

Learning to Lose: Using Gaming Concepts to Teach Failure as Part of the Learning Process

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Abstract

Failure is an expected part of games and simulations; however, this loss is also an expected part of the learning experience rather than an end result. In contrast, many traditional school settings use failure, but only as an end result. Students of a graduate educational games and simulations course were polled before and after completing the course to determine if there was a change in their opinions about the place of failure in education. Before beginning the course, 82% of the 22 students in the course thought of failure as a consequence of not learning the lesson or, in other words, as an end result of the learning process. At the end of the course, when the 22 students were polled again, 91% of the 22 students shifted their opinion by thinking of failure more as a part of the learning process rather than just an end result.

The Importance of Failure

Failure is an important part of our economy, our government, and the learning process (Albert, 2013). For example, failure weeds out inferior products or inefficient suppliers. Also, policies and/or leaders can be deemed as failing by voters who can, consequently, change their support to more promising platforms and candidates. Additionally, most people would agree that experiencing failure has taught them valuable life lessons. In short, failure often makes progress possible; therefore, failure is not necessarily an end result, but part of the process of living and learning.

When a person considers failure as just a shortfall of reaching the objective, it could be said that he or she is really looking at failure as an opportunity for learning. The gap between reaching the objective can be analyzed and evaluated so that strategies can be adjusted for the next attempt. For instance, Thomas Edison, who, reportedly, had 10,000 failures before inventing the light bulb, embraced each failure as a step in the learning process that brought him closer to success (Bartes, 2009).

Controlled Failure

Many innovative companies encourage and fund experimentation rather than punishing or failing to reward employees who risk potential failure (Cannon & Edmondson, 2005). Additionally, some organizations generate controlled failures to simply analyze what works and what does not so that new products, services, and innovations may be identified. A huge advantage of this type of experimentation is that these failures can take place in simulations or off-line so that there is relatively little cost.

Failure in Games

Games offer a similar environment where it is not only safe to fail, but that a player learns from every fail. Becker (2008) goes a step further stating that gamers become persistent in playing since it is commonly known that there is a way to win. This knowledge encourages another try after every fail. This experimentation and fail-safe environment of games may account for part of the motivating factor of games. McGonical (2011) insinuates that there is no real comparison between games and reality. She suggests that games eliminate our fear of failure, improving our chances for success; whereas, reality is just hopeless. McGonical (2011) goes on to point out that although no one likes to fail, gamers can spend 80% of their play failing (i.e., run out of time, lose the fight, don't solve the puzzle, die). She hypothesizes that positive failure feedback in a well-designed game is the reason. If a fail seems random or passive, the player could lose optimism and/or a sense of purpose. But, she argues that feedback that can be incorporated into a learning experience is valued and applied on the very next try.

Gee (2006, 2008) has a similar hypothesis in that good games use failure as a learning experience. But, he adds, the price of failure is also lowered in good games. For example, very often, good games will not make a player start completely over when he or she fails. Gee (2006, 2008) suggests that all of these features of failure in games allow players to take risks that might be too costly elsewhere, like classrooms, where failure is often seen as an end result.

Teaching Failure

During a graduate level course on the incorporation of games and simulations in education taught at Morehead State University (MSU) during the Fall semester of 2013, students were asked their opinion of failure before and after the coursework. Students were all educators, school teachers to trainers, of varying stages, from preservice to inservice, and levels, preschool to adult. Before the coursework began, most of these students considered failure as an end result. Out of the 22 students enrolled: 12 (55%) thought of failure as a consequence or punishment for not doing better; 6 (27%) thought that it would be a small part of the learning process because students would learn the lesson from the end result (i.e., from the punishment of bad grades); and only 4 (18%) considered it a part of the learning process. Overall, 82% of these students thought failure was an end result, more of a punishment or consequence for not doing better, in the learning process.

During the MSU graduate course, students were exposed to the concepts, characteristics, and qualities of good games and simulations. The fail-safe nature of games and simulations were part of the lessons (Gee, 2006, 2008; Gredler, 2004; Juul, 2009; McGonical, 2011; Simpson & Stansberry, 2008; Squire, 2005). Assignments in the 16 week course included: educational game evaluation (choosing two educational and relevant games to evaluate and deciding how to evaluate them), designing a virtual world field trip for their learners, a comparison between instructional design and game design, a proposal for an educational game design (with storyboards) relevant to their practice as educators, and creation of a game evaluation rubric to build a repository of educational games relevant to their practice as educators and designed to share with their peers.

When the 22 students were polled at the end of the course: only 2 (9%) thought of failure as a consequence or punishment for not doing better; only 2 (9%) thought that it would be a small part of the learning process because students would learn the lesson from the end result (from the punishment of bad grades); and the other 18 (82%) considered it a part of the learning process. Please note that the 2 students who polled as ‘failure as an end result’ had originally marked this category in the pre-course poll, so their opinions had not shifted. The 2 students who polled that it was ‘a small part of the learning process’ had shifted from the ‘failure as an end result’ category, so these two did change their opinion when the class was over. Therefore, this translates into 2 (9%) people who stayed with same opinion while 20 (91%) students shifted their opinion on the importance of failure as a part (not just an end result) of the learning process. See Table 1 for some of the students’ comments.

Table 1. Selected comments from the students

| Student | Timing (before or after the course content) | Comment |
|---------|---|---|
| A | Before | “During lessons, yes. During an exam, no. If we create a safety net for children, where failing while learning is ok, there is a potential for them to take more risks without reprisal. That being said however, I am a harsh critic of “falling forward,” where children who should not pass, are moved forward without earning the progression.” |
| | After | “Failsafe is good, or can be good, in the right set of circumstances. However, at the end of the day we have to draw the line in the sand somewhere. We have to let them fail at some point. If we don't let them fail in the short term, then we fail in the long term.” |
| B | Before | “I do not believe students should be allowed to fail. In fact, if a student does poorly, I first try to evaluate where I let the student down. If I am monitoring every student every day, then no child should succumb to failure.” |
| | After | “How we view and respond to our failures is key to recovering and moving forward. I believe no matter the case, as an educator and an advocate for my |

students' success, failure should not be a road block. I will strive to provide a failsafe environment that is rewarding and encouraging to all students."

| | | |
|---|--------|---|
| C | Before | "I do not think students should be allowed to fail without consequence. I think that students should be held accountable for their own learning. When students refuse to work, I believe there should be a consequence. On the other side, I believe teachers should be given time to help students that need extra time and support in order to be successful." |
| | After | "I originally stated that I didn't think students should be able to fail without consequence. However, now I think that it is VERY important for students to be able to try new ideas and see if they are successful or not. In a gaming environment, being able to start over and with the new knowledge gained is a very powerful motivator and will help students to try something after failing." |
| D | Before | "This is a hard one to answer. The teacher in me does not want her students to fail. When they do it tells me that I need to re-teach and look at how I presented the material to the class, or that some need more one on one time to understand the material. Then I feel like we need some failure in our lives so we can grow and learn that it is okay to make a mistake. When we fail we are challenged to try harder and to improve our best. If we never fail we never feel like we need to be better." |
| | After | "I think that it helps with perseverance and self-confidence – not to see themselves as a failure if they do not succeed on the first attempt. Now, I have changed my homework policy so students can make multiple attempts to achieve success. Students are doing better on homework and I am getting more CORRECT feedback from their work, than just a grade. Students are no longer copying each other, because they know that it doesn't count for a grade and want to see what they know!" |

Conclusion

To some, failure can be considered an important part of living and learning. For example, many companies, practice controlled failures or establish fail-safe environments to generate innovation. Without trial and error procedures, where would science and technology be today? And yet education has slowly shifted from an environment where it is safe to try and fail while learning to an environment where fail is a dreadful word that is spoken in a hushed tone. With the high stakes testing students and educators are exposed to on a daily basis, it is no wonder that to them failure has become synonymous with punishment or consequence – in other words, a negative result.

On the other hand, anyone who has ever played a game will tell you that he or she will start the game expecting to 'die' and that the goal is to see how far he or she can make it before failing. Moreover, people *want* to play, even though they are going to die (fail) many, many times; however, with each death, they learn more about how to win. Since, games and simulations have been suggested as some of the best teaching tools out there, researchers have been trying to find the recipe for the best games, the best teaching tools, and the best ways to learn (Amory & Seagram, 2003; Berlotti, Kapralos, Lee, Moreno-Ger, & Berta, 2013; Gee, 2006, 2008; Gredler, 2004; Juul, 2009; McGonical, 2011; McManus, Ebby-Rosin, & Kurshan, 2014; Papastergiou, 2009; Pineteh, 2012; Simpson & Stansberry, 2008; Squire, 2005). Perhaps using gaming concepts to remind educators that failure is part of the learning process and not just an end result may be a step in the right direction. Although this study shows the potential for educators to shift their thoughts on the relationship between failing and learning, this is one class in one semester at one university. Further research is required to truly divine the view educators take on failure in the learning process.

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