

Needs-Based Development of Anime-Themed Instructional Materials in 7th Grade Life Sciences

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Abstract

This study aimed to develop an anime-themed instructional material for 7th-grade Life Science by determining how such material could be produced through the Analysis, Design, and Development (ADD) stages of the ADDIE instructional design model, identifying the learners' needs surfaced during Analysis, and describing the instructional objectives, content activities, and assessment strategies formulated during Design. A qualitative-descriptive developmental design was employed, deliberately confined to the first three ADDIE phases, using semi-structured interviews with six 7th-grade students and four teachers from Minnesota Math and Science Academy (MMSA) in Saint Paul, Minnesota, USA, and examining responses through open and axial coding. Findings showed that learners' needs converged on five interrelated requirements: visual representation of abstract biological concepts, interactive and inquiry-based learning, engaging and contextualized materials, support for scientific vocabulary, and scientifically accurate storytelling, while teacher interviews yielded eight design themes centered on curriculum alignment, structured content organization, inquiry-based activities, authentic assessment, purposeful anime integration, engaging visual design, technology-enhanced resources, and learner-centered instruction. These findings were translated into a curriculum-mapped prototype instructional material adapted from the Amplify Science Microbiome unit. The study concludes that the ADD Model offers a coherent, replicable, and evidence-based framework for producing anime-themed instructional materials that balance cognitive, motivational, and linguistic considerations while remaining anchored to curricular standards and pedagogical soundness.

Keywords: Science Education; anime-themed instructional materials, ADDIE model, needs-based instructional design; qualitative-descriptive developmental design, semi-structured interviews, open and axial coding, United States (Saint Paul, Minnesota), Asia (Philippines).

