Devising Effective Learning Objectives
Goal
At Macmillan, our goal is to drive better learner outcomes. A fundamental part of our approach is to apply findings from the Learning Sciences to product design, improvement, implementation, training, and support.

Overview
Here we provide an evidence-based Learning Objective Strategy derived from a synthesis of the learning science literature. We begin by discussing the benefits of using learning objectives to drive learning experience design, then outline a research-based approach to the design of learning objectives.

Application
This Learning Objective Strategy underpins how we’re developing next-generation learning products. However, this strategy may also be applied by institutions, instructors, and instructional technologists to their own learning experiences.

Research Foundation and Process

Foundation
This strategy is based upon a thorough literature review of educational and measurement research, and instructional design best practice by learning researchers.

Process
This strategy was developed through a rigorous and comprehensive ten-step research and refinement process that included:

- Primary and secondary literature review and synthesis by Macmillan Learning Research team
- Design of principles by Macmillan Learning Research team
- Internal review by 4 Macmillan Learning scientists
- External review by 7 students
- External review by Macmillan Learning’s Learning Research Advisory Board

All of these researchers, contributors and reviewers are listed to the right.

Researchers and Contributors

Macmillan Contributors
Jeff Bergin, PhD, VP Learning Research and Design
Lisa Ferrara, PhD, Manager Learning Research
Becca Runyon, PhD, Manager Learning Research
Erin Scully, MA, Manager Learning Research

Macmillan Reviewers
Adam Black, PhD, Chief Learning Officer
Kara McWilliams, PhD, Sr. Director, Impact Research

Macmillan Learning Research Advisors
Robert Atkinson, PhD, Arizona State University
Chris Dede, EdD, Harvard
Erin Dolan, PhD, University of Georgia
Mark McDaniel, PhD, Washington University in St. Louis
Liz Thomas, PhD, Edge Hill University

Macmillan Student Advisors
Matthew Cherrey, New Jersey Institute of Science
Yasir Choudhury, University of Texas
Asja Lanier, College of Saint Elizabeth
Anthony Nguyen, CUNY Hunter College
Zaynub Siddiqui, Prince George’s Community College
Ben Their, Duke University
Starshae Toomer, SUNY Broome Community College

Special Thanks
Philip Conley
Nikki Larsen
John Quick, PhD
Allison Zengilowski

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The Value of Learning Objectives

Establishing sound, evidence-based practices for the design and articulation of learning objectives is critical to improving student learning and measuring the effectiveness of course design because they:

1. Enable instructional alignment across all instructional and assessment content/components via backward design
2. Drive assessment task development and implementation
3. Enable high-quality, targeted reporting of learning progress and performance for learners, instructors, institutions, and meet accreditation and employability requirements
4. Facilitate personalization and adaptive learning capabilities
## Learning Objective Design

Learning objectives best support learner engagement and improve learning outcomes when they are designed to positively impact all of the following.

<table>
<thead>
<tr>
<th>Instructional design can be improved by implementing LOs that are:</th>
<th>Self-regulated learning can be bolstered with LOs that:</th>
<th>Assessment practice can be enhanced with LOs that:</th>
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<tbody>
<tr>
<td>• Derived from relevant Frameworks (standards, competencies, broad learning goals/categories) from educational and/or professional bodies</td>
<td>• Clearly and concisely describe criteria for success</td>
<td>• Are measurable and support creation and implementation of high-quality assessment tasks</td>
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<td>• Comprehensive and appropriate given the nature of the learning experience</td>
<td>• Provide transparency into all aspects of the learning experience to all stakeholders involved (e.g., learners, instructors, institutions)</td>
<td>• Facilitate formative and summative assessment best practices, including alignment between the two, targeted feedback, and learning-objective-driven progress and performance reporting</td>
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<td>• Challenge learners, but also provide the appropriate level of scaffolding to achieve broader, more cognitively complex learning goals</td>
<td>• Support interventions whereby instructors and students can remediate gaps in understanding</td>
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Relevant Frameworks should help inform learning objectives for any given learning experience.

When available and appropriate, multiple Frameworks can be referenced and leveraged in the process of developing learning objectives.

Learning objectives can align to multiple learning goal statements or categories that exist in relevant Frameworks, thus allowing for insights to be derived against a specific learning objective through to a Framework.
"Starting a course with clear LOs helps students anchor the lecture and are useful for instructors to stay on track providing only the most pertinent information." - Student Codesign Group Member

“Sometimes instructors start with assessments and backward-design the learning to fit the assessment. But the good way to go about it is what you have here: you figure out what you want the learners to do, then you figure out the assessments to align with that.” - Dr. Dede

"I like this visual for thinking about the relationships between frameworks and objectives. I think it is especially valuable for identifying ‘hubs’ or objectives that align with multiple frameworks of interest (i.e., more important or reflecting greater consensus), which may help instructors to prioritize." - Dr. Dolan

"It is helpful to think of frameworks in a broad way to include internal documents as well as external frameworks." - Dr. Thomas
References


