



game developer

GAME CREATION STRATEGIES
FROM INDUSTRY LEADERS[news](#) | [features](#) | [companies](#) | [jobs](#) | [resumes](#) | [education](#) | [product guide](#) | [projects](#) | [store](#)

Search

By Mike Lopez

[\[Author's Bio\]](#)

Gamasutra

November 28, 2006

Contents

Gameplay Design
Fundamentals: Gameplay
Progression

- ▶ [Page One](#)
- ▶ [Page Two](#)
- ▶ [Page Three](#)
- ▶ [Page Four](#)
- ▶ [Page Five](#)

Letters

Latest Letters to the
Editor:

▶ [Perpetual Layoffs](#) by
Alexander Brandon
[09.21.2007]

▶ [Casual friendliness in
MMO's](#) by Colby Poulson
[09.20.2007]

▶ [Scrum deals and 'What
is Scrum?'](#) by Tom
Plunket [08.29.2007]

[\[Submit Letter\]](#)
[\[View All...\]](#)

Features

Gameplay Design Fundamentals:
Gameplay Progression

(Page 1/5)

Next ▶

In the first installment of his series on gameplay, systems and mechanics fundamentals, systems design veteran Mike Lopez focuses on maximizing the player experience through the planning, structure and execution of the key elements of Gameplay Progression (mechanics, duration, ancillary rewards, practical rewards and difficulty).

Gameplay WHAT?

Most people who play games are probably familiar with the concept of difficulty progression, at least at a subconscious level - that games should get harder over time. Most designers presumably know to build increasing difficulty into successive levels, missions, worlds, or courses (usually the single player experiences). But difficulty is only one portion of the overall game experience, and there are several other elements that need to be structured, managed and revealed carefully in order to provide the user with a truly compelling and enjoyable experience throughout gameplay. So, what exactly is Gameplay Progression?

Progression

n 1: a series with a definite pattern of advance [syn: patterned advance] 2: a movement forward [syn: progress, advance] 3: the act of moving forward toward a goal [syn: progress, procession, advance, advancement, forward motion, onward motion]
[WordNet ® 2.0, © 2003 Princeton University (via dictionary.com)]

All 3 of these definitions for progression apply to games, because it is both the realized pattern of advance and the act of movement towards the ultimate goal (winning the game) that are essential to an enjoyable experience for the player. The pattern or structure of the advance is what will ensure a rewarding experience during gameplay and will ensure the further continuation and replay necessary to turn renters into buyers.

Key Elements of Gameplay Progression:

1. **Game Mechanics** – all controls and interactions within the game, including new weapons, abilities, powers, vehicles, and environmental states or events.
2. **Experience Duration** – the average time it takes to complete each stage, level, mission (including deaths if applicable) or course (using the most relevant vehicle).
3. **Ancillary Rewards** (visual, aural, decorative, etc.) – exciting environmental wonders, fancy visual effects, scripted events, etc. It is great to weight some of the more spectacular environmental wonders and effects up front (*Medal of Honor* style), but an enjoyable game needs to have all the level, course or

mission experiences built so that new visual rewards are staggered at a pace that keeps the user interested (in other words with an **Environmental Progression** in mind).

4. **Practical Rewards (gameplay relevant)** – new game modes, upgrades and practical unlockable content are very useful as the carrot on the stick that entices users to continue playing the game.
5. **Difficulty** – not just how hard it is to pass obstacles and NPCs/bosses, but also how much risk is taken with respect to player injury/death, weapon depletion, or vehicle/equipment damage or loss.

Games that do not structure the distribution of all these elements risk the danger of overwhelming the player with too much up front, or they risk not keeping users engaged enough with new elements to keep them playing or to encourage renters to buy. We have all played games that have suffered from sadly common issues like difficulty spikes, frustrating mechanics complexity, or those that we just become bored with after the first few hours – all of which are symptoms of unstructured, ill-designed and/or un-managed game progression.

One of the reasons many Nintendo games are considered a bench mark for quality is that games like **Zelda** have the most meticulously planned, structured and executed gameplay progressions of any games on the market, and on a subconscious level the experience in those games feels just right for players in terms of increasing challenge, complexity, risk and reward. In fact, a truly engaging and memorable player experience is one where all the above elements of progression are carefully laid out and then the gameplay content (levels, missions or courses) is built to fit within that structure such that the pace of new elements is controlled and somewhat predictable, yet always keeps the player wanting more.

(Page 1/5)

[Next](#) ▶

[join](#) | [contact us](#) | [advertise](#) | [write](#) | [my profile](#)
[news](#) | [features](#) | [companies](#) | [jobs](#) | [resumes](#) | [education](#) | [product guide](#) | [projects](#) | [store](#)



Copyright © 2006 CMP Media LLC

[privacy policy](#) | [terms of service](#)



THE 2007 ~~game developer~~ GAME CAREER GUIDE
DON'T PLAY GAMES WITH YOUR CAREER



[news](#) | [features](#) | [companies](#) | [jobs](#) | [resumes](#) | [education](#) | [product guide](#) | [projects](#) | [store](#)

[Search](#)

By [Mike Lopez](#)

[\[Author's Bio\]](#)

Gamasutra

November 28, 2006

Contents

Gameplay Design
Fundamentals:
Gameplay Progression

- ▶ [Page One](#)
- ▶ [Page Two](#)
- ▶ [Page Three](#)
- ▶ [Page Four](#)
- ▶ [Page Five](#)

Letters

Latest Letters to the
Editor:

▶ [Perpetual Layoffs](#) by
Alexander Brandon
[09.21.2007]

▶ [Casual friendliness in
MMO's](#) by Colby
Poulson [09.20.2007]

▶ [Scrum deals and
'What is Scrum?'](#) by
Tom Plunket
[08.29.2007]

[\[Submit Letter\]](#)
[\[View All...\]](#)

Features

Gameplay Design Fundamentals: Gameplay Progression

(Page 2/5)

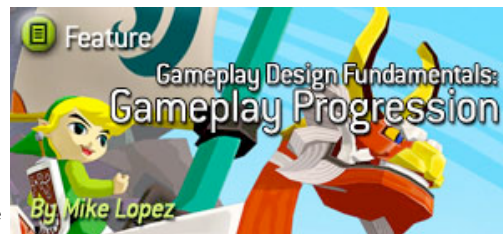
[Previous](#)

[Article Start](#)

[Next](#)

Game Mechanics

Game mechanics are an extremely important segment of gameplay because they directly affect the control complexity and in turn the learning curve. For a simple game with limited mechanics (say an arcade racer with only steer, throttle and brake) a designer need not layer in the mechanics. But, for a more complex game (*Halo*, *Splinter Cell*, *Zelda*, *Ratchet & Clank*), mechanics progression is essential so as not to overwhelm the player with the complexity of the controls.



The 2 main styles of mechanics progression that can be used in games with even a moderate level of mechanics complexity are what I call Gated Access and Directed Gameplay:

1. **Gated Access** – make some mechanics unavailable initially until a later point in the game (via inventory, disabled controls that later get enabled, or progressively adding in new moves, etc.).
2. **Directed Gameplay** – make all mechanics available up front but direct the gameplay (missions or levels) to utilize mechanics progressively (so the first levels only **require** the basics and each level or stage layers on something new).

Some games use one or the other and some use both (*Halo* for instance requires more skill with the mechanics later on and opens new weapons and vehicles to be acquired / used).



	Quick Turns	Sliding + Speed Management	Ramp Jump Alignment	90 Degree Slide-Swirling Slide	Sliding on new surface types	180 Slide	360 Slide	Reverse 180 Slide	Jump to 180 Slide
Mission 1	0								
Mission 2	X	0							
Mission 3	X	X	0						
Mission 4	X	X	X	0					
Mission 5	X	X	X	X	0				
Mission 6	X	X	X	X	X	0			
Mission 7	X	X	X	X	X	X	0		
Mission 8	X	X	X	X	X	X	X	0	
Mission 9	X	X	X	X	X	X	X	X	0
Mission 10	X	X	X	X	X	X	X	X	X
0 = New Low Frequency Mechanic X = Part of regular repertoire of mechanics									

Fig 1: An example experience-driven mechanics progression for a fictional mission-based driving game

Weapons or any inventoried mechanics are an obvious segment to reveal progressively via Gated Access. The best combat games actually reveal a new weapon sooner than they make that weapon consistently available to the player (for example an enemy may have a new weapon, and you can kill them to get it, but only with a limited supply of ammo up front). Deeper driving games should manage the progression of mechanics by directing the gameplay to control when more complex mechanics **must** be used and at what frequency (see Fig 1).

Platform games like *Ratchet & Clank* or adventure games like *Zelda* have entirely separate levels dedicated to new mechanics and these top-quality games take a lot of care to reveal these mechanics progressively, and they feature them even more by making all content on those levels support the new mechanics (for example this leaf-wielding flight and fan level in *Zelda: The Wind Waker*). Most great RTS games (*Command & Conquer*, etc.) control the progression during the single player campaign by initially limiting the tech level drastically at the beginning so that you learn the basics before more buildings and units are revealed at later levels. Many great action games also reveal new attack moves, or abilities as the game progresses.



	Pistol (teaching precise shooting, reload, ammo mangmt)	Machine Gun (teaching med range rapid fire, distance spray area)	Shotgun (teaching range accuracy, shot spray, slow reload)	Machine Pistol (teaching smaller clip management)	RPG (teaching long range combat, splash damage)	Sniper Rifle (teaching scope use, head shots, long range combat)	Grenade (teaching parabolic trajectory, timer mangmt)	Mine (teaching placement + trigger mechanics)	Rocket Launcher (teaching homing +/or guidance mechanics)
Mission 1	O								
Mission 2	X	O							
Mission 3	X	X	O						
Mission 4	X	X	X	X		O			
Mission 5	X	X	X	X	O				
Mission 6	X	X	X	X	X	X			
Mission 7	X	X	X	X	X	X	O		
Mission 8	X	X	X	X	X	X	X	O	
Mission 9	X	X	X	X	X	X	X	X	O
Mission 10	X	X	X	X	X	X	X	X	X
O = Available to select NPC(s) X= Available to all NPCs & Player									
Fig 2: An example inventory-driven mechanics progression for a fictional FPS game (Note that the progression need not be perfectly uniform)									

The thing to remember is that most any game in any genre (maybe other than team sports) can and should have their mechanics structured as part of the gameplay progression in order to deliver a great experience for the player (easy to grasp, keeping the user wanting more, and rewarding continuation with new abilities and/or new challenges).

(Page 2/5)

[◀ Previous](#)

[Next ▶](#)

[📄 Article Start](#)

[join](#) | [contact us](#) | [advertise](#) | [write](#) | [my profile](#)
[news](#) | [features](#) | [companies](#) | [jobs](#) | [resumes](#) | [education](#) | [product guide](#) | [projects](#) | [store](#)



Copyright © 2006 CMP Media LLC

[privacy policy](#) | [terms of service](#)



FEBRUARY 18-22
SAN FRANCISCO
[Learn More](#)



[news](#) | [features](#) | [companies](#) | [jobs](#) | [resumes](#) | [education](#) | [product guide](#) | [projects](#) | [store](#)

[Search](#)

By Mike Lopez

[\[Author's Bio\]](#)

Gamasutra

November 28, 2006

[Contents](#)

Gameplay Design
Fundamentals:
Gameplay Progression

[Page One](#)
[Page Two](#)
[Page Three](#)
[Page Four](#)
[Page Five](#)

[Letters](#)

Latest Letters to the
Editor:

[Perpetual Layoffs](#) by
Alexander Brandon
[09.21.2007]

[Casual friendliness in
MMO's](#) by Colby
Poulson [09.20.2007]

[Scrum deals and
'What is Scrum?'](#) by
Tom Plunket
[08.29.2007]

[\[Submit Letter\]](#)
[\[View All...\]](#)

Features

Gameplay Design Fundamentals: Gameplay Progression

(Page 3/5)

[Previous](#)

[Article Start](#)

[Next](#)

Experience Duration

Not all games have to increase the length of the experience to be fun or successful, but experience length can directly support the gameplay progression and in turn the overall enjoyment of the experience. In all 8 **Road Rash** versions I worked on, we made sure to increase the length of races (both in distance and in time) at every level, and although it was a subconscious decision at the time, I now recognize that approach as a part of the gameplay experience progression. Racing games have to increase the race length more on new level races since presumably they also have faster vehicles on the new level (which can cover more ground in the same time). Combat games can increase in mission distance, opponent difficulty and penalty (e.g. player death) to increase the overall experience time.

	Avg. Length	Avg. Speed	Avg. Duration
Level 1	6.7 mi.	100 MPH	4 min.
Level 2	9.9 mi.	108 MPH	5.5 min.
Level 3	16.3 mi.	122 MPH	8 min.
Level 4	25.7 mi.	140 MPH	11 min.
Level 5	41.3 mi.	165 MPH	15 min.

Fig 3: An example race level experience progression for a fictional driving game



Some platform games have very short levels at the start (teaching basic mechanics) and then longer levels farther in. Even subtle differences in experience length over time will subconsciously increase the sense of progress for the user and therefore their overall gratification (ask most players why **Zelda** games are so excellent and they may be hard pressed to articulate the reasons, because the *feel* of the experience is such a subjective thing, but much of that cohesive feel is delivered via gameplay progression).

On a micro level, the user should also feel a sense of progression within a single mission, level or course and the building structure into the content allows the designers to control the pacing, and gradually increase the intensity within a single level, race or mission. On a macro level, the sense of advancement and overall game percentage completion for the player should be obvious.

Ancillary Rewards & Environmental Progression



Most games are filled with pleasing rewards that do not directly affect how the user plays the game, but ancillary rewards (visual, aural or decorative) add to player gratification and therefore encourage replayability. Visual environmental rewards can be very pleasing and memorable to the player and include things like fantastic environments, amazing particle or lighting effects, and incredible scripted action events (e.g. ***Medal of Honor*** and ***Call of Duty*** style) and an **Environmental Progression** of these elements is therefore an extremely important area to plan and structure since it is key to encouraging continuation and replay. Environmental rewards are especially valuable to the player experience since they can directly affect the gameplay pacing and so they should occur fairly often (usually one at a time) within a level, mission or race.

Decorative rewards can be things like Trophies or Medals (***Medal of Honor***) that serve as unlocked collectibles but do not alter the gameplay. Decorative Rewards do add value in helping recognize player progress, but in this day and age a game that entirely substitutes Practical Awards with Ancillary rewards will often get hammered in chat forums and in review scores.

Key visual rewards that dramatically affect the pace of gameplay and thus need to be designed and structured into an **Environmental Progression** are things like scripted action events, the intensity of those action events, visual wonders, landmarks (essential for proper navigation and orientation), object groups, terrain types, and weather types (see Fig 4).

	Scripted Game Moments or Action Events	Scripted Action Intensity	Environmental Wonders (Spectacular Visuals of med-large scale)	Distinctive Landmarks (large scale and visible at a distance)	Environment Types (It is important that these are mixed up and varied as much as possible)	Weather Types (if fixed, these should be revealed steadily + mixed)	Time of Day (if fixed, these should be revealed and mixed)	Object Types
Mission 1	3	10	3	3	Warehouse Interior	NA	NA	Industrial
Mission 2	2	3	2	2	Back Alley Exterior	Foggy	Day	City
Mission 3	2	4	2	1	Mall Interior	Clear	NA	Public
Mission 4	3	4	2	1	Jungle	Rainy	Day	Nature
Mission 5	2	5	2	1	Desert Fortress Ext	Clear	Evening	Moroccan
Mission 6	2	6	2	1	Skyscraper Interior	NA	Night	Corporate
Mission 7	2	7	2	1	Forrest	Foggy	Night	Nature
Mission 8	3	8	2	1	Main Street USA	Clear	Day	Town
Mission 9	4	9	1	1	Freeway	Rainy	Evening	City
Mission 10	5	10	3	1	Russian Kremlin	Snow	Morning	Russian

Fig 4: An example environmental progression for a fictional FPS game

The original ***Medal of Honor*** did an excellent job of progressively structuring the unlockable medals, and since this was pretty new to FPS console gamers at the time (around 1999), these Decorative Ancillary Rewards were extremely effective as an incentive for replay (gamers just had to earn those medals). If Decorative Ancillary Rewards are the bulk of the unlockable content the first unlockables should be revealed quickly and then over progressively longer time periods from that point. Care should also be taken to make Ancillary Rewards interesting and unique enough to keep players interested (generic bronze, silver, and gold trophies or medals are less likely to satiate players in this day and age).

Ancillary rewards can also help dramatically play up key game events. For ***Road Rash: Jailbreak***, we reinforced the combat knock-down with visual and audio rewards (skull & bones icon and cash register sound effect) to make it more gratifying. Team skeptics (myself included) quickly changed their tune when those audio/visual rewards were proven to have increased the gratification of knock-downs during focus tests. The point here is that key game mechanics or systems should be the first place to consider adding visual and audio rewards, but in that case, there is no progressive gameplay structure and those portions of ancillary rewards will not directly enhance the overall gameplay progression. In fact, in order to maximize gameplay continuation and replay many other Ancillary Rewards (e.g. scripted action events, environmental wonders, and other visual

rewards) can and should be structured into an **Environmental Progression Plan** prior to having those levels, or areas constructed by the artists and/or level designers (**see Fig 4 above**); ensuring successive levels or missions have an interesting new mix of action and visuals will serve the dual purpose of rewarding prior player progress and enticing their continuation and replay.

(Page 3/5)

[Previous](#)

[Next](#)

[Article Start](#)

[join](#) | [contact us](#) | [advertise](#) | [write](#) | [my profile](#)
[news](#) | [features](#) | [companies](#) | [jobs](#) | [resumes](#) | [education](#) | [product guide](#) | [projects](#) | [store](#)



[Copyright © 2006 CMP Media LLC](#)

[privacy policy](#) | [terms of service](#)



game developer

POST MORTEM
AND PRODUCT REVIEWS[news](#) [features](#) [companies](#) [jobs](#) [resumes](#) [education](#) [product guide](#) [projects](#) [store](#)

Search

By Mike Lopez

[\[Author's Bio\]](#)

Gamasutra

November 28, 2006

Contents

Gameplay Design
Fundamentals: Gameplay
Progression

- ▶ [Page One](#)
- ▶ [Page Two](#)
- ▶ [Page Three](#)
- ▶ [Page Four](#)
- ▶ [Page Five](#)

Letters

Latest Letters to the
Editor:

▶ [Perpetual Layoffs](#) by
Alexander Brandon
[09.21.2007]

▶ [Casual friendliness in
MMO's](#) by Colby Poulson
[09.20.2007]

▶ [Scrum deals and 'What
is Scrum?'](#) by Tom
Plunket [08.29.2007]

[\[Submit Letter\]](#)
[\[View All...\]](#)

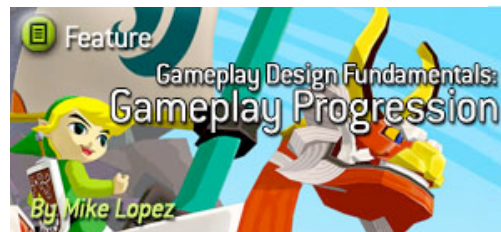
Features

Gameplay Design Fundamentals:
Gameplay Progression

(Page 4/5)

[◀ Previous](#)[◀ Article Start](#)[Next ▶](#)Practical Gameplay Rewards

More and more games these days are following the old-school RPG and fighting game model of unlocking practical new content pieces that directly change, expand or improve the way the game is played. Fighting games may unlock new characters, attacks or powers, while racing games may unlock new vehicles, vehicle upgrades or race courses and combat games unlock new weapons, multiplayer maps, or environments. The reason more attention is being paid to rewards these days is that players have come to expect them in many instances, but also that practical gameplay rewards lead the player through the game and are the most effective means to encourage continuation and replay (vs. decorative rewards or just beating the game). An excellent example of structured practical rewards in my opinion is in ***Burnout: Revenge***, where new modes, new tracks and new vehicles are all unlocked at a structured pace (the rate seems fast at the start and progressively slower through the game), with a few nice awards very soon after starting the game. A well planned and executed practical reward structure is extremely helpful in enticing player continuation and replay and ultimately in increasing review scores.



It is extremely important that the player be able to understand the rewards system. Some games present rewards just after completing a level, while others award money at the end of the mission, race or level and then allow the user to purchase new content, and in these cases the rewards system needs little or no explanation. Other games tabulate experience points or other categories which either automatically unlock the reward at a predefined pace, or allow the user to select which reward they wish to purchase; either way these systems of points need to be explained more clearly (or at least presented with the reward input / output organized in a table) since they are not as intuitive. For a combat game like any of the ***James Bond*** or ***Medal of Honor*** games, the mission results screens usually tabulate categories like shot accuracy, remaining health, enemy kills, or enemies escaped, and in any such game there should be a point value associated with the performance in each category that serves as a system explanation, because the user can see the relative weights of each category (see **Figures 5a/b for some fictional mission results examples**); a player can use the category information and relative values in their future gameplay strategy in order to improve their ability to earn rewards. Keeping the system as obvious and simple as possible will reduce the amount of explanation feedback the interface will need to provide.

Game Developers
Conference Mobile

**KEYNOTE
ANNOUNCED!**

Michel Guillemot
CEO & President,
Gameloft

www.
GDCMOBILE
.com

MISSION RESULTS			
Status: Complete			
Performance: ★★★★★			
Enemies Killed	42 (93%)	3,732	
Enemies Subdued	8	1,600	
Accuracy	55%	2,200	
Efficiency	28%	1,400	
Health Remaining	62%	2,480	
Time (Target = 3:45)	4:53	2,830	
Total Score		16,698	
Reward Target		15,800	
** Performance Reward Earned **			
Space Facility Arena			

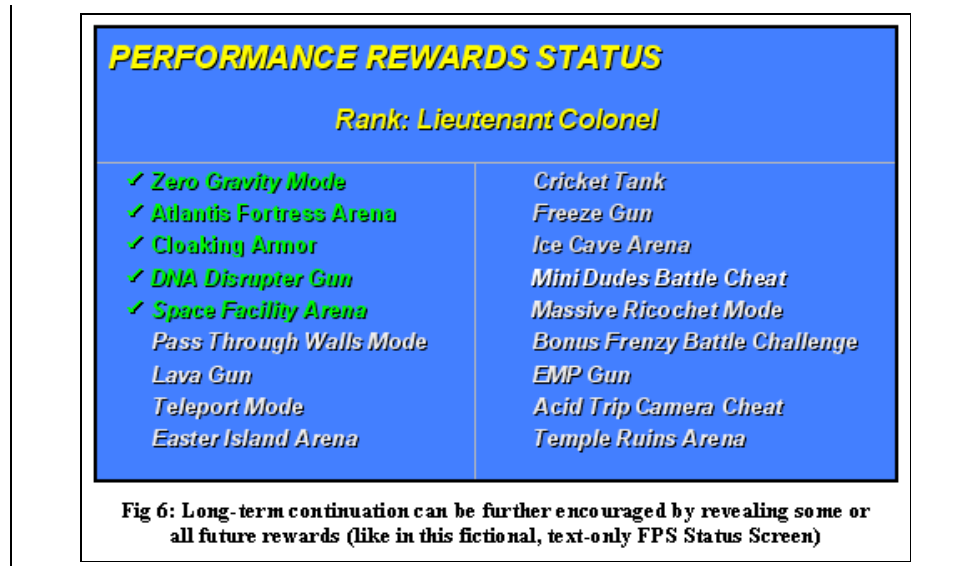
Fig 5a: Reward Success – a more complex award system should be clearly broken down & laid out (like in this fictional, text-only FPS Results Screen)

MISSION RESULTS			
Status: Complete			
Performance: ★★★★★			
Enemies Killed	42 (93%)	3,732	
Enemies Subdued	8	1,600	
Accuracy	55%	2,200	
Efficiency	28%	1,400	
Health Remaining	5%	200	
Time (Target = 3:45)	5:28	530	
Total Score		9,662	
Reward Target		15,800	
** Performance Insufficient **			
Reward Unavailable			

Fig 5b: Reward Failure – Both success and failure need to be clearly presented with causation (like in this fictional text-only FPS Results Screen)

Ideally, the player should also get a glimpse at the rewards content that lies ahead (either the next few or all remaining practical rewards) in order to encourage their long-term continuation and replay. It is great to know the next reward (say a key character model unlocked for play in multiplayer). It is even better if the player can see that mysterious and intriguing new team gameplay mode or crazy character or weapon that is available several awards down the line (see Fig 6) because they might want that one so bad they will extend their play in the current sitting or at least keep playing long after they might otherwise, just to gain that item and be able to experience it in gameplay.

These days it is increasingly more important that the main content unlocking system of the game feature Practical Gameplay rewards only. Decorative Ancillary Rewards (Trophies, etc.) do add value but should be presented separately from Practical Rewards; if it appears that Decorative Rewards are stuck into the system to fluff up the appearance of Practical Rewards then the chat forums and reviewers may respond with comments like some of them are 'useless' or 'cheap'. Decorative Rewards can supplement the Practical Rewards, but they should be kept separate and not treated as equals.



(Page 4/5)

[Previous](#)[Next](#)[Article Start](#)

[join](#) | [contact us](#) | [advertise](#) | [write](#) | [my profile](#)
[news](#) | [features](#) | [companies](#) | [jobs](#) | [resumes](#) | [education](#) | [product guide](#) | [projects](#) | [store](#)



Copyright © 2006 CMP Media LLC

[privacy policy](#) | [terms of service](#)



game developer

CLICK HERE
TO FIND OUT MORE TODAY!STARTING AT
\$8
USD PER HOUR[news](#) [features](#) [companies](#) [jobs](#) [resumes](#) [education](#) [product guide](#) [projects](#) [store](#)[Search](#)

By Mike Lopez

[\[Author's Bio\]](#)

Gamasutra

November 28, 2006

ContentsGameplay Design
Fundamentals:
Gameplay Progression

- ▶ [Page One](#)
- ▶ [Page Two](#)
- ▶ [Page Three](#)
- ▶ [Page Four](#)
- ▶ [Page Five](#)

LettersLatest Letters to the
Editor:

▶ [Perpetual Layoffs](#) by
Alexander Brandon
[09.21.2007]

▶ [Casual friendliness in
MMO's](#) by Colby
Poulson [09.20.2007]

▶ [Scrum deals and
'What is Scrum?'](#) by
Tom Plunket
[08.29.2007]

[\[Submit Letter\]](#)
[\[View All...\]](#)

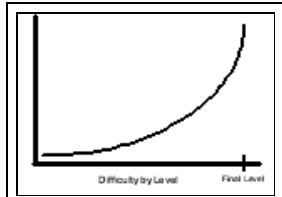
Features

Gameplay Design Fundamentals: Gameplay Progression

(Page 5/5)

[◀ Previous](#)[◀ Article Start](#)**Difficulty**

Most non-sports games have some sort of difficulty progression, but often it is unstructured, unplanned or ill-defined and this results in difficulty spikes, early frustration (too much challenge), or possibly early game abandonment (players get bored from not enough new challenge). A developer challenge for properly structured difficulty progression is to be far enough into development to completely understand the elements that affect difficulty the most (e.g. weapons, single enemy offensive/defensive behaviors, group behaviors, enemy class strengths, and enemy class quantity and group distribution), and yet still early enough to give your team time to refine the tuning of the content (levels, missions or courses) to fit the desired difficulty progression and especially to verify that progression with external subjects (focus testers, etc.).



An example of a
Curved Difficulty Progression

demographic we cannot afford to alienate (we do want those renters to buy, right?).

A curved difficulty progression can often be the best, since it allows for casual gamers to get a reasonable distance into the game, and hard core players will breeze past the first few levels, but the levels then start to increase progressively in difficulty (each step is greater than the last) to continually test their skill and their ability to adapt to the new mix of challenges. As systems designers, we have to figure out how to plan and structure our game difficulty and at a high level a first step is to estimate how often the player will die (see Fig 7), wreck their vehicle, or fail a challenge. From there all categories that affect the estimated failure rate should be added to the difficulty progression table and the table must be followed for the levels, missions or courses as they are built. Finally, the difficulty progression must be verified and tuned via focus testing.



THE 2007
game developer
GAME CAREER GUIDE

Real-world
advice on how
to make it in
the business

- Professional resources and salary survey
- Insider information from industry veterans



Download your
copy today!

	Easy NPCs (weak and stupid)	Medium NPCs (medium strong, smart +/- fast)	Hard NPCs (fast, strong, smart and defense capable)	Grenadier NPCs	Sniper NPCs	Rocket Launcher NPCs	Ammo Caches	Health Packs	Projected Avg. Player Deaths
Mission 1	0						5	8	0
Mission 2	X						5	7	1
Mission 3	X						4	6	2
Mission 4	X	0		0			4	5	2
Mission 5	X	X			0		3	5	3
Mission 6	X	X			X	0	3	4	3
Mission 7	X	X	0	0		0	2	4	4
Mission 8	X	X	X	X	0		2	3	4
Mission 9	X	X	X		X	X	1	3	5
Mission 10	X	X	X	X		X	0	3	8
0 = Introductory / Low Frequency X = Part of regular repertoire of enemies									
Fig 7: An example difficulty progression for a fictional FPS game (Note that distribution need not be uniform)									

The Challenge

Often the real development challenge is not in knowing how to structure a great and engaging game progression, but in how to steer a large portion of the development team to achieve it. It is one thing for the lead designer to be able to tune or direct all the difficulty balancing of the gameplay on a game with limited systems, but it is a much more difficult and costly maneuver to attempt to steer multiple level designers, effects artists, world builders, and AI programmers to achieve a wider and more desirable gameplay progression on a more complex game. Ideally, the progression is designed and planned early enough to bring the producer and team leads on board into backing such an approach, but on first generation engines often certain elements remain unknown until deep into production (e.g. how different AI behaviors affect difficulty). So, it is best to both plan the progression in advance as much as possible (early production), and to set a planned checkpoint later on to update the progression structure with formerly unknown elements, and finally to set multiple review and feedback loops in the content to make sure the progression structure is supported, followed and satisfactory to focus testers.

I admit to not having yet personally achieved the **perfect** gameplay progression execution on the games I have designed systems and mechanics for, and I am not sure I can say for sure if I ever will. But in my 15 years of design experience I have learned to identify the progression patterns in top-quality games, and that experience has led me to consciously plan the progression structure much more thoroughly than I used to, and I have strived to work within my influence and abilities to execute content to that structure as much as possible. Each development experience has led to more process learning on my part and, as an external Creative Manager, I now heavily encourage all the design teams I am working with to structure the gameplay progression early on and to build content that fits that structure from the start.

Realistically, the goal for us game designers should not be to build a Nintendo-worthy gameplay experience (it has taken them 20 years to get there), but to build the most enjoyable experience for the specific game we are working on and ultimately to make our users excited enough to play (and buy) our game. Then all will be right in the [game] world and [hopefully] the peasants will rejoice. M'kay?

(Page 5/5)

◀ Previous

Article Start

Feature Story

[join](#) | [contact us](#) | [advertise](#) | [write](#) | [my profile](#)
[news](#) | [features](#) | [companies](#) | [jobs](#) | [resumes](#) | [education](#) | [product guide](#) | [projects](#) | [store](#)



[Copyright © 2006 CMP Media LLC](#)

[privacy policy](#) | [terms of service](#)