

***Ninja Gaiden Black* and the Tutorial-Less Tutorial**

Jason Mathias, University of Southern California

Jason.Mathias@gmail.com

The Teaching Challenge

Ninja Gaiden Black's main character is a quick, agile ninja, not an ox-like warrior. In order to survive, the player must spend a large amount of time dodging and weaving, finding just the right time to strike. All of this requires a deep understanding of controls - not only of single buttons and what they do, but button combinations and when to use them. Modern games – both educational and commercial – use long tutorials that slowly walk players through movement and combat, using practice dummies or contrived scenarios, which tell the player how to move, but often lack a sense of experimentation from those early levels.

Instead of painstakingly instructing the player on how to navigate and conquer the virtual battlefield, Team Ninja, the game's developers, opted for a different teaching style – To make the beginning of the game an open sandbox, and make experimentation the basis of navigating levels and conquering enemies.

The Mini-Sandbox

The very first level of the game, the player stands in a riverbed. There are no enemies attacking the player, but also no instructions for where to go, or how to get there. So, the player simply has to press buttons and figure out how to move, how to jump, and how to get out of the riverbed. For a game that will later be very intense and require quick reflexes to survive, this beginning scene is surprisingly calm.



Figure 1: The Riverbed the player must escape from. No enemies! No chance of failure! ...But no instructions, either.

Ninja Gaiden Black is played on the Xbox or Xbox 360, so any input in the game is done via a gamepad. The gamepad has 11 buttons, a directional pad, and two analogue sticks, and pressing all of them in order to discover what happens on screen takes a small amount of time. Since the player knows all the buttons that could possibly affect the game space, she will most likely press them until she figures out how to proceed. In doing so, she will likely discover actions such as quick slashes, heavier attacks, and eventually, how to move around the space. Thus, these essential actions are 'figured out,' rather than taught through traditional instruction. This is more engaging for the player as well, as there is a sense of discovery to these actions.

The space is then structured to require combinations of button presses to navigate – The player must get out of a riverbed, but in some areas, she must hop over a gap, while in others she must run along walls to cross larger gaps. These more complex movements often come with a text description of what the player must do, but still lack the 'press A to jump'

button-style explanation of tutorials. In other words, the game will tell the player that she can run along walls, but won't tell her what buttons to press.

Tutorials as Hints (and Sometimes as Backup)

While tutorials are minimal, they do appear when the game wishes to teach the player how to interact with certain types of geometry. For instance, the player character Ryu can run on water with the right button presses, and the player would not know to try that feat, so when the player first encounters the flowing river, a tutorial message explains how the ninja can run on water.

It's important to note, however, that when a prompt pops up, the player is often told what she can do, but not how to do it – The prompt merely serves as a way to guide the player's mind on how to proceed and beat an obstacle, without giving the player the solution.

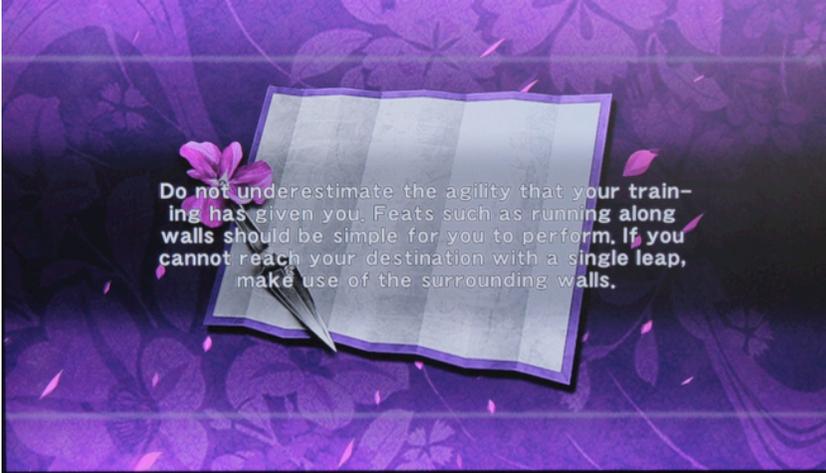


Figure 2: Complex, terrain-specific instructions are explained as hints to the player – Note that the prompt does not explain how to run along the wall, only that it can be done.

It is worth noting that a few prompts do explicitly state buttons that should be pressed, particularly when it serves a combat function. For instance, the rolling dodge is a move that requires the player to understand not only how to block (pressing the left trigger) but also that when blocking, using the left analogue stick to move does not make the player character run, but rather roll, avoiding sword strikes. Right before one of the early combat scenarios, the player is told of this complex move via a text prompt. This move is complex, and it would be difficult to explain this without explicitly stating the buttons required, so the game makes sure to explain the buttons within the prompt. Since the player character's life may depend on understanding the move, more tutorial-styled explanations are given.

Elegant Controls Facilitate Experimentation

It is worth noting that experimentation would be much harder if this game was on a keyboard or touch interface – With more than 50 buttons to press or a more ambiguous blank space, the player wouldn't really know how to go about pressing buttons. With only 14 or so options, however, the player can mentally map successful feedback to specific buttons and remember them much more easily.

(It is important to note that, while not every educational game can be on a gamepad, what is important here is not the gamepad itself, but the fact that the player mentally sees only a few options for interaction. A touch screen broken up into a series of buttons or visually squared off areas could very well have the same effect.)

Much of the game's success can also be attributed to the smart controls. The game starts with industry-standard controls (movement via the left joystick, attacking and jumping via the face buttons), so the player doesn't have to un-learn the controls that they're used to. The game-specific controls, however, are designed so that the player doing one action can stumble upon another.

For instance, when I first played *Ninja Gaiden Black*, I figured out how to roll accidentally when pressing button combinations, and realizing that using the left trigger when moving would result in a speedy roll. However, since no enemies were attacking me in the beginning riverbed level, I did not realize that holding the left trigger actually did anything more than enable rolling. However, when encountering my first set of enemies, I rolled, and the enemy slashed at where I was going to land. Yet, instead of getting hurt, my player character blocked – I had held down the trigger, intending to roll a second time, and that trigger caused a block. Because the designers thought to make ‘defensive’ movements (blocking and dodging) using the same modifier (the left trigger button), I could accidentally discover how to block, without being told.

Improvisation in Combat

Halfway through getting out of the riverbed, a few ninjas attack. The player can try out the attacks she has learned, and see that they have a solid effect. Thus, the traditional pattern of a beat-em-up is established, without actually instructing the player. But a curious thing happens – The enemy ninjas are aggressive. So aggressive, that they attack where they know the player is going to land when she rolls or jumps. The player now has to use jumping and rolling as an evasion tactic, or aggressively attack using moves discovered only minutes before. (If the player did not accidentally hit an ‘attack’ button during experimentation, they will likely flail about on the gamepad looking to discover the button at this point. Since the attacks are tied to the front buttons on the gamepad, they will likely be easy to discover, and the player will learn that way, instead.) This rapid processing of skills is a direct result of pressure by the game system, providing a negative feedback when the player is not at a high enough skill level. While there is a certain amount of skill necessary to get to this stage, once the player is at this stage, she can learn rapidly using this pressure-based experimentation.



Figure 3: Combat with Ninjas that mimic the player make the player very aware of her own strengths and weaknesses, lessons that can then be used to fight all sorts of enemies. Image source: <http://videogames.techfresh.net/ninja-gaiden-dragon-sword-trailer/>

Finally, the enemy ninjas themselves use the exact same moves that the player performs. They can jump, dodge, and slash using the same moves that the player does, albeit a bit more basic. Thus, if the player does not already know how to, say, jump off of a wall in order to dodge a blow, she will see the enemy do it, and realize that they could do that as well. (Similarly, she will know when dodging isn't a good idea, because she will catch a ninja leaving itself open to attack, and use it to kill her enemy. That's a lesson that's hard to forget!)

This leads to a sort of discovery by observation and mimicry, a way that the designers can secretly tell the player the best moves for getting out of any of the game's most dangerous scenarios. Once this first level is done,

the player will be well equipped with a basic language of how to move, jump, dodge and strike, and will have built a solid game plan how to face the enemy in what could have been a frustratingly difficult game world. Later on, the enemies become monsters with more devastating fighting styles and attacks – yet the foundation that the player has gotten from surviving the first level with little instruction prepares them to face their enemies head on.

Takeaways for Educational Games

Ninja Gaiden Black does not seem like a great example of an educational game, but it is an excellent lesson in giving the player the ability to learn on her own terms. Many times, there is an attention barrier for more practiced players playing a game (educational or otherwise) - A game's first few levels often lack engagement due to rote item-by-item tutorials, which interrupt the flow of the game. *Ninja Gaiden* gives the player an open level and enough feedback for the player to learn to navigate it.

The solution, however, isn't simply refusing to tell the player how to play the game, as that would simply invite frustration! *Ninja Gaiden Black's* success is because of a design that limits the possibility of input, minimizes failure, and has a relatively high standard for success. In other words, the player needs to have an intuitive control scheme to experiment with, and feel free to experiment without the frustration of dying or being hindered because of not doing a specific combination. Yet, the experiments should mean something – once they've had that time to experiment, they should be tested on their discoveries, so that they understand what the reason is for learning this newfound skill, and cement it in their memories as ways to beat challenges.

As was mentioned previously, it is worth noting that button-press experimentation works best when there are a small set of buttons to press. If the game was on a touch screen, for instance, experimenting with movement would be much harder, as the player wouldn't be sure if they should tap

screen space, or swipe with one or two or three fingers, or hold a finger on a point – The possibilities seem endless in comparison to 13 or so buttons and a few joysticks. However, that doesn't mean that a tablet game can't allow for experimentation. Buttons on the screen, or spaces that the player can visually sense are for pressing or swiping – those kinds of indicators give the player a sense of 'known possibility space,' letting the player not guess at how to create input, and get to the task of figuring out what inputs to actually make.

During this period of experimentation, it is important to provide strong feedback and rewards, and minimize negative punishments. The time for tests will come later – experiment spaces need to feel as free as possible. Once the player feels she is ready to continue, she will, but until then, she should be rewarded visually and mechanically with feedback that tells her how her inputs translate into actions.

According to the 'Just In Time' and 'Transfer' principles put forth by James Paul Gee in *What Video Games Have to Teach Us About Learning and Literacy* (2003), tests should come soon after one has learned a particular action or mechanic. It isn't necessary for tests to be difficult early on, but they should require a challenging level of engagement soon after the period of experimentation, so that the experiments feel like they were learned at a time when they were useful. If the player learns something by experimenting, yet doesn't have to use it for a while in a scenario that matters, she will likely forget it and move on to the other challenges that are present in the game. If the discovery is immediately transferrable, however, the player will transfer that knowledge to attacking new problems, and the period of experimentation will have yielded a lesson.

Conclusion

Ninja Gaiden Black is not hampered by its lack of tutorial, but strengthened by it. For such a 'hardcore,' punishing game, players learn to adapt to and conquer their surroundings and opponents fairly quickly through

rapid digestion of information, largely because they are provided the means to act in order to discover their moves. *Ninja Gaiden Black* is not unique to this type of teaching-by-experimentation, nor is it the only style by which a designer can teach by experimentation. However, it is a stellar example of such a philosophy, and its lessons could be well applied to future games, educational or otherwise.

References

- Ninja Gaiden Black*. Team Ninja, Tecmo. 2005. Xbox/Xbox 360 console. Video game.
- Gee, James Paul (2003). *What Video Games Have to Teach Us About Learning and Literacy*. New York; Palgrave Macmillan.