

# Causal Loop Diagram: Online Learning & Student Engagement

- Q → E (+): Better design increases engagement
- Q → M (+): Better design raises motivation
- T → E (+): Reliable tech boosts engagement
- T → S (-): Reliability reduces stress
- S → E (-): Stress decreases engagement
- F → M (+): Feedback motivates
- F → E (+): Feedback increases engagement
- I → E (+): Instructor support raises engagement
- I → M (+): Instructor increases motivation
- P → M (+): Peer interaction motivates
- P → E (+): Collaboration increases engagement
- E → M (+): Engagement improves motivation
- M → E (+): Motivation fuels engagement
- E → F (-): Engagement reduces feedback need
- E → S (-): Engagement lowers stress
- S → M (-): Stress reduces motivation

