

SAM Model Instructional Design Guide for Hybrid Courses

A comprehensive guide for teachers and instructional designers

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1. Introduction to Instructional Design

What is Instructional Design?

Instructional design is the systematic process of creating educational experiences that make learning effective, efficient, and engaging. It combines learning theory, pedagogical principles, and technology to develop structured learning solutions.

Why Instructional Design Matters for Hybrid Courses

Hybrid learning environments blend face-to-face instruction with online components, requiring careful orchestration of both modalities. Effective instructional design ensures:

- **Seamless integration** between online and offline experiences
- **Consistent learning objectives** across all touchpoints
- **Optimized use** of each modality's strengths
- **Enhanced student engagement** through varied interaction methods
- **Measurable learning outcomes** that can be tracked and improved

Key Benefits

- **Flexibility** for diverse learning preferences
- **Scalability** for different class sizes
- **Accessibility** for students with varying needs

- **Cost-effectiveness** through optimized resource use
 - **Data-driven insights** for continuous improvement
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2. The SAM Model Explained

What is SAM?

The **Successive Approximation Model (SAM)** is an agile instructional design methodology that emphasizes iterative development and rapid prototyping. Created by Dr. Michael Allen, SAM offers a more flexible alternative to traditional linear models.

Core Principles

1. **Iterative Development:** Build, test, and refine repeatedly
2. **Collaboration:** Involve stakeholders throughout the process
3. **Rapid Prototyping:** Create working models quickly
4. **User-Centered Design:** Focus on learner needs and experiences
5. **Continuous Evaluation:** Gather feedback at every stage

The Three Phases of SAM

Phase 1: Preparation

- **Gather background information** about learners, content, and constraints
- **Define project scope** and success criteria
- **Assemble the design team** and establish roles
- **Create initial project timeline** and milestones

Phase 2: Iterative Design

- **Design small prototypes** of learning experiences
- **Review and refine** with stakeholders
- **Make rapid adjustments** based on feedback
- **Build consensus** on design direction
- **Prepare for development**

Phase 3: Iterative Development

- **Develop functional prototypes** with real content

- Test with actual learners in realistic settings
- Refine based on performance data
- Scale successful elements
- Launch and monitor

SAM vs. ADDIE: Quick Comparison

Aspect	SAM	ADDIE
Approach	Iterative, agile	Linear, sequential
Flexibility	High - easy to change direction	Lower - changes can be costly
Time to Market	Faster - working prototypes early	Slower - complete before testing
Stakeholder Involvement	Continuous throughout	Primarily at analysis and evaluation
Risk Management	Lower - issues caught early	Higher - problems found late

3. Practical Application for Hybrid Courses

Understanding Your Hybrid Environment

Hybrid courses typically combine:

- **Synchronous face-to-face** sessions (lectures, discussions, labs)
- **Synchronous online** sessions (live video calls, virtual workshops)
- **Asynchronous online** components (recorded content, forums, assignments)
- **Independent study** time with various resources

Key Considerations for Hybrid Design

1. Modality Mapping

Determine which activities work best in each environment:

Face-to-Face Strengths:

- Complex discussions and debates
- Hands-on activities and experiments
- Team building and social interaction
- Immediate clarification of difficult concepts
- Practical skills demonstration

Online Strengths:

- Self-paced content consumption
- Individual reflection and writing
- Multimedia-rich presentations
- Flexible scheduling
- Digital collaboration tools
- Automated assessments

2. Seamless Integration Strategies

- **Flipped Classroom Elements:** Online content preparation for in-person application
- **Blended Assessments:** Combine online quizzes with in-person presentations
- **Continuous Narratives:** Ensure topics flow naturally between modalities
- **Consistent Communication:** Use unified platforms and messaging
- **Cross-Modal References:** Connect online and offline activities explicitly

Technology Stack for Hybrid Courses

Essential Tools

- **Learning Management System (LMS):** Canvas, Blackboard, Moodle
- **Video Conferencing:** Zoom, Microsoft Teams, Google Meet
- **Content Creation:** Articulate, Camtasia, Adobe Creative Suite
- **Collaboration:** Padlet, Miro, Google Workspace
- **Assessment:** Kahoot, Poll Everywhere, Turnitin

Integration Considerations

- Single sign-on (SSO) capabilities
 - Mobile accessibility
 - Offline functionality where needed
 - Analytics and reporting features
 - Accessibility compliance (WCAG guidelines)
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4. Step-by-Step Process

Phase 1: Preparation (1-2 weeks)

Step 1: Stakeholder Analysis

Who to involve:

- Subject matter experts (SMEs)
- Learners or learner representatives
- Technical support staff
- Administrative stakeholders
- Peer instructors

Key questions:

- What are the learning objectives?
- Who is the target audience?
- What constraints exist (time, budget, technology)?
- What success metrics matter most?

Step 2: Learner Analysis

Create detailed learner personas including:

- **Demographics:** Age, background, experience level
- **Technology comfort:** Device access, digital literacy
- **Learning preferences:** Visual, auditory, kinesthetic
- **Motivations:** Internal/external motivators
- **Constraints:** Time availability, location, responsibilities

Step 3: Content and Context Analysis

- **Subject matter complexity:** Cognitive load considerations
- **Prerequisites:** Required prior knowledge or skills
- **Content shelf life:** How quickly information becomes outdated
- **Regulatory requirements:** Compliance or certification needs

Phase 2: Iterative Design (2-4 weeks)

Iteration 1: High-Level Design (Week 1)

1. Create course blueprint

- Module breakdown
- Modality assignments
- Assessment strategy
- Timeline overview

2. Design first prototype

- One complete module or lesson
- Include both online and face-to-face components
- Basic interaction design

3. Stakeholder review

- Present to design team
- Gather initial feedback
- Document change requests

Iteration 2: Detailed Design (Week 2)

1. Refine based on feedback

- Adjust content structure
- Revise modality assignments
- Update interaction methods

2. Expand prototype

- Add more detailed content
- Include assessment examples
- Develop media specifications

3. Expert review

- SME content validation
- Pedagogical approach review
- Technical feasibility check

Iteration 3: Design Finalization (Weeks 3-4)

1. Complete design document

- Detailed storyboards
- Technical specifications
- Production guidelines

2. Pilot test preparation

- Recruit test learners
- Prepare evaluation instruments
- Set up testing environment

Phase 3: Iterative Development (4-8 weeks)

Development Sprint 1: Core Content (Weeks 1-2)

1. Produce essential materials

- Key video content
- Primary reading materials
- Basic assessments

2. Build technical infrastructure

- Set up LMS course shell
- Configure tools and integrations
- Test all technical connections

3. Alpha testing

- Internal team testing
- Technical functionality check
- Content accuracy review

Development Sprint 2: Enhanced Features (Weeks 3-4)

1. Add interactive elements

- Simulations or gamified content
- Collaborative activities
- Multimedia enhancements

2. Develop support materials

- Learner guides and tutorials
- Instructor facilitation guides

- Technical support resources

3. Beta testing

- Limited learner pilot
- Gather usage data
- Collect feedback surveys

Development Sprint 3: Polish and Launch (Weeks 5-8)

1. Refine based on testing

- Address identified issues
- Optimize user experience
- Finalize all content

2. Prepare for full deployment

- Instructor training
- Marketing and communication
- Support system activation

3. Soft launch

- Limited initial rollout
 - Monitor closely
 - Rapid issue resolution
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5. Evaluation and Continuous Improvement

Key Metrics for Hybrid Courses

Learning Effectiveness

- **Knowledge retention:** Pre/post assessments, long-term retention tests
- **Skill application:** Performance-based assessments, portfolio reviews
- **Learning objective achievement:** Competency-based measurements

Engagement Metrics

- **Participation rates:** Forum posts, attendance, assignment completion
- **Time on task:** LMS analytics, session duration
- **Interaction quality:** Depth of discussions, peer collaboration

Satisfaction Measures

- **Learner satisfaction:** Course evaluations, Net Promoter Score (NPS)
- **Instructor satisfaction:** Teaching effectiveness, workload assessment
- **Stakeholder satisfaction:** Organizational objectives alignment

Operational Efficiency

- **Cost per learner:** Development and delivery costs
- **Time to completion:** Course duration vs. planned timeline
- **Technical performance:** System uptime, loading speeds, error rates

Data Collection Methods

Quantitative Data

- **LMS analytics:** Login frequency, content engagement, completion rates
- **Assessment scores:** Quizzes, assignments, final evaluations
- **Survey responses:** Likert scale ratings, multiple choice feedback
- **Technical metrics:** Page views, video completion rates, download counts

Qualitative Data

- **Focus groups:** In-depth learner discussions
- **Interviews:** One-on-one stakeholder conversations
- **Observation:** Classroom behavior, online interaction patterns
- **Open-ended feedback:** Survey comments, reflection journals

Continuous Improvement Cycle

1. Collect Data (Ongoing)

- Automated data gathering through LMS
- Regular feedback collection at module completion
- Mid-course check-ins with learners
- Instructor reflection logs

2. Analyze Performance (Monthly)

- Review key metrics against benchmarks

- Identify trends and patterns
- Correlate different data sources
- Prioritize improvement opportunities

3. Implement Changes (Quarterly)

- Make data-driven adjustments
- Test changes with small groups first
- Document modifications for future reference
- Communicate changes to stakeholders

4. Evaluate Impact (Semester/Term)

- Assess effectiveness of implemented changes
 - Compare performance across iterations
 - Update best practices documentation
 - Plan major revisions if needed
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6. Templates and Resources

Template 1: Learner Persona

LEARNER PERSONA: [Name]

Demographics:

- Age range: ____
- Educational background: ____
- Professional experience: ____
- Technical proficiency: ____

Learning Context:

- Available study time: ____
- Primary devices used: ____
- Internet connectivity: ____
- Physical learning environment: ____

Motivations:

- Primary goals: ____
- Success drivers: ____
- Potential barriers: ____

Learning Preferences:

- Preferred content types: ____
- Interaction preferences: ____
- Feedback preferences: ____

Template 2: Module Design Blueprint

MODULE: [Title] | DURATION: [X weeks]

Learning Objectives:

- 1. ____
- 2. ____
- 3. ____

Content Breakdown:

Topic	Modality	Duration	Assessment	

Integration Points:

- Online → Face-to-face: ____
- Face-to-face → Online: ____
- Assessment connections: ____

Template 3: Iteration Feedback Form

PROTOTYPE REVIEW: [Version] | DATE: ____

Reviewer: ____ | Role: ____

Content Quality:

☐ Excellent ☐ Good ☐ Needs Improvement ☐ Poor

Comments: ____

User Experience:

☐ Excellent ☐ Good ☐ Needs Improvement ☐ Poor

Comments: ____

Technical Functionality:

☐ Excellent ☐ Good ☐ Needs Improvement ☐ Poor

Comments: ____

Priority Changes:

1. ____

2. ____

3. ____

Overall Recommendation:

☐ Proceed to next iteration

☐ Major revisions needed

☐ Restart this phase

Checklist: Pre-Launch Review

Content Readiness

- ☐ All learning objectives clearly stated
- ☐ Content accuracy verified by SME
- ☐ Multimedia elements optimized
- ☐ Accessibility standards met (alt text, captions, etc.)
- ☐ Copyright permissions secured

Technical Readiness

- ☐ All links functional
- ☐ Cross-browser compatibility tested
- ☐ Mobile responsiveness verified
- ☐ Loading speeds acceptable
- ☐ Backup systems in place

Instructional Design Quality

- ☐ Clear navigation and course structure
- ☐ Appropriate cognitive load distribution
- ☐ Variety in interaction types
- ☐ Alignment between objectives and assessments
- ☐ Integration between modalities seamless

Support Systems

- ☐ Learner support documentation complete

- ☐ Instructor facilitation guides ready
 - ☐ Technical support contacts identified
 - ☐ Emergency backup plans established
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Conclusion

The SAM model provides a robust framework for designing effective hybrid courses that truly integrate the best of both online and face-to-face learning environments. By embracing its iterative approach, you can:

- **Reduce development risk** through early and frequent testing
- **Improve learner outcomes** through user-centered design
- **Increase stakeholder satisfaction** through collaborative development
- **Create more engaging experiences** through rapid prototyping and refinement

Remember that successful instructional design is not a destination but a journey of continuous improvement. Use data to guide your decisions, remain flexible in your approach, and always keep the learner experience at the center of your design process.

Next Steps

1. **Start small:** Apply SAM to a single module or lesson first
2. **Build your team:** Identify key stakeholders and collaborators
3. **Set up measurement systems:** Establish baselines for key metrics
4. **Begin prototyping:** Create your first learning experience iteration
5. **Gather feedback early and often:** Make data-driven improvements

Happy designing!

About This Guide This guide was created to provide practical, actionable guidance for educators and instructional designers implementing the SAM model in hybrid learning environments. For updates and additional resources, consider joining professional communities like the Association for Talent Development (ATD) or the International Society for Technology in Education (ISTE).