compare the outcomes of the two groups.

MACKAY: The benefit of the digital space, and the application of gamification and game-based learning, is the generation of vast data that can be used to assess, aid, and enhance learner performance.

LONG-WHEELER: To me, it is not only about measuring changes in performance, but also the mental and emotional states of people learning with and without gamification/game-based learning present. Of course, the investment in gamification and game-based learning is worthwhile if people are performing better, but it is also critical if it improves morale and motivation behind the work.

SLOTA: To optimally measure gamification’s and game-based learning’s impact on job performance, my colleagues and I recommend taking a hybrid approach to data collection and analysis. This means looking beyond whether a game is good or bad for training/instruction. We recommend exploring how game experiences vary with individual learner goals as an interaction with the parameters of the educational environment. This means collecting a combination of quantitative and qualitative information, ranging from Likert scale surveys and validated pre- and post-assessments (depending on the core content), to user-maintained journals and portfolios. Appropriate measurement and analysis tools will depend on the nature of the game(s), player(s), and work environment(s) involved.
WHAT SUCCESS LOOKS LIKE

Each game-based learning and gamification asset will have its specific merits based on content, approach, motivators, etc. But, when designing, developing, or implementing an existing form of digital gameplay, certain elements will always drive success. These include:

- A mindful introduction to either or both approaches with an interface that makes sense to learners, and that addresses a concept or topic appropriate in a gamelike construct.
- The application of game concepts that are aligned with the psychology of gaming (motivators, self-determination, etc.).
- Strategies that are linked to clear learning objectives and outcomes (clearly defining what success will be and guiding evaluation/assessment therein), which are directly linked to the workplace or environment where learners will apply skills and knowledge. (Determine exactly what the asset will address: Reinforcement? Enrichment? Intervention? Skill development?)
- Built-in mechanisms that provide learners with immediate assessment-based feedback on their progress.
- Incentives that do not focus on rewards or competition, but on achievement. The end result should always be that participants know they have learned something.
- Realistic, engaging, and meaningful tasks, scenarios, challenges, etc., that require problem-solving and critical-thinking skills.
- Increasingly complex tasks as participants move through the learning event, inviting them to draw on existing skills and uncover/discover new approaches to take on an unknown challenge.
- Emphasis on habits and behavior that reflect what modern learners need in the modern world.
- Recognition of the different ways people learn, and the unique ways they are motivated. Tasks and incentives must match these qualities in order for them to be meaningful.

It is important to thoughtfully design or select game-based learning and gamification assets because the potential pitfalls can result in an unproductive learning opportunity. What you do not want is:

- Incentives that are simply a function of game mechanics rather than tools that encourage learners to achieve goals;
- Participants to be centered on the competitive aspect of the gaming experience: it’s not about winning...it’s all about learning;
- Feedback that does not guide learners in constructively working through mistakes. The assets must support experimentation, exploration, and the option to repeat a task if a learner does not feel he or she achieved what was required (basically, the chance to try again!);
- Repetitive and predictable tasks that do not challenge learners to up their game; and
- Gaming assets that have no relationship to the participants’ lives beyond the learning environment, i.e., the actual workplace.

We requested that our interviewees give examples of effective game-based learning and gamification tools, practices, and resources that inspire the use of related methods in blended learning environments. They offered a diverse and fascinating range of programs.
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<tr>
<th>LEARNING GAMES</th>
<th>FOCUS</th>
<th>STRATEGIES</th>
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<tr>
<td>VERBA™</td>
<td>Language learning cards</td>
<td>Players benefit from seeing high frequency words, with many repetitions, in a context that fosters authentic learning and comprehensible input informed by best practices in second language acquisition. Play objectives and the learning objectives are one in the same. Players win by making comprehensible sentences, scaffolded by the cards, the images, and the helpful hints included on sentence cards.</td>
<td><a href="http://practomime.com/content/verba.php">http://practomime.com/content/verba.php</a></td>
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<tr>
<td>Underlings of Underwing™</td>
<td>Instructional game for color theory</td>
<td>Uses dragons to focus on workplace management and manufacturing themes, with goal of making sure product (egg) is made correctly using color theory. Competition between directors to make best eggs. Mix of worker placement, resource management and set collection. 1:1 ratio of game and learning objectives, situated cognition.</td>
<td><a href="http://www.practomime.com/content/underlings.php">http://www.practomime.com/content/underlings.php</a></td>
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<tr>
<td>CARD-tamen™</td>
<td>Educational debate and rhetoric game for Roman, Greek, and American history, as well as psychology, life science, and healthcare.</td>
<td>Model of gamification in which players must learn about the people and places on the cards in order to participate in and win epic battles of wits and rhetoric about, for example, whether Cicero or Augustus contributed more to the growth of civilization. 1:1 ratio of game and learning objectives, situated cognition.</td>
<td><a href="http://www.practomime.com/cardtamen/cardtamen.php">http://www.practomime.com/cardtamen/cardtamen.php</a></td>
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<td>Operation LAPIS</td>
<td>Game-based Latin language course</td>
<td>Interactive adventure in which students perform learning to develop and assess their growing language skills. Focuses on playing a story in a collaborative fashion by integrating learned skills. Applies experiential, project-based, and problem-based learning, leveling, questing, role playing, among other methods. 1:1 ratio of game and learning objectives, situated cognition.</td>
<td><a href="http://www.practomime.com/lapis/lapis.php">http://www.practomime.com/lapis/lapis.php</a></td>
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<td>Game On</td>
<td>Students encounter teacher-created quests or missions (assignments).</td>
<td>Quests are leveled; learners earn points to level up and progress on a leaderboard. Includes a marketplace that provides motivational elements beyond the game that enable learners to earn rewards for their accomplishments.</td>
<td><a href="http://maclab.guhsd.net/game-on/">http://maclab.guhsd.net/game-on/</a></td>
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<td>GradeCraft</td>
<td>Game-oriented LMS that allows educators to structure and deliver courses in game format.</td>
<td>Leveled system with learning analytics that keeps learners informed about their progress. Strong focus on learner self-motivation, autonomy, and choice. Challenging tasks that invite accomplishment (competency). Learners are part of a broader community (belongingness). Allows for productive failure or failing forward. Grades determined by points (badges) accumulated. Learners can participate anonymously, team-based leaderboards if they enjoy competition. Or, opt out if they don’t.</td>
<td><a href="https://umich.gradecraft.com/">https://umich.gradecraft.com/</a></td>
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<td>Learning Battle Cards</td>
<td>Game-oriented LMS that allows educators to structure and deliver courses in game format.</td>
<td>Brings game-based thinking into design process showing that with the proper features, many L&amp;D projects can be perceived as play. Emphasizes habits that can be important to the world of modern learners, where diversity, rich methodologies, and varied approaches are valued.</td>
<td><a href="http://learningbattlecards.com/">http://learningbattlecards.com/</a></td>
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| Just Press Play             | Achievement system that adds a playful activity layer to undergraduate students' educational environments and experiences. Designed to encourage students to reflect on their accomplishments, and strengthen their sense of competence and progress. | Centers on faculty and staff achievements that students receive after engaging in a specific playful or creative interaction. Encourages collaboration among students. Achievements (optional activities not connected to class requirements) can have points in any of four quadrants: create (focused on creative work), socialize (in-person interaction with faculty, staff, and/or students), explore (discovery of real-world locations on campus and in the community), and learn (gaining new skills or experiences). | http://jpp-rit-sandbox.azurewebsites.net/Home/About  
https://github.com/RIT-MAGIC/JustPressPlay |
<p>| Gameful Learning Lab        | Promotes conversation about learner motivation and engagement, convening educators to collaboratively design gameful learning environments; and take a design-based implementation research approach to the development of tools based on gameful theories of learning. | Leverages inspiration from good games to explore how learning environments can be designed (and re-designed) to promote learners’ senses of autonomy, belonging, and competence to motivate engagement and effort in learning. | <a href="http://ai.umich.edu/about-ai/gameful-learning-lab/">http://ai.umich.edu/about-ai/gameful-learning-lab/</a>                     |
| The Gamified Classroom:     | Slide presentation addressing elements of effective gamification and game-based learning. | Lays out what each approach is and entails, how each is used in the classroom. | <a href="https://www.dropbox.com/s/xpxwwwevde5xa2r/ALDI2015_Presentation_Avi_Spector_Gamification.pdf?dl=0">https://www.dropbox.com/s/xpxwwwevde5xa2r/ALDI2015_Presentation_Avi_Spector_Gamification.pdf?dl=0</a> |
| One Teacher's Story        |                                                                                                                                  |                                                                            |                                                                      |
| Uber's Gamification Approach| NY Times article reporting on Uber's behavioral, science-based gamification strategy for encouraging its independent work force to maximize company growth. | Uber tests various gamification techniques that subconsciously influence driver decisions. Techniques range from setting earnings goals for drivers and sending notifications on their progress, to providing badges for things like having great conversations with riders or being regularly ranked highly. | <a href="https://www.nytimes.com/interactive/2017/04/02/technology/uber-drivers-psychological-tricks.html">https://www.nytimes.com/interactive/2017/04/02/technology/uber-drivers-psychological-tricks.html</a> |</p>
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<td>GOBLIN</td>
<td>Game-based learning and gamification professional development tool in the form of games.</td>
<td>Centers on game design (mechanics and leveled tasks). Encourages collaboration/teamwork, and productive failure. Invites educators to adapt lessons for the classroom to help students master skills needed for college success. Goal is to invite educators to think about how to create more active and engaging environments that motivate students to learn.</td>
<td><a href="https://GOBLIN.education">https://GOBLIN.education</a></td>
</tr>
<tr>
<td>eXperience Play</td>
<td>Professional development program introducing instructors to game design and its use in classrooms.</td>
<td>Participants build text-based games and explore pedagogical themes, like digital literacy and students as creators.</td>
<td><a href="https://experienceplay.education/">https://experienceplay.education/</a></td>
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<tr>
<td>Latin Scansion®</td>
<td>A digital application for rehearsing scansion for advanced Latin education.</td>
<td>Tool for learning how to accurately scan Latin poetry with feedback system, timed marathon modes for practicing lines of poetry, scoring, and challenges/achievements to move past high scores (motivators).</td>
<td><a href="http://www.practomime.com/content/scansion.php">http://www.practomime.com/content/scansion.php</a></td>
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KARL KAPP HIGHLIGHTS WHAT MAKES FOR GREAT GAMIFICATION BY SHARING DESIGN ELEMENTS OF ZOMBIE SALES APOCALYPSE, A GAME HE CREATED.

My most successful gamification experience revolves around content gamification. It is the creation of a sales learning platform, which I conceived and built, called Zombie Sales Apocalypse™. The platform is a flexible, interactive sales training tool that uses content gamification to immerse the learner in a 3D environment focused on building sales skills in a simulated sales situation — with the added danger of avoiding zombies. The sales training tool is built from the ground up on a foundation of solid academic research, as well as around my experience as a professor, and researching and writing books on gamification.

The 3D zombie sales experience is not for every organization. However, those interested in cutting edge analytics — allowing their sales force to practice specific behavioral sales skills — have found the experience to be worthwhile. Additionally, the gamification platform is customizable to eliminate zombies and make it more of a simulation experience. And it can be modified to fit each individual organization’s sales model.

The biggest successes have arrived on two levels. The first is the level of engagement, focus, and participation. We launched the zombie gamification experience to reinforce a corporate sales model and experienced an engagement level through the roof. We’ve had wonderful reports and anecdotal evidence of individual sales reps participating in the experience over and over again — on and off hours. Most important: district and regional managers are able to use the analytics to diagnose areas of weakness for individuals and regions based on actual behavioral choices made within the game. The choices made are more authentic than role plays because the sales reps are under constant pressure because zombies are chasing them. This pressure causes real decision making and avoids the reps trying to game the system. They have to answer quickly and accurately or they lose.

The second level of success is increased performance. The company has seen an increase in the subsequent application of the sales model and an increase in product sales. The team is also able to use the analytics to track behavior over time, so it has a record of how the sales reps’ understanding of the sales model has changed through the gamification experience.

The best result is the enthusiasm and learning of the sales reps within the gamification experience, along with the data the managers are using to help coach and guide their sales force to success.
There is an expanded use of game-based learning within blended learning environments, especially as the world of instructional design evolves. Research demonstrates their impact; they are popular among learners; and they bring many benefits to professional settings. Our experts concur that their influence is substantial and that they are definitely here to stay.

**NOEL:** I think if badging becomes more widely used and accepted as a credential, then standards may begin to evolve around what constitutes a successfully gamified course. In terms of game-based learning, I am not sure it needs to evolve. Part of the great thing about game design is that the game is intentionally made to fit its environment, so by simply following game design principles, game-based learning will naturally adjust to new landscapes.

**KAPP:** The techniques of engaging learners through games or game-based elements are, in fact, not new. Humans have been using games for learning since the beginning of time and using elements of games for learning for just as long. So we may not call it gamification or game-based learning, but because those are two very powerful techniques for learning, they are not fads. In fact, I would argue that both are foundational for learning. Humans need to be interacting with content and each other to learn, and there is no better way than through games and gamification. So they will remain key elements in an effective toolkit for learning professionals building a modern learning strategy.

**Scragg:** As a component of redesigning the traditional game of schooling, I think they have useful elements that are likely to (or should) become integrated into the new machinery of formal learning, particularly around learner ownership and leveraging intrinsic motivation.

**Vivolo:** Begin with understanding the audience now, and those five to ten years from now. Consider the growth of social media (which is game-based), and multiple player videos. (I myself play with an interest in the gameplay, the compelling story created, and the ability to compete during multiple player events.) Data exist that show next-generation learners will continue playing games into their adulthood.

**ŁAIS:** The popularity of games and success of the game development industry (compared to other forms of entertainment, like for example movies) demonstrate that game-based approaches will be strong tools in the close future. New generations, who have grown up in a picture and game culture, will be present in organizations for the next decades. Their weaker ability to read long text, and the need for simplicity in the information flood, will make traditional ways of learning weaker than approaches such as games.

**THOMAS:** I believe that gamification and game-based learning will get a seat at the learning table and become a player during the analysis phase of learning development projects. I believe that it will be considered during early stages of curriculum development. It will be included early on to determine if it should be used in any of the learning interventions.
With game-based learning and gamification as part of the future learning landscape, now is the time to learn more about these approaches. Here are just a few of the many steps you can take to expand your understanding of these methods:

- PLAY GAMES!!! And play many different types. Get a sense of which mechanics best meet your instructional and other needs;
- Connect with researchers and game designers to explore the creation of games or game-infused activities;
- Explore different examples of gamification and game-based learning. Consider which learning theories (if any) were used to develop those games, and whether the game maintains a consistent 1:1 ratio of game and learning objectives;
- Join discussion groups to learn about what is happening in the educational gaming arena;
- Try your hand at building a game (something simple, like a text-based game using Twine - https://twinery.org/);
- Read relevant literature and research;
- Learn from other industries (i.e., game development) that deal with engagement, a key learning factor in game-based learning and gamification; and
- Discuss games with practitioners to validate solutions based on their opinions.

Hopefully, this gamification and game-based learning primer has been convincing enough to encourage a jump into the use of gaming in many blended learning environments. And that it reinforces what is already known about the educational value of these tools. Thoughtful creation, rich content, and practical tasks are essential to gameplay design. Remember, FUN is also a must-have!

Ideally, the experts’ contributions have offered concrete guidance on how to move forward. Hearing it directly from those in the know is the best way to jumpstart a gameplan. InSync Training is grateful for their invaluable input and their desire to support colleagues.

Finally...to reiterate (it cannot be said enough)...PLAY GAMES!
RESOURCES


REFERENCES


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