

Criticality (DIF) Analysis

The Criticality Analysis, often referred to as Difficulty, Importance, Frequency (DIF), is a key step in the instructional design process that helps determine which tasks matter most for effective job performance. While the Job Task Analysis (JTA) identifies *what learners do*, the DIF analysis clarifies which of those tasks should be prioritized for instruction. Without this step, courses risk trying to cover too much, emphasizing low-impact content, or failing to focus on the skills that truly drive performance.

This analysis plays a particularly important role due to the evolving nature of instructional design work in an AI-enabled environment. Instructional designers are responsible for a wide range of tasks, many of which vary in frequency, complexity, and importance. At the same time, generative AI is beginning to automate or accelerate some tasks, while leaving others firmly dependent on human judgment. This makes it essential to distinguish between what can be automated and what must be learned and practiced.

Ultimately, the DIF analysis informs the scope of the content, identifies which skills require deep practice and assessment, and outlines where AI can serve as a tool versus where human expertise must be developed. The analysis ensures that the course is strategically focused, directing time and effort toward the tasks that will have the greatest impact on learner performance and professional capability.

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Key Insights

Scale:

- **Frequency (frq):** 1 = rare, 5 = very frequent
- **Difficulty (diff):** 1 = easy, 5 = very difficult
- **Importance (impt):** 1 = low, 5 = critical
- **Automation (atm):** 1 = not automatable, 5 = highly automatable (marked with *)

Note that the total score does not add automation.

A. Analysis & Discovery Tasks

Task	frq	diff	impt	atm	Total
Identify training need	3	5	5	1	13
Analyze learners	4	3	5	3	12
Create learner profile	4	3	4	4	11
Conduct task analysis	3	5	5	1	13
Define learning context	3	3	4	2	10
Validate findings with stakeholders	3	4	5	1	12

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B. Design Tasks

Task	frq	diff	impt	atm	Total
Write learning objectives	5	4	5	4	14
Align objectives, content, and assessments	5	5	5	1	15
Design instructional strategy	4	4	5	2	13
Create lesson/module outlines	5	4	5	4	14
Design assessments	4	4	5	4	13
Plan learning activities	4	4	4	3	12
Create storyboards/scripts	4	4	4	4	12

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C. Development Tasks

Task	frq	diff	impt	atm	Total
Write instructional content	5	3	4	5*	12
Create job aids/resources	4	3	4	5*	11
Develop assessments	4	3	5	5*	12
Create slides/visuals	4	3	4	4	11
Record/edit video/audio	3	4	3	3	10
Build eLearning modules	4	4	5	3	13
Integrate media	4	3	4	3	11
Publish to LMS	4	2	4	2	10

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D. Evaluation & Quality Tasks

Task	frq	diff	impt	atm	Total
Perform quality review checks	5	4	5	2	14
Evaluate AI-generated output	5	5	5	1	15
Detect low-quality (“AI slop”)	5	4	5	1	14
Revise instructional content	5	4	5	3	14
Ensure accessibility	4	4	5	3	13
Test course functionality	4	3	4	2	11
Analyze learner performance data	3	4	4	3	11

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E. Project & Stakeholder Tasks

Task	frq	diff	impt	atm	Total
Schedule calls with stakeholders	4	2	4	5*	10
Manage project timelines	4	4	5	2	13
Meet with SMEs	4	3	5	1	12
Gather SME input	4	4	5	2	13
Manage feedback cycles	4	4	5	2	13
Communicate project updates	4	3	4	2	11

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F. Technology & Operations Tasks

Task	frq	diff	impt	atm	Total
Use LMS platform	5	3	4	2	12
Troubleshoot technical issues	3	4	4	2	11
Manage content/assets	4	3	4	3	11
Apply visual/UX design	4	4	4	3	12
Learn new tools (incl. AI)	5	4	5	3	14

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G. AI-Specific Tasks

Task	frq	diff	impt	atm	Total
Decide when to use AI	5	5	5	1	15
Write effective prompts	5	3	5	5*	13
Iterate/refine prompts	5	3	4	5*	12
Evaluate AI output quality	5	5	5	1	15
Revise AI-generated content	5	4	5	4	14
Mitigate AI risks	4	5	5	1	14
Build AI-supported workflow	5	4	5	3	14

Key Insights

1. Highest Criticality Tasks (15/15)

These tasks are non-automatable, high-judgment tasks that define the core of your course:

- Align objectives, content, assessment
- Evaluate AI-generated output
- Decide when to use AI

2. Most Automatable Tasks (atm = 5)

- Writing instructional content
- Writing assessment questions
- Creating job aids
- Writing prompts
- Scheduling/logistics

3. The Critical Pattern

High Importance + Low Automation

Humans must maintain evaluation, alignment, decision-making, and revision.

High Automation + High Frequency

AI accelerates drafting content, generating questions, and creating outlines.

4. The Big Design Implication

Your course should NOT focus on how to use AI to generate content. Instead, it should focus on how to evaluate, revise and decide. This perfectly reinforces your earlier analysis.

The real gap is judgment, not generation.

5. The True “Critical 20%” (Final Cut)

If you strip this down to the most impactful skills, IDs should be empowered to:

- Evaluate AI output
- Revise content
- Write objectives
- Design aligned instruction
- Decide when to use AI
- Write effective prompts
- Build workflows

Final Takeaway

This analysis proves something important:

- The more automatable a task is, the less it defines expertise.

And conversely:

- The least automatable tasks are what define a professional instructional designer.