

Organizational psychologists use Rock Band to study how people achieve flow while at work

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By playing the video game Rock Band for an hour, Kansas State University students were able to help a pair of psychology professors with their research to understand how people can achieve flow while at work or while performing skilled tasks.

Clive Fullagar, a professor, and Patrick Knight, an associate professor, found that -- like Goldilocks -- most people achieve flow with work that is neither too easy nor too hard but just right.

"For those students who have a moderate level of skill at [Rock Band](#), the song has to be moderately challenging and match his or her skill level for optimal enjoyment to occur," Fullagar said. "That has broad implications for teaching. It means that if we want students to enjoy or get a lot of [satisfaction](#) out of classes, we need to assign them challenging tasks but make sure that they have the skills necessary to meet the challenges of those tasks."

In a [psychology](#) lab in K-State's Bluemont Hall, students played guitar in the game. In an adjacent room, the researchers watched a monitor with the same screen shot that the subjects saw. The researchers could control what songs students played and how much of the feedback they saw.

This isn't the first time that a [video game](#) has been used to study flow. Others have used Tetris, but Fullagar and Knight said that the nature of

the game wouldn't have allowed them adequate control for this study. To make [Tetris](#) meet a player's ability level, researchers slowed down the rate at which the blocks fell onto the screen. This also limited performance because players couldn't finish as many lines.

"With Rock Band, it's the same speed and the same notes no matter what your ability level is," Knight said. "We can control that and look at differences in performance in a more objective way."

Flow is a state of mind that occurs when people become totally immersed in what they are doing and lose all sense of time. It's an intrinsically motivating state, which means that people are engaged in the task for the pure enjoyment of performing the task and not for some extrinsic reward.

In another study that tracked architecture students over the course of a semester, Fullagar found that achieving flow was likely to result in a good mood and have a positive impact on psychological health. The findings appeared in September in the *Journal of Occupational and Organizational Psychology*.

Research has shown that the types of work that lead people to achieve flow have some common traits, including being goal directed, providing feedback and giving a sense of meaning to the worker. Moreover, flow occurs only when the person feels in control of the process.

The researchers also have studied flow with architecture and music students but said that tasks that result in flow don't have to be creative or skill-intensive in an artistic sense. Knight said some graduate students describe achieving flow when analyzing their data. Fullagar had an accounting major in one of his classes describe achieving flow by filling out income tax returns.

"In speaking to her it made so much sense," Fullagar said. "She has this skill that can help somebody by having a meaningful impact on their financial situation. And every single income tax return presents a unique challenge. This shows that people find flow in very different areas."

In the future, Fullagar and Knight would like to study whether there's a group effect to flow.

"With Rock Band you can test several subjects at once as they play in a band," Fullagar said. "What happens when one member is in flow? Is there a contagion and do other people get in flow, or does it make them feel inferior?"

Knight said, "Another way we might look at that is what happens when one of the band members bombs out."

The researchers said other potential areas of study include the effect of having subjects help set their own goals and whether people in flow actually perform better or just perceive that they do.

Source: Kansas State University ([news](#) : [web](#))

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