

Challenge Point

The "challenge point" hypothesis by Guadagnoli and Lee (2004) contends that there are optimal practice conditions that when present, maximally nurtures skill learning (Magill, 2011) in such a way that the learner "makes the most" out of a practice session. While one must consider the skill level of the learner and the difficulty of the task/skill to determine optimal practice conditions, the "challenge point" also asserts that problem-solving is part of learning (thus part of the practice session), and best learning occurs in the presence of the right amount of information and the right kind of information available to the learner for synthesis in the performance (Guadagnoli & Lee, 2004). Guadagnoli and Lee (2004) noted that if no information is available during practice, then learning cannot occur; too much or too little available information is also counter-productive (learner is underwhelmed or overwhelmed); and that just the right amount of the right kind of information is needed that is relevant to the learner at his/her skill level respective to difficulty of the skill/task. The "challenge point" describes "Goldilocks" conditions of skill acquisition.

Pollock, Boyd, Hunt, and Garland's (2014) case study described how the "challenge point" theory was utilized in the stepping reactions (gait balance, reactionary balance control to environment) rehabilitation of four stroke patients. The rehabilitation program started with a period of blocked practice stepping in multiple directions using a harness device (Pollock et al., 2014). Instructions and feedback were provided to the patients on form and how to best navigate the walking task (Pollock et al., 2014). The second phase of the rehabilitation program involved random multidirectional stepping practice, a walking belt, and less feedback was given as problem-solving ambulatory challenges was encouraged. During the final phase of rehabilitation, the program imposed more cognitive challenges by having the patients obey stepping instructions that were called out by the therapist (Pollock et al., 2014). Physical assistance was reduced to spotting by the therapist, and feedback was further reduced. Although Pollock's et al. (2014) study was not able to positively confirm the direct effectiveness of the challenge point theory, it is likely that the rehabilitation design and the patients' outcome benefitted from increased challenges, contextual interference, and random practices (Pollock et al., 2014). Pollock et al., (2014) concluded that more applied studies were needed with regards to the situations that might best employ the challenge point framework.

Fischer's (2012) commentary criticized the challenge point framework in the context of medical students developing surgical skills and manual dexterity. As noted by Fischer (2012), the challenge point framework alone may not be applicable to all skill acquisition situations. Perhaps a more realistic blended approach as dictated per learning scenario is better warranted. Magill (2011) described metacognition as "what we know about what we know" (p. 380). The challenge point theory seems to require that the learner possess or at least be capable of developing high levels of metacognition.

References

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