

Upping your game through behavioral design

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Often tech companies tout the use of gamification, consumer insights, and UX (user experience design) on their website. These approaches are touted as key elements underlying the success of giants like Disney, Google, Spotify, and Instagram for good reason; Behavioral design consisting of gamification, consumer insights and good UX make all the difference in user engagement and product success.

Using proven methods rooted in the behavioral sciences, game theory, user research, and UX design thinking, have demonstrated that simple, inexpensive tweaks within government and the private sector can create population-level behavior change. We now possess the scientific understanding of how healthier habits are formed along with the ability to employ these interventions through technology including using nudge theory in ways that people find pleasurable and motivating. This offers the potential to develop products that create large scale positive change in society.

Each of these approaches have made significant individual contributions to improving the products and services we all use. However, while they sound related in many ways, these three approaches have grown mostly in parallel over the past several years- which has led them to be more like cousins than siblings, specifically, cousins that only talk at family gatherings. There is overlap in their backgrounds and they share many overarching beliefs, but they use different “dialects” to talk about the same things and they demonstrate those beliefs through different methods.

Thus, for companies looking to employ these best practices to improve their products and services, it can be almost impossible to know which approach is best for what types of problems. Comparing the three disciplines/ methodologies is rarely, if ever, done. There is no real guidance on what falls into the realm of gamification versus behavioral economics versus UX design or even which



approach is best in any given situation. Often, the course of action is determined by the type of professional assigned to the project or employed by a company, who simply defaults to their area of expertise. This is clearly not the best way to understand problems or identify solutions as it always eventually leads to blind spots or pitfalls.

Obviously, most companies do not have the resources to hire experts from all of these fields to work together on development. Those that do are often the giants described above, which in part explains their continued success but even if a company is not able to employ experts from each of these disciplines, there are ways to mitigate this gap. Here are a few:

Whenever possible, a problem or solution should be considered from all three perspectives, even if it's done a bit haphazardly. This might mean involving colleagues from other departments or hiring consultants for specific projects or it may simply entail expanding online research to include findings

from all of 3 fields. Taking a "big picture" view will help your group to reduce blind spots and pitfalls. Not only should you search for what successful solutions have been identified that address your specific problem, you should also look at what has worked for problems that involve a similar type of behavior or what has been studied in a similar group of people or setting. It often helps to use specific terms like "gamification," "behavioral economics" (or behavioral science), and "UX design" in your searches, especially if they are outside of your usual approach. Also, intentionally seek out examples where an idea that is similar to yours did not work and explore why it did not work. This will help you have a much broader understanding of the problem and solution than any one field could provide.

Having more standardized definitions of gamification, behavioral science, and UX design along with a general overview of the benefits and limitations of each approach would help immensely. Just like "innovation" five years ago, the terms "gamification," "behavioral science," and "UX design"



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are so broadly defined and are applied in so many different ways, that they've essentially lost their meaning. Thus, it makes it difficult to understand how these approaches overlap and how they differ, even for people working in these related fields. How can you know what you are missing if you don't know what is possible or what people outside of your field have found?

While these recommendations can help you spot glaring omissions, they will not really equip you to take your product or service to the next level. Gamification, behavioral economics, and UX design are all effective solutions that address specific behavioral problems such as lack of motivation, attention, or desire to persevere. However, knowing which one you need to use and when to use it requires both an interdisciplinary approach to identifying and solving problems as well as a clear understanding of what behavioral problem you want to address. It is not enough to just take a solution from gamification such as badges for effort or a behavioral nudge like opt-out / opt-in and just apply it. This is the quintessential hammer looking for a nail. You are bound to waste a great deal of time and money when these solutions don't transfer and it's how you end up with products that sound like a good idea and look great, but that no one uses. None of these strategies on their own will enable the creation of successful products, because they were all designed to tackle specific issues. Instead, they need to be tools within a larger approach, and where the focus is on defining and identifying the problems and clarifying the desired outcomes.

Specifically, we recommend using a behavioral design approach to develop products. Behavioral design means that all products (and services) should be designed with the goal of creating a specific change in the behavior of the user. This might be something as simple as increasing utilization of an application or as complex as increasing exercise or long-term savings. No matter the size of the behavior or series of behaviors, the key is to clearly spell out what specific behavior users would demonstrate in the ideal situation (what could this look like). Then, you can step back and figure out how best to design a product that encourages people to act in this ideal way using the strategies already found in gamification, behavioral economics, and UX design (among others). When seen through this design lens, it is very clear that the best approach to take will simply be the one that addresses the specific behavior that you are trying to change in the most impactful way. While this may be obvious at times, other times this may require some testing to determine. However, with such a clear behavioral outcome already defined and access to technology, testing will be more straightforward and quicker than ever before and will result in data-driven products that work and that people actually want.



Talking with potential and current users of your product provides you with insight into their personal motivations and helps you create products that engage and delight them.





One last thing to keep in mind...

Usually by the time experts are brought in, it's way too late in the product development cycle. By then it's much too late to truly "fix" a system that was ill-conceived from the onset. This could range from tweaking an app that was never going to have the desired impact to cleaning up unanticipated ripple effects from a nudge. While there is improvement to be had from working this way, there is only room for minimal impact. Behavioral Design Principles must be included upstream, when the initial product design is being discussed and the specific behavior change is being identified. Not only will these experts be needed to guide teams through this new design process and teach them how to identify behaviors, they can also help teams to identify bigger picture issues much earlier.



Recognizing the basic differences

Gamification

Gamification means applying game-like characteristics to other types of activities. Often increases motivation and fun, as well as attention and reinforcement of behavior through rewards. Gamified learning is often more accurate than non-gamified.

Flatla et al. (2011) indicate that games have 4 basic principles:

- Games are challenging
- Games have a theme or story
- Games use rewards to reinforce behavior
- Games highlight progress

When an activity is completely transformed into a game it is called “hard gamification,” but most gamification is “soft gamification” where some aspects of a game are added to the activity.

Behavioral economics

Behavioral economics is a subfield of economics that seeks to understand why people fail to behave rationally (i.e. in the way that traditional economics would predict). It blends economics and psychology to understand why people often fail to act in their own best interests or in line with goals that they set for themselves. People aren't great at identifying why they do what they do and are poor predictors of their own future behavior. One key take-away from behavioral economics is that, in most situations, providing education or information does not change behavior because people usually already know the right thing to do. They just don't do it.

The initial impetus of behavioral economics was to research and describe the various cognitive biases (or heuristics) that people use when making decisions. Then, interventions (called “nudges”) were designed to help people overcome these biases to make better decisions. These nudges have often had a tremendous positive impact on large groups of people for very little cost.

FYI: Behavioral science is a related term that usually refers to a larger field that encompasses behavioral economics, but has a broader scope and includes emotion, social norms, and incentives.

User experience

“User experience” includes all parts of the end-user's interaction with the company, its services, and its products.

User experience design (UXD) focuses on creating experiences that meet the exact needs of the customer, without obstacles. UXD should also deliver simplicity and elegance that make products a joy to own and use.

Great UXD goes beyond providing what a customer says they want or a checklist of features. True user experience design combines services and technology with how people think.

It's very important to distinguish user experience from the user interface (UI) and usability. Good UI should make a product easy to learn, efficient to use and pleasant. While a product could score high on usability criteria, the broader UX fails if a key user need is not met.



Demonstrated Effectiveness

Gamification

Gamification has been shown not just to increase knowledge, but also to impact behavior. Some examples are:

Hard gamification:

- Educational games for one-time and continuous learning across wide-ranging fields
- Sports (gamified exercise)

Soft gamification:

- Reducing cognitive bias
- Increasing exercise and healthy eating (apps + wearables)
- Saving money; reducing unnecessary spending; long-term investing
- Increasing charitable donations
- Improving health behaviors such as blood glucose testing
- Employee and customer engagement
- Accurate completion of tedious tasks like paperwork
- Many other behaviors!

Behavioral economics

Behavioral economics nudges have shown to be effective ways to change population-level behaviors such as:

- Organ donation
- Vaccination
- Exercise
- Healthier food choices
- Paying taxes
- Voter turnout
- Saving money
- Medication adherence
- Charitable donations
- Energy consumption
- Recycling
- Littering
- Honesty in write-offs
- Investments
- Many other behaviors!

User experience

User experience design has been shown to increase knowledge of how customers consider, buy, use and recommend products and services. Companies that improve customer satisfaction see the following business impacts:

- Increased revenue
- Increased retention and reduced churn rate
- Increased customer lifetime value
- Increased profitability/margin
- Increased customer referrals
- Increased loyalty program participation
- Reduced cost of service
- Reduced cost of acquisition



Use Cases

Gamification

One of the most often cited cases is the use of gamification in Duolingo, the app that helps people learn foreign languages. It is a great example of how to tap into features that help humans with a rich, engaging experience. You can learn more about this case in *The Gamification Toolkit: Dynamics Mechanics, and Components for the Win*, by Wharton legal studies and business ethics professor Kevin Werbach and Dan Hunter. The app has more than 60 million users.

Behavioral economics

Thaler and Benartzi's "Save more tomorrow (SMarT)" pension program is a great example of how to apply an understanding of cognitive bias to build a better system. Instead of asking people to begin a pension program immediately after hiring, they are asked to join this program where instead of taking money out of their current income for savings, they will begin saving whenever they get a pay raise. Then, the amount that they save will be automatically increased with each future pay raise up to a pre-set maximum. People can opt-out at any time.

This program has resulted in an estimated increase of \$35B saved. It is so successful because it is designed with the understanding that: people feel losses more than they feel gains, people are more willing to do difficult tasks in the future, and that defaults and opt-out works better than opt-in. While there is still the ability to choose, it makes the right decision the easy decision and removes

User experience

In today's world, the successful ROI of user-centered design has been widely acknowledged. You can find dozens of reports from companies like Forrester, McKinsey, and InVision that back up the efficacy of the practice. Companies that place their customers at the center of product design are experiencing a 30–40% increase in overall profit margins, for example, design has been shown to increase the agility of their product, design and development teams.



Keep in mind

Gamification

Not all apps that intend to increase these kinds of behaviors use gamification. Some apps use more of an educational or behavior change approach without gamification.

Hard gamification is more difficult because you have to be able to get people to do a tedious task simply for fun. Imagine trying to get a group of friends together for a night of playing a tax return game!

Gamification only really works when it is applied to the right behaviors and well-defined processes. Sometimes this gets confusing and the wrong behavior is rewarded, which results in a “failure.” So, be very careful and clear! Be sure to include data at all steps of planning and intervention to make sure that things work the way you anticipated.

Also, sometimes it could be seen as unethical or inappropriate to gamify certain behaviors, so be sure to keep this in mind. It can be part of **a** solution not **the** entire solution.

Behavioral economics

Behavioral economics often relies on a set of strategies designed to overcome specific behavioral biases. While this can be quite effective for certain behaviors, it will depend on the behavior. Often behavioral economics research has involved lab studies where all other factors are held constant and only the variable of interest is allowed to change. While this can help to define a concept, in the real-world things are rarely so clear-cut. Thus, there may be ripple effects of these interventions that can't be known until they are done in an applied setting with actual customers.

There will always be risks if you take a solution designed for one situation and try to apply it to other situations or behaviors. Some things are likely to work across the board (like removing friction), but others have the potential to fail or even worse, to backfire. Careful testing and behavioral expertise are required when developing and implementing behavioral solutions. In sum, it is not as easy as it seems and the nuance and details can change everything in these interventions.

User experience

Research and feedback speed momentum. It's critical to create time in your product development process to seek out feedback from users, people in your team, and people outside of your team. A lot of products fail because they do not solve a real problem. UX designers must strive to confirm problems before creating solutions. Adopt processes that validate new ideas before spending too much time on them.

Think beyond a view (or your view). It's easy to get fixated on a single feature or screen of a product. As passionate creators, we often get stuck in the details. It's not about one feature or screen. It's about how everything fits together to help solve the user's problem or complete the task at hand. UX designers must constantly ask themselves whether we are getting the right things done. It's essential to get comfortable with being wrong. We must be fearless in exploring new ideas while also validating those ideas through user data and feedback.

One of the most important variables in product development is time. We can waste too much of it when trying to make the right decisions. Many times, you simply need to decide to get things done. Consider how easy it is to measure or change a decision when making this choice. Then keep moving forward.



Born in the Research Triangle Park of North Carolina. We built this company on a foundation of design, gaming and learning. Our focus is developing products that improve lives by blending design and technology. We craft experiences that align with what customers want to do, then wrap them up in fun. We're thankful that most of our clients share a belief in making a difference. We love what we do, and this passion is what keeps our customers coming back.