



What is Flow Theory?

Flow Theory was developed by Csikszentmihalyi (1975). The theory suggests that learners can experience optimal learning when they perform tasks characterized by a skills-challenge balance and by a person's interest, control, and intense focus.

Below is an 18-min video about [the state of "Flow"](#).

Key Concepts and Dimensions

Skills-challenge Balance

Flow requires a skill-challenge balance, which means that the skills are **neither overmatched nor underutilized** to meet a given challenge.

The skill-challenge balance is **dynamic**. A person will incrementally improve his/her skill levels when performing the tasks, which, therefore, requires the person to engage in new challenges to match their increasing skills. (Hektner & Csikszentmihalyi, 1996, p. 4)

Attention

The **undivided attention** to a task may be the most clearly sign of flow. It is found that **unintentionality of focused attention** is crucial to flow experience (Egbert, 2003), while intentional focused attention impedes flow (Abbott, 2000). In Csikszentmihalyi's words (1975):

[H]e is aware of his actions but not of the awareness itself.

Interest

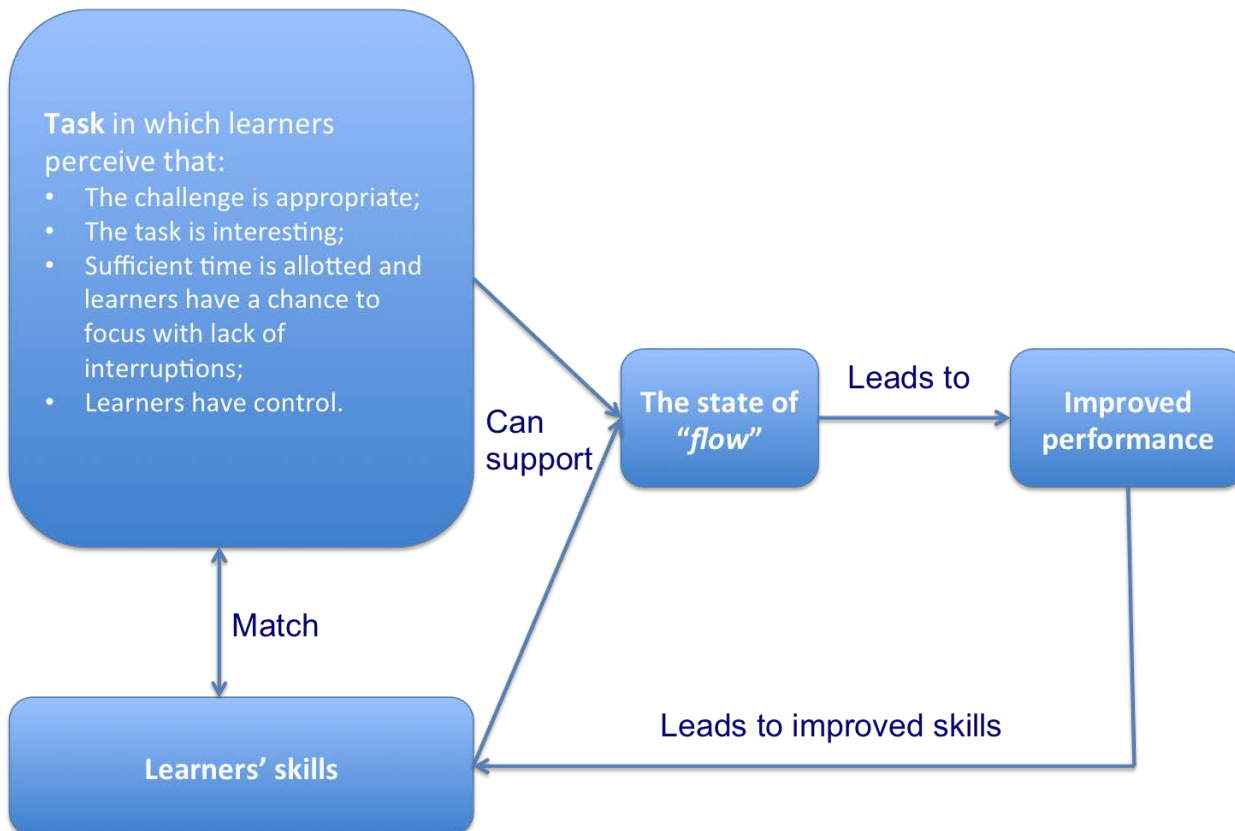
Research suggests that individuals are very likely to develop **interest** when their abilities, needs, and desires of an individual mesh with the attributes of a task (Deci, 1992). This echoes the concept of **skills-challenge balance**.

Flow Theory associates learner interest with **affect** and posits that **some level of anxiety** is needed for learners to experience flow (McQuillan & Conde, 1996; Schmidt, Boraie, & Kassabgy, 1996).

Control

The opportunity for learners to **exercise control** while learning is essential in experience flow (Jackson & Marsh, 1996). However, learners are **not inherently autonomous** and they need

help to gain independence in their learning environment (Thanasoulas, 2000).



Adapted from (Egbert, 2003)

Measurements

There are various approaches for measuring flow. We will need to operationalize flow in different ways to collect data from various learning contexts in order to answer our unique research questions.

Finneran and Zhang (2005, p. 95) have provided a nice summary of how flow is operationalized in major empirical studies:



Study	Operationalizing Flow
Ghani [1995]	The constructs with the following indicators (1-7 Likert scale) Enjoyment Interesting Fun Exciting Enjoyable Concentration (refined in follow-up study) Was deeply engrossed in activity Was absorbed intensely in activity Attention was focused on the activity Concentrated fully on activity
Novak et al [2000]	Narrative description of flow
Chen [2000]	Flow quotations from Csikszentmihalyi
Huang [2003]	Control When navigating this website, I felt in control. I felt that I had no control over my interaction with the Web. This website allowed me to control the computer interaction. Attention focus When navigating this website, I thought about other things. When navigating this website, I was aware of distractions. When navigating this website, I was totally absorbed in what I was doing. Curiosity Navigating this website excited my curiosity. Interacting with this website made me curious. Navigating this website aroused my imagination. Intrinsic Interest Navigating this website bored me. Navigating this website was intrinsically interesting. This website was fun for me to use.
Pearce et al [2004]	Flow-process measure How challenging did you find this activity? {too low just right too high} Were your skills appropriate for understanding this last activity? {too low just right too high} Overall flow-state measure I felt in control of what I was doing I was absorbed intensely by the activity I found the activities enjoyable I thought about other things I found the activities interesting I was frustrated by what I was doing The activities bored me I was aware of distractions The activities excited my curiosity I knew the right thing to do It required a lot of effort for me to concentrate on the activities
Skadberg and Kimmel [2004]	Time Distortion (1-5 Likert scale) While I was browsing the Web pages, time seemed to go by very quickly Enjoyment (1-5 Likert scale) Overall, I enjoyed the virtual tour



Another measure for flow is *Flow Perceptions Questionnaire* from Egbert (2003). This questionnaire consists of 14 items in the Likert format, having a 7-point scale. This measure has been used in foreign language learning environment (Mirlohi, Egbert, & Ghonsooly, 2011).

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