



PRACTICES THAT FOSTER EFFECTIVE LEARNING

LEARNER IMPACTS

- Attitudes
- Behavior
- Self-regulation
- Achievement

DESCRIPTION

Grit is “perseverance and passion for long-term goals” that occurs in a person at the trait level (i.e. a relatively stable characteristic rather than a temporary mood) (Duckworth & Quinn, 2009, p. 166). Although research on grit itself and its role in educational and/or professional contexts is in the preliminary stages, there is research to suggest that some aspects positively impact learner achievement (Duckworth & Quinn, 2009; Hochanadel & Finamore, 2015). This principle provides an overview of the existing research, as well as additional research that relates to and informs the aspects of grit, and research-based recommendations to inform aspects of course design hypothesized to cultivate the positive aspects of grit within learners. Recommendations include assessing grit via validated assessment methods and/or utilizing motivation research to inform characteristics of product design that bolster intrinsic motivation and growth mindset within learners (Christensen, 2014; Duckworth et al., 2007; Duckworth et al., 2011; Hochanadel & Finamore, 2015; Yeager, Paunesku, Walton, & Dweck, 2013).

CAPABILITIES

- Cognitive Tools: Planning/outlining
- Cognitive Tools: Visualized task completion
- Instruction: Scaffolded worked example
- Adaptivity: Adaptive remediation

SAMPLE DESIGN IMPLEMENTATIONS

- Robust Technology: Brief, targeted interventions to bolster growth mindset based on performance or self-reported levels of grit
- Simple Technology: Goal setting and learning strategy prompts/scaffolds
- Content Support: Feedback statements that encourage intrinsic motivation and growth mindset



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Principle Criteria	Integration (4-5 points)	Exploration (2-3 points)	Consideration (1 point)	Not Applicable (0 Points)	Total Points
Definition	<p> Strong support of consistent interests over time</p> <p> Strong support of perseverance and effort</p> <p> Strong support of setting long-term goals and plans to pursue them</p>	<p> Some support of consistent interests over time</p> <p> Some support of perseverance and effort</p> <p> Some support of setting long-term goals and plans to pursue them</p>	<p> Poor support of consistent interests over time</p> <p> Poor support of perseverance and effort</p> <p> Poor support of setting long-term goals and plans to pursue them</p>	<p> Does NOT use effectively or is not a related activity</p>	= _____
Model	<p> Strong support of self-approach mindset to foster growth and persistence</p> <p> Strong consideration of task goals, team structure, competition, and other designs that may influence learner mindsets</p>	<p> Some support of self-approach mindset to foster growth and persistence</p> <p> Some consideration of task goals, team structure, competition, and other designs that may influence learner mindsets</p>	<p> Poor support of self-approach mindset to foster growth and persistence</p> <p> Poor consideration of task goals, team structure, competition, and other designs that may influence learner mindsets</p>	<p> Does NOT use effectively or is not a related activity</p>	= _____
Design	<p> Strong consideration of developmental stage of target audience</p> <p> Strong evidence-based application of interventions, reward structures, goal structures, or other related elements</p>	<p> Some consideration of developmental stage of target audience</p> <p> Some evidence-based application of interventions, reward structures, goal structures, or other related elements</p>	<p> Poor consideration of developmental stage of target audience</p> <p> Poor evidence-based application of interventions, reward structures, goal structures, or other related elements</p>	<p> Does NOT use effectively or is not a related activity</p>	= _____
Assessment	<p> Strong use of feedback and goal structure to support positive learning mindsets</p> <p> Strong use of a validated scale for measuring grit</p>	<p> Some use of feedback and goal structure to support positive learning mindsets</p> <p> Some use of a validated scale for measuring grit (e.g. modified scale)</p>	<p> Poor use of feedback and goal structure to support positive learning mindsets</p> <p> Poor use of a validated scale for measuring grit (e.g. untested scale)</p>	<p> Does NOT use effectively or is not a related activity</p>	= _____