

Proposed course title:				<input type="checkbox"/> New Course	<input type="checkbox"/> Major Update	<input type="checkbox"/> Impacts Certification
				<input type="checkbox"/> New Module	<input type="checkbox"/> Minor Update	<input type="checkbox"/> Other (specify)
				<input type="checkbox"/> Addition to Existing Course	<input type="checkbox"/> Localization	<input type="checkbox"/> Translation
Curriculum area:						
Scope of course (major topics):						
Overall course objective (what learners will be able to do as a result of this course):						
Target population:						
Primary:				Others:		
Requested by:				Date of request:		
				Date due:		
Specific characteristics and major components of course materials to be produced:						
Estimated number of work days:						
Course Developer:						Total Workdays:
Others (specify):						

Demographics

- How long have you been with the company?
- What is your present position?
- How long have you been in this position?

Understanding of need

- Why should you learn (. . .)?
- What does your company expect you to do with (. . .)?
- Is this reasonable in your view?

Aptitudes

- Have you ever performed (. . .) or something similar?
- With what results?
- With what problems?
- How did you learn to do it?
- What things helped you learn best?
- What things either did not help or actually interfered with your learning?
- Do you feel you could perform the task now?
- What would help you get ready?

Attitudes

- What do you know about (. . .)?
- How will this affect your job?
- How do you feel about (. . .)?
- Is there any part of this about which you feel very positive? Very negative?

Learning and language preferences

- If you were designing a course to help you learn (. . .), what would it be like?
- Let's forget about (. . .). Think of a **great** course you have taken on any subject (e.g. a company course, a night school class, a self-study course). What made it great?
- Now think of a terrible class or course you have taken. What made it terrible?
- Have you ever used any self-study materials to acquire skills -- one for which you had no instructor? Was it paper and pencil? Audiovisual? Computer based? Multi-media? Other?
- What was your feeling about it? Why?

Tool and Prerequisite Skills

- How adept are you at (. . .)?

Not at all

Some skill

Very skilled

(Repeat for each required tool or prerequisite skill.)

Other

- Let us leave the actual course aside. What do you think might help you prepare for mastering (. . .) before any training starts?
- What about materials that are written clearly and simply and are sent to you personally, to help you get ready to come on course?
- Once you have completed the course, what will help you perform well on the job?
- Is there any other information you would like to share?
- Are there any questions you would like to ask?

Thank you for your cooperation and help. To design a course that will be useful to you, we need to know what helps you learn and also what interferes. You have been terrific! Thanks again.

1. Introduction: interviewer/interviewing team and interviewees
2. Explanation of purpose of the interviews
 - Desired performance.
 - Interview information helps create courses that are designed to meet both employee and company needs.
 - Interview information guides the course design so that it fits your characteristics, is interesting to you and facilitates your learning.
3. Explanation of interview procedures
 - Interviewer asks questions.
 - Interviewees respond freely -- no constraints.
 - Interviewer probes where necessary to obtain clarification.
 - Interviewer takes notes.
4. Basic rules
 - No names are recorded beside specific comments -- anonymity is guaranteed.
 - Interviewees may ask questions, too.
 - The meeting lasts no longer than _____ minutes maximum.

Target Population/s

Primary

- Job titles

- Relevant characteristics

Secondary

- Job titles

- Relevant characteristics

Aptitudes

- Current knowledge and skills in the task or subject-matter area

- Relevant background and experience

- Major misconceptions about the task or subject-matter

- Specific deficiencies

Attitudes

- General attitudes toward task or subject-matter content
- Subtopics within the task or subject-matter content toward which there are very positive feelings
- Subtopics within the tasks or subject-matter content toward which there are very negative feelings

Learning and Language Preferences

- Instructional methods, strategies and format preferences
- Instructional methods, strategies and format dislikes
- Instructional media/delivery system preferences
- Instructional media/delivery system dislikes
- Language level and specialized terminology knowledge
- Style of language preferences (technical, conversational, mixed)

Tool and Prerequisite Skills

- Relevant tool and prerequisite skill abilities

- Relevant tool and prerequisite skill deficiencies

- Other deficiencies that require special attention

Other

1. Does the course to be designed necessarily include instructor support or does the situation permit alternative delivery?
2. If instructors are required, are there sufficient qualified instructors available?
3. In what sort of physical facilities must the course be delivered?
4. How is the course to be introduced and integrated into the existing system?
5. What personnel, documentation, software, data bases and other resources are available to support the course design? The course delivery?
6. What media or computer equipment is available for development of the course? The delivery of the course?
7. What rewards or incentives are there for learners to go through the course? For their supervisors, if appropriate?
8. What type of testing and/or grading system, if any, or verification of learning is employed/permissible?
9. What type of enrollment and tracking procedures can/must be employed?
10. What are the cost and/or personnel constraints for the design of the course? Production? Delivery? Monitoring?
11. What are the time constraints for designing the course? For course delivery?
12. What are the scheduling constraints?
13. What other technical, administrative, legal or environmental requirements must be factored into the design and delivery of the course?

1. Instructor support

2. Availability of qualified instructors

3. Facilities

4. Introduction and integration of course into existing system

5. Personnel, documentation and other resources

6. Media and computer equipment

7. Rewards or incentives

a) for learners

b) for their supervisors

8. Testing and/or grading system

9. Enrollment and tracking procedures

10. Cost and/or personnel constraints

11. Time constraints

12. Scheduling constraints

13. Other contextual factors and requirements

Job Aid TA-1

Selection of Task Analysis Type

Write main task/
desired training
outcome here

If...	Then...	If...	Then...	If...	Then...
The main task can be broken down into prerequisite sub-tasks and Each sub-task is independent and The sum of all the sub-tasks equals the main task and Each sub-task requires instruction for mastery	Select hierarchical task analysis	The sub-tasks are linked in a flow and The task is a linear procedure and The learners can perform the individual sub-tasks without instruction	Select procedural task analysis	The main task can be broken down into prerequisite sub-tasks and Some of the sub-tasks are linear procedures	Select hierarchical task analysis Perform independent procedural task analyses for each sub-task that is a linear procedure

Note: If in doubt, begin with a hierarchical task analysis. Identify sub-tasks that are procedures and analyze these independently using procedural task analysis.

1. Specify the main task. Include:

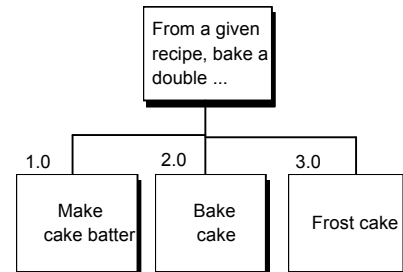
- The skill the learner is expected to master upon completion of instruction.
- The conditions under which the skill is to be used.
- Standards, if appropriate.

Example:

From a given recipe, make a double layer chocolate cake complete with frosting using a regular home oven

2. Identify sub-tasks at the next level down. Ask:

- What major sub-tasks must the learner be able to do to perform the main task?
- Are each of these sub-tasks **necessary**?
- As a group, are these sub-tasks **sufficient**?
In other words, does the sum of these sub-tasks equal the main task?



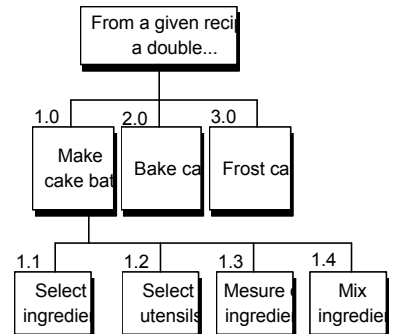
Only include sub-tasks that **immediately** contribute to the main task.

Yes No

- Are each of these prerequisite sub-tasks necessary? Yes No
- As a group, are these prerequisite sub-tasks sufficient? Yes No

3. Treat each sub-task as a main task and repeat the procedure. As in step 2, ask:

- What prerequisite sub-tasks must the learner be able to do to perform the sub-task?
- Are each of these prerequisite sub-tasks **necessary**?
- As a group, are these prerequisite sub-tasks **sufficient**? Does the sum of these prerequisite sub-tasks equal the superior sub-task?



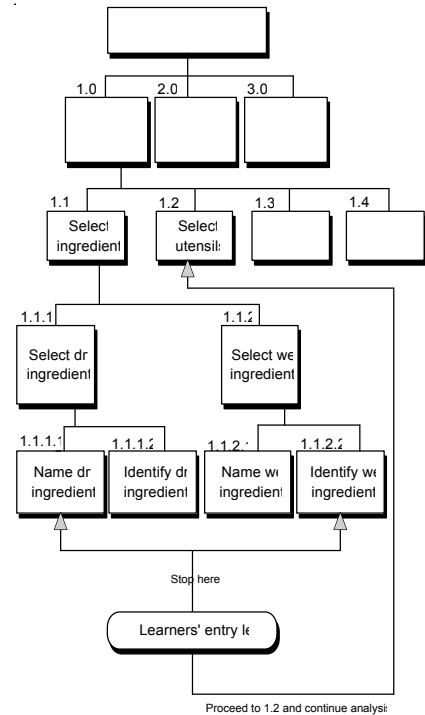
Yes No

- Are each of these prerequisite sub-tasks necessary? Yes No
- As a group, are these prerequisite sub-tasks sufficient? Yes No

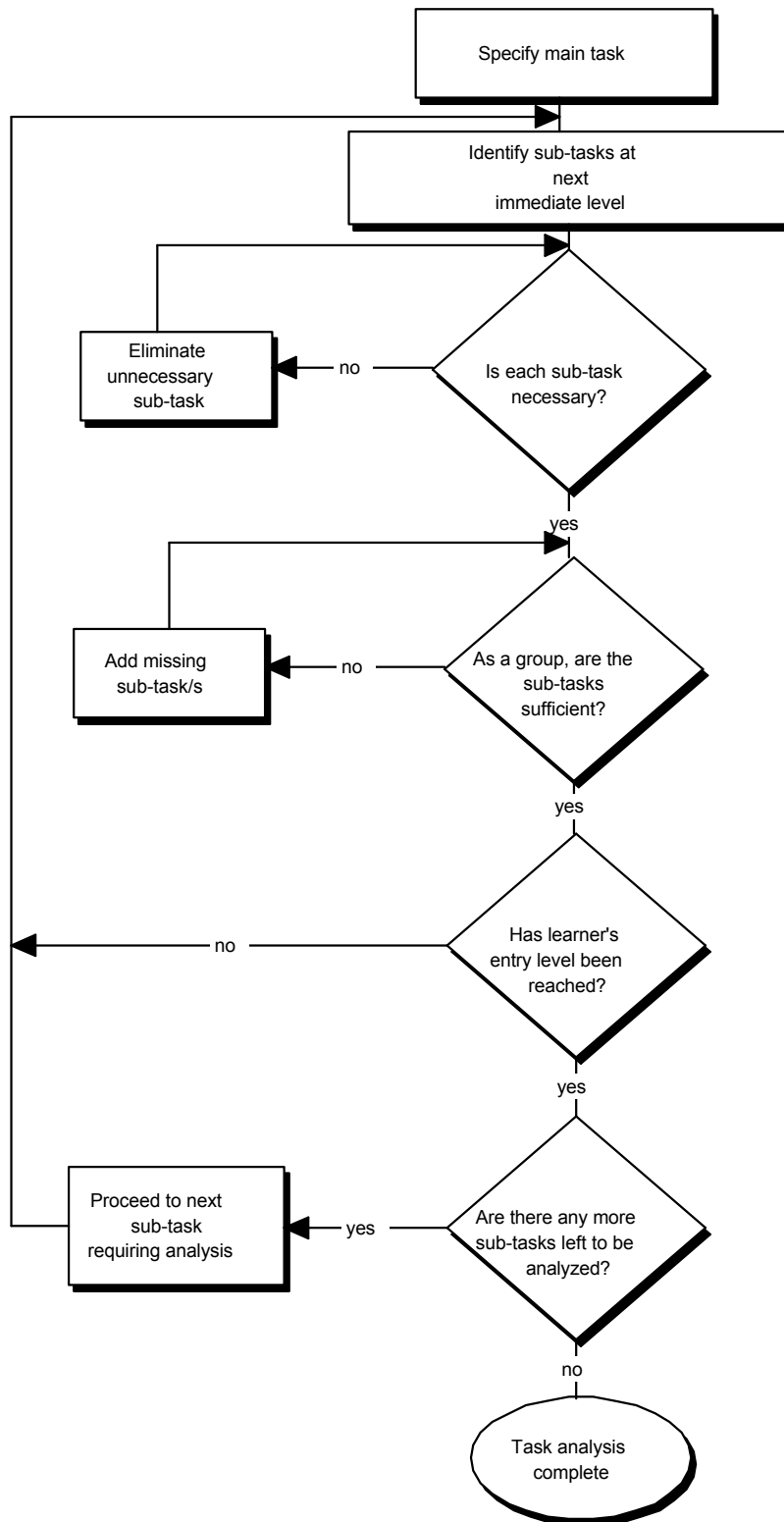
4. Stop the analysis when a sub-task has reached the learner's entry level*. Ask:

- Does the learner already know how to do this prerequisite sub-task (from learner analysis)?
If yes, stop and move to another sub-task.
If no, continue.
- Are there any more sub-tasks? If yes, continue.
If no, stop. The task analysis is complete.

A task analysis is complete when all sub-tasks and sub-sub-tasks have been analyzed to the entry level of the learners.



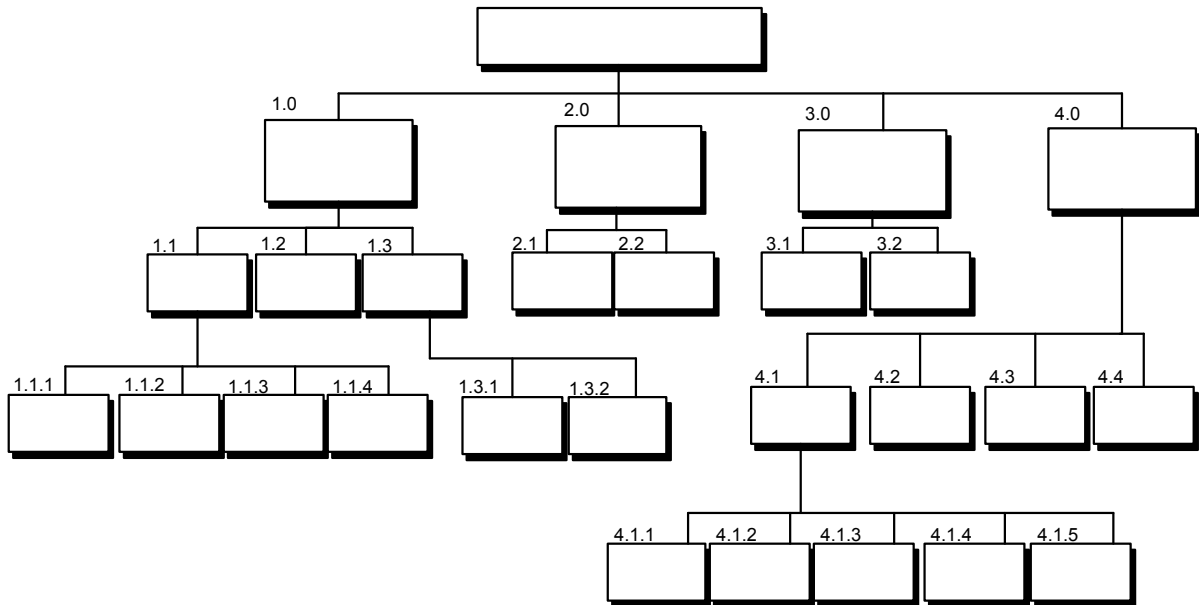
* The learner's entry level can be at different layers of the task analysis for each sub-task.



Job Aid TA-3

Conversion of Hierarchical Graphic Task Analysis to Linear Format

1. Ensure that all sub-tasks are correctly numbered on graphic task analysis. Use many pages for a long task analysis.



2. Start with **primary** sub-tasks (e.g. 1.0, 2.0, 3.0). List these linearly.

1.0 _____
 2.0 _____
 3.0 _____
 4.0 _____

3. List all **secondary** sub-tasks (e.g. 1.1, 1.2, 4.3, 4.5) under each appropriate primary sub-task. Indent the secondary sub-tasks.

1.0 _____
 1.1 _____
 1.2 _____
 1.3 _____


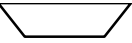



2.0 _____
 2.1 _____
 2.2 _____

3.0 _____
 3.1 _____
 3.2 _____

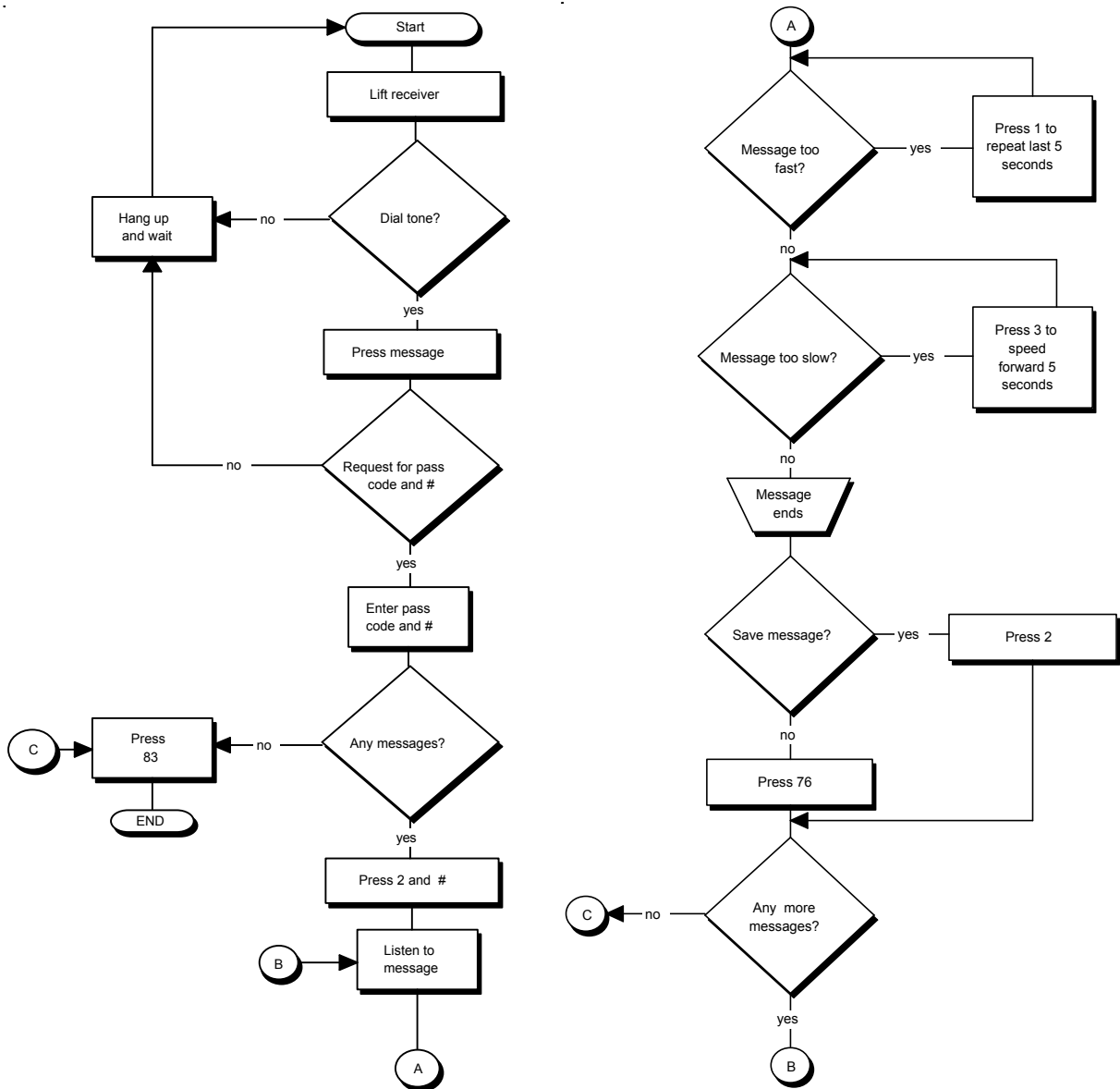
4. List all **tertiary** sub-tasks (e.g. 1.1.3, 4.1.2) under each appropriate secondary sub-task. Indent the tertiary sub-tasks farther than the secondary ones.

1.0 _____
1.1 _____
 1.1.1 _____
 1.1.2 _____
 1.1.3 _____
 1.1.4 _____
1.2 _____
1.3 _____
 1.3.1 _____
 1.3.2 _____

5. Continue, layer after layer until all sub-tasks have been included in the linear representation of the task analysis.

1. Adopt the point of view that the main overall task to be mastered is made up of simpler steps arranged in a sequence.
2. If all the steps in the sequence are observable (e.g. starting up a piece of equipment; filling out a form), observe the performance in action. Attempt the procedure yourself if feasible and safe. Observe your own performance.
3. If the sequence in the steps are intellectual with steps that cannot be observed or if a demonstration of performance is not feasible (e.g. equipment unavailable; software not yet developed), question experts/master performers as they rehearse the procedure. If possible try out or simulate the procedural steps with an expert or master performer verifying your performance.
4. If any steps in the procedure appear to be the result of an unconscious effort (e.g. troubleshooting a piece of equipment; deciding to whom a call should be directed), infer what steps were taken or are necessary. Test to verify if inferred steps work.
5. Represent the procedure as a flowchart. Use  to start or stop,  for inputs,  for actions or mental operations,  for yes-no decisions and  to go to another part of the flowchart or another flowchart.
6. Have the flowchart show the sequence of events, including simultaneous and alternative sequences.
7. The final action should represent successful completion of the desired task.

Example: Access messages on voice mail



1. Review all items* in your task analysis. For each item, ask the following questions:

- Are there safety implications?
- Are there legal implications?

If you answer "yes" to either of these questions, place an "S" and/or "L" beside the item. Retain these critical sub-tasks for the course. Build in sufficient time for training and practice.

2. For each item with neither safety nor legal implications, determine criticality by rating it high (3), medium (2), or low (1) according to the following criteria:

Impact

(What would happen if the task was not performed correctly?)

- Rate (3) if severe negative consequences.
- Rate (2) if some negative consequences.
- Rate (1) if little or no negative consequences.

Frequency

(How often is the task performed?)

- Rate (3) if performed daily or often during each day.
- Rate (2) if performed weekly or monthly.
- Rate (1) if performed less than monthly.

Difficulty

(To do the job effectively and efficiently, how difficult is the task to perform?)

- Rate (3) if a great deal of practice and feedback are required for mastery.
- Rate (2) if some practice and feedback are required for mastery.
- Rate (1) if little or no practice and feedback are required for mastery.

3. If a sub-task rates two or more "2's" and/or "3's", retain it. Build in sufficient time for training and practice.
4. If a task rates two "1's", consider alternative strategies such as:
 - Job aids
 - Task lists
 - Field placements
 - Supervised activity
 - Procedure manual
5. If a task rates three "1's", place an "X" beside the appropriate item in the task analysis. Do not train for it (although you may refer to it in documentation).

* Item is a sub-task at any level in the task analysis.

Origin and Understanding of the Need (from Business Case)

- What triggered the request for training?
- Who/what was the source of the request?
- To whom was the request addressed?
- What appeared to be the need (understanding of need)?
- How was the need addressed?

Project Plan

- Curriculum area and course title.
- Nature of work.
- Scope of course (including major topics).
- Overall course objective.
- Specific characteristics and major components of course.
- Estimated number of work days.

Tasks, Timelines and Responsibilities

- Project tasks and timelines chart with minimal explanations as required.
- RASCI chart with brief explanation.

Results of Learner Analysis

- Methodology (Brief description of Learner Analysis).
- Key findings.

Results of Context Analysis (Key findings)

Results of Task Analysis (Linear format)

Conclusions

- Summary of key requirements for instructional design.
- Summary of key requirements for media/delivery system selection.
- Summary of key requirements for implementation.

Appendices

- Learner Analysis Report.
- Context Analysis Report.
- Task Analysis (graphic format).

1. Both in the task analysis and performance objectives, only use action verbs that permit external verification of an end result either through direct measurement or observation accompanied by a checklist/observation sheet.

2. Avoid verbs that cannot be externally verified or are not an end result such as:

appreciate	enjoy	like	rehearse
be aware of	know/know how to	listen to	think about
comprehend	learn	practice	understand

3. The following are sample verbs that can be used in training objectives statements.

Simple tasks:

choose	duplicate	point
circle	identify	provide
collect	imitate	recall
complete	indicate	repeat
copy	isolate	select
count	label	state
define	list	tally
designate	match	underline
detect	name	
differentiate	note	
discriminate	omit	
distinguish	order	
distribute	place	

Intellectual tasks:

arrange	document	map	sort
categorize	find	organize	suggest
chart	follow	quote	support
cite	formulate	record	underline
circle	gather	relate	volunteer
classify	include	reproduce	
compile	itemize	return	
diagram	locate	signify	

Analysis tasks:

analyze	criticize	generate	save
appraise	deduce	induce	shorten
combine	defend	infer	structure
compare	evaluate	paraphrase	switch
conclude	explain	plan	
contract	formulate	present	

Synthesis tasks:

alter	paraphrase	regroup	retell
change	predict	rename	rewrite
design	propose	reorganize	signify
expand	question	reorder	simplify
extend	rearrange	rephrase	synthesize
generalize	recombine	restate	systematize
modify	reconstruct	restructure	

Language tasks:

abbreviate	edit	punctuate	summarize
accent	hyphenate	read	syllabicate
alphabetize	indent	recite	translate
argue	outline	speak	type
articulate	print	spell	verbalize
capitalize	pronounce	state	write

Physical tasks:

assemble	fit	mold	sharpen
blend	fix	nail	sketch
brush	fold	paint	smooth
build	form	paste	stamp
carve	frame	pat	stick
color	grind	position	stir
construct	hammer	pour	trace
crush	handle	press	trim
cut	heat	procedure	varnish
dab	illustrate	roll	wipe
dot	make	rub	wrap

draw	melt	sand
drill	mend	saw
finish	mix	shake

Calculation tasks:

add	derive	integrate	reduce
bisect	divide	interpolate	solve
calculate	estimate	measure	square
check	extract	multiply	subtract
compound	extrapolate	number	tabulate
compute	graph	plot	tally
count	group	prove	verify

Scientific tasks:

calibrate	grow	plant	specify
compound	increase	prepare	straighten
connect	insert	reduce	time
convert	lengthen	remove	transfer
decrease	light	replace	weigh
demonstrate	limit	report	
dissect	manipulate	reset	
graft	operate	set	

Social intervention tasks:

accept	disagree	join	share
agree	discuss	laugh	smile
aid	excuse	lend	supply
allow	forgive	meet	talk
answer	greet	offer	thank
buy	guide	permit	volunteer
communicate	help	praise	vote
compliment	inform	react	
contribute	interact	relate	
cooperate	invite	serve	

Note: Use concrete, verifiable, end result verbs in the task analysis, overall or main objective and specific objectives

Activity	Example
<p>1. Convert major sub-tasks from task analysis into statements that specify desired outcome in terms of learner performance once instruction ends.</p>	<div data-bbox="878 401 1466 646" style="text-align: center;"> </div> <p>* major sub-tasks</p> <p>Overall Performance Objective: From a given recipe, bake a double layer chocolate cake with frosting using a regular home oven.</p> <p>Specific Objectives: On completion of this session, learners will be able to:</p> <ul style="list-style-type: none"> 1.0 <i>Make cake batter.</i> 2.0 <i>Bake a cake.</i> 3.0 <i>Frost a cake.</i>
<p>2. Include in each statement what the learners will be given to work with and the conditions in which they will be placed.</p>	<p>Specific Objectives: On completion of this session, learners will be able to:</p> <ul style="list-style-type: none"> 1.0 <i>Given a recipe for double layer chocolate cake, make cake batter.</i> 2.0 <i>Given a recipe for a double layer chocolate cake, a correctly made batter and a regular home oven, bake a cake.</i> 3.0 <i>Given two layers of chocolate cake and a recipe, frost the cake.</i>

Activity	Example
<p>3. Specify, in each statement, the standard of acceptable performance.</p>	<p>Specific Objectives:</p> <p>On completion of this course, learners will be able to:</p> <p>1.0 Given a recipe for double layer chocolate cake, make cake batter <i>that contains all the necessary ingredients in the correct quantities, has no lumps and is of the correct consistency.</i></p> <p>2.0 Given a recipe for a double layer chocolate cake, a correctly made batter and a regular home oven, bake <i>two layers of the cake at the specified temperature for the specified length of time so that both layers rise to the specified height and both are sufficiently moist.</i></p> <p>3.0 Given two layers of chocolate cake and a recipe, frost the cake so that <i>the frosting between layers is even and the top and sides are completely covered and smooth.</i></p>

Activity	Example
<p>4. Repeat the same procedure for each sub-sub-task until all components of the task analysis are accounted for.</p>	<p>Specific Objectives:</p> <p>On completion of this session, learners will be able to:</p> <ul style="list-style-type: none"> 1.0 Given a recipe for double layer... <ul style="list-style-type: none"> 1.1 Select ingredients as specified in the recipe. <ul style="list-style-type: none"> 1.1.1 Select dry ingredients. <ul style="list-style-type: none"> 1.1.1.1 Given a set of dry ingredients from a recipe, name each of the ingredients without error. 1.1.1.2 Given the names of dry ingredients from a recipe, identify each one without error. 1.1.2 Select wet ingredients. <ul style="list-style-type: none"> 1.1.2.1 Given a set of wet ingredients from a recipe, name each of the ingredients without error. 1.1.2.2 Given the names of wet ingredients from a recipe, identify each one without error. 1.2 Select utensils as specified in the recipe. <ul style="list-style-type: none"> 1.2.1 etc.

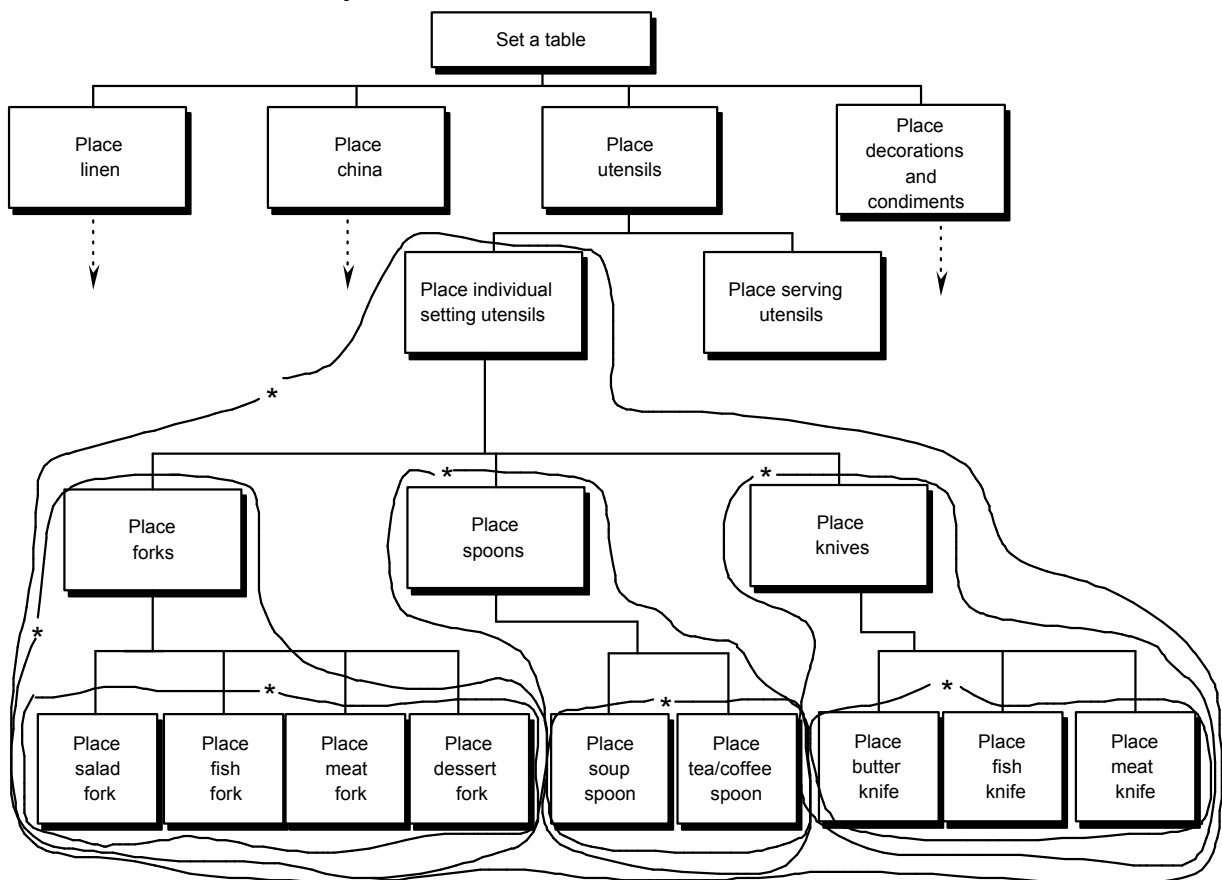
Note: Include conditions and/or standards in enabling¹ (lower order) objectives only if they differ from the immediate higher order objective.

¹ Enabling objective: A statement that prescribes an expected learning/performance outcome for a part of the course enroute toward attaining a higher order specific objective.

For design purposes, you may cluster within a single, specific objective those sub-tasks which can be naturally **tested** together. This reduces the redundancy of design decisions.

To do this, apply the following procedure:

1. For **hierarchical task analysis**, examine the lowest level of sub-tasks to determine which ones naturally cluster together **for testing purposes**. Circle these. Repeat the procedure moving up the hierarchy. In this way you can cluster clusters of objectives.

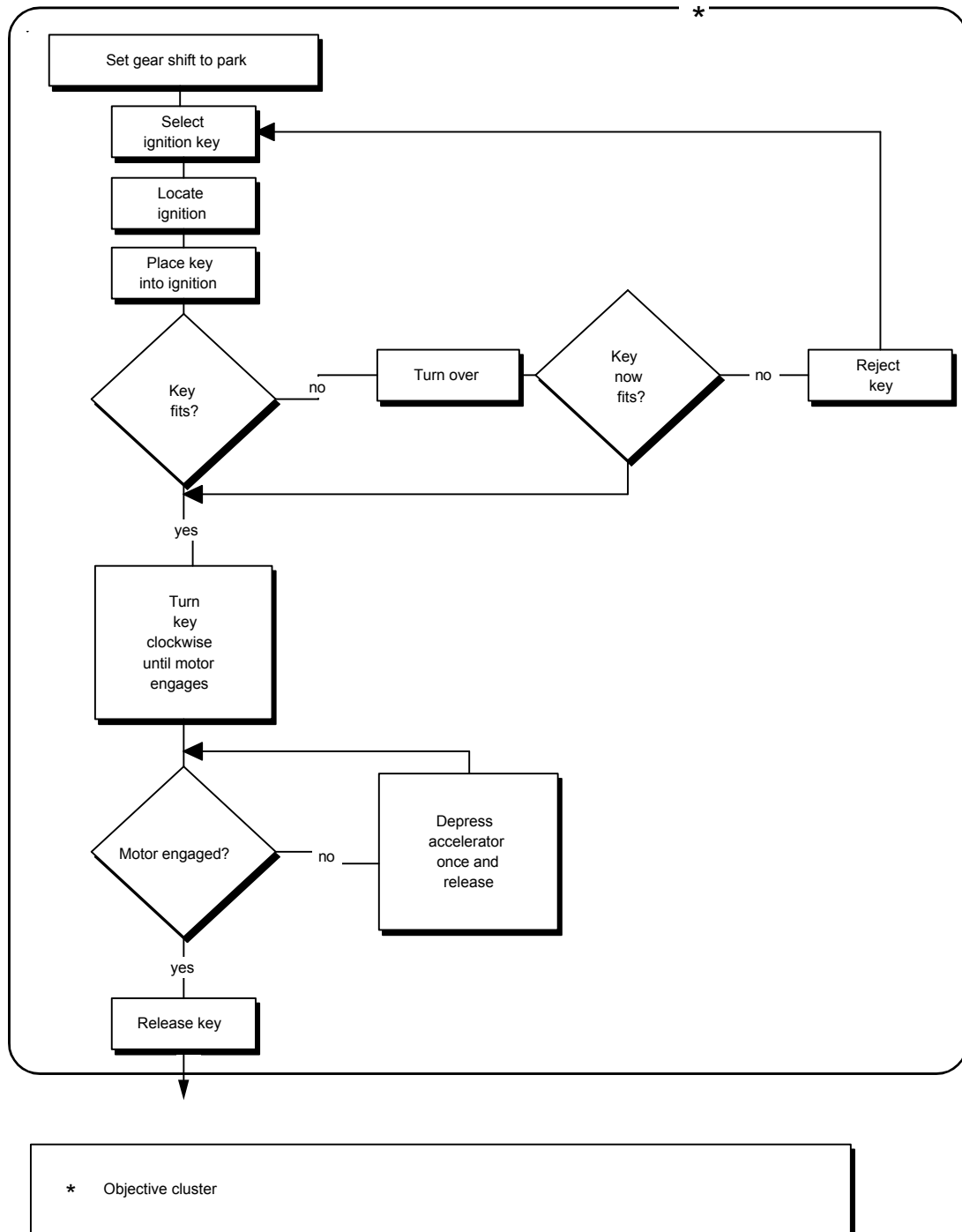


* Objective clusters

Stop when you have reached a level beyond which it would be difficult to create a single test item that verifies all included sub-tasks.

Objective: Given all appropriate utensils, place these for an individual setting so that each utensil is in its correct position.

2. For **procedural task analysis**, cluster several steps and decisions in a sequence which can be naturally tested together.



Objective: Given a set of car keys and an automatic transmission car, start the car so that the engine catches and idles.

Note: Sub-tasks that are **difficult** to learn/master, have a **high impact** on performance and/or are **frequently** performed should not be clustered with other sub-tasks. They generally require their own individual objectives and criterion test items (e.g. select the correct filter size for separation in the grinding process of a specific ore sample; determine the appropriate features of an insurance plan based on a customer profile).

Sub-tasks that have serious **legal** or **safety** implications should also be treated individually. Once again, they may require their own individual objectives and criterion test items (e.g. select the correct key for turning an alarm system on/off; identify unacceptable hiring interview questions.)

Apply this checklist to each performance objective including:

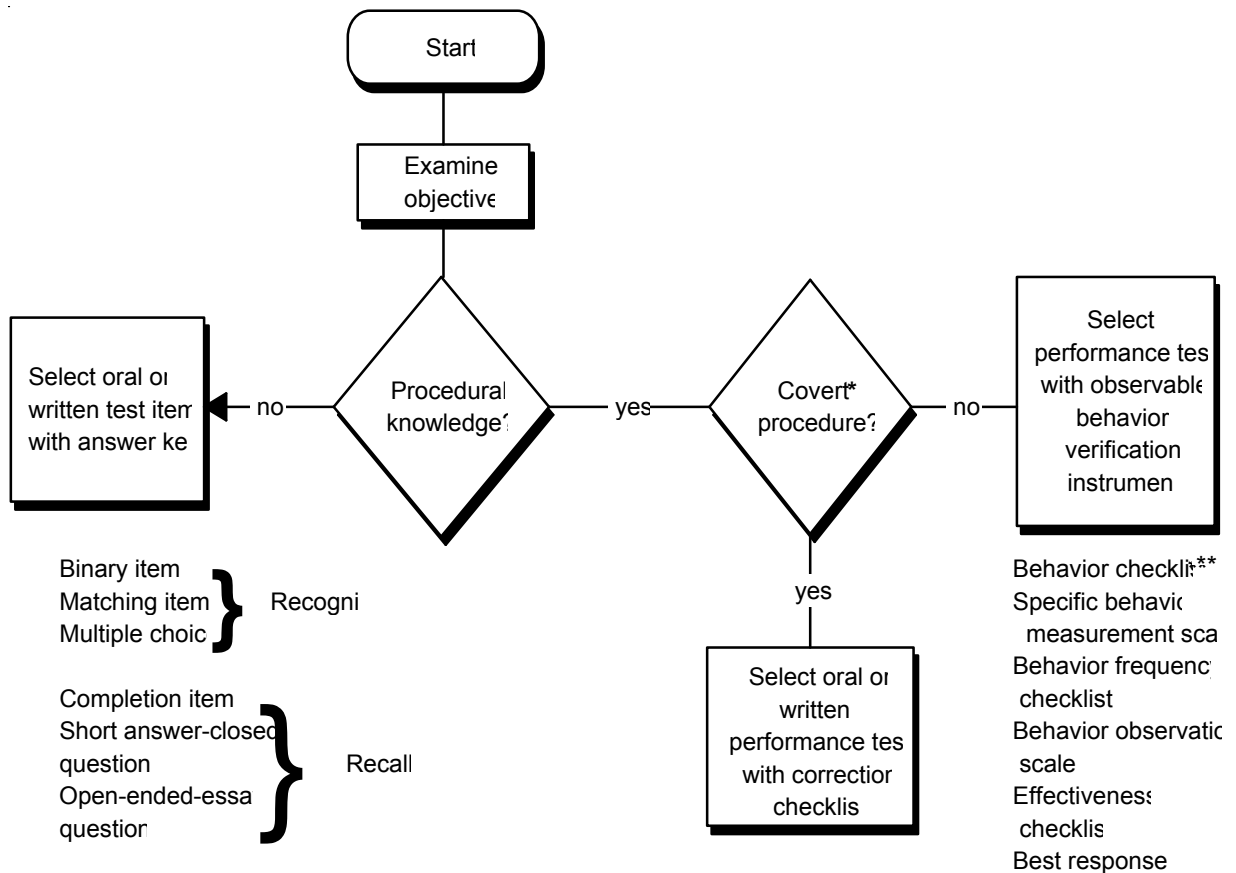
- the overall or main objective
- the specific objectives
- enabling objectives

Note: Once you have stated the performance objectives for the design, you may subsequently reword them more simply and/or briefly in the participant manual.

Using the checklist below, check off (✓) "Yes" or "No" for each statement.

The Objective...	Yes	No
1. States what the desired outcome will be.	<input type="checkbox"/>	<input type="checkbox"/>
2. States the desired outcome in terms of the learner.	<input type="checkbox"/>	<input type="checkbox"/>
3. Specifies an end result (e.g. identify, record) not an ongoing activity (e.g. practice, rehearse).	<input type="checkbox"/>	<input type="checkbox"/>
4. States the desired outcome once instruction ends and without instructor assistance.	<input type="checkbox"/>	<input type="checkbox"/>
5. Includes what the learner will be given to work with and/or the conditions in which s/he will be placed.	<input type="checkbox"/>	<input type="checkbox"/>
6. Specifies the standard of acceptable performance.	<input type="checkbox"/>	<input type="checkbox"/>

Any "No" requires the objective to be rewritten until only "Yes" responses are checked.



The tables on the following pages describe each type of test item and list its advantages/disadvantages.

* A covert procedure is one you cannot see being performed. It takes place in the learner's head. Mental arithmetic, troubleshooting and decision-making that occur inside the learner with no overt activity are examples of covert procedures.

** Most common type of performance test.

Oral and/or Written Test Items

Type of Test Item	Advantages	Disadvantages
<p>Binary question (including true/false). Offers learner two choices to select from, only one of which is correct. True/false, yes/no are the most common types.</p>	<ul style="list-style-type: none"> • Easy to correct and compile results manually, mechanically or if entered on computer. • Test instructions easy to understand. 	<ul style="list-style-type: none"> • Range of responses limited to two choices. • The test creator must possess strong mastery of the learning material. • 50% chance of getting a right answer without knowing the learning material.
<p>Matching question. Requires learner to match an item in one column with an item in a second column. Items in the second column are generally in random order. To increase challenge, the second column usually contains more items than the first.</p>	<ul style="list-style-type: none"> • Easy to create. • Easy to correct. • Allows for many items to be tested simultaneously. • Especially applicable for content that lends itself to pairing items. 	<ul style="list-style-type: none"> • Restricted in application to objectives/content that lend themselves to pairing items. • Only tests low level objectives. • Through process of elimination allows for some guesswork.
<p>Multiple choice question. Requires learner to select the correct answer to a question from an array of three or four alternatives.</p>	<ul style="list-style-type: none"> • Easy to correct either manually or mechanically. • Can include distractors that force discrimination between correct and almost correct responses. • Permits testing of a large body of material fairly rapidly. 	<ul style="list-style-type: none"> • Generally limited to fact based questions. • Does not allow for elaboration or explanation. • Takes a lot of skill and time to create excellent test items. • Requires good reading skills.

Type of Test Item	Advantages	Disadvantages
<p>Completion question. Requires a one word or several words completion to a statement. Range of acceptable completion responses is limited.</p>	<ul style="list-style-type: none"> • Limits the range of possible correct responses. • Easy to correct manually using a correction guide or by computer if entered. • Eliminates subjectivity. • Appropriate for problems with a limited number of possible correct responses. 	<ul style="list-style-type: none"> • Not appropriate for "why" and "how" type questions. • The question itself may provide clues for the correct response. • Difficult to correct hand written responses mechanically.
<p>Short answer/closed question. Requires a brief, limited response from the learner.</p>	<ul style="list-style-type: none"> • Easy to create. • Easy to check. • Easy to insert during instruction. 	<ul style="list-style-type: none"> • Limited in richness of response. • Longer to correct (written form) than multiple choice, binary or matching items. • Can result in response variability.
<p>Open-ended (essay) question. Requires an extended response that can also include learner's opinion, interpretation, vision.</p>	<ul style="list-style-type: none"> • Easy to create. • Allows for freedom of response by learner. • Appropriate for "why" and "how" types of objectives. 	<ul style="list-style-type: none"> • Requires strong subject-matter knowledge to verify and give feedback. • Labor intensive correction. • Highly diverse responses.

Performance Test Items

Type of Test Item	Advantages	Disadvantages
<p>Behavior checklist. Provides an observer with a list of behaviors the learner must demonstrate during an exercise.</p>	<ul style="list-style-type: none"> • Easy to develop. • Easy to train observers. • Checklist items are easily understood. • Provides concrete feedback to the learner. 	<ul style="list-style-type: none"> • Limits qualitative evaluation especially for higher level competencies. • Does not lend itself readily to situations where there is a wide range of acceptable behaviors. • If poorly designed, results in a high degree of observer subjectivity.
<p>Specific behavior measurement scale. Provides an observer with a set of specific behaviors and a measurement scale for each. The scale is graded by level of competence.</p>	<ul style="list-style-type: none"> • Provides a mechanism for analyzing different competency levels for different learner behaviors. • Decreases observer subjectivity. • Relatively easy to train observers to use this type of instrument. • Can provide learners with feedback during the learning process. 	<ul style="list-style-type: none"> • Takes a long time to create. • Difficult to create. • Not useful if learner demonstrates behaviors not on the scale. • Cumbersome to use. • Some subjectivity remains.
<p>Behavior frequency observation checklist. Provides an observer with a checklist that helps monitor frequency of a behavior or frequency of relevant and irrelevant behaviors.</p>	<ul style="list-style-type: none"> • Produces a lot of data. • Demonstrates concretely presence or absence of specific behaviors. • Can be used even if the learner deviates from targeted behaviors. • Can provide learners with feedback during the learning process. 	<ul style="list-style-type: none"> • Does not measure the degree of improvement of a behavior. • Requires considerable training of observers.

Performance Test Items (continued)

Type of Test Item	Advantages	Disadvantages
<p>Behavior observation scale. Allows an observer to judge the appropriateness of using a behavior.</p>	<ul style="list-style-type: none"> • Easy to create. 	<ul style="list-style-type: none"> • The result depends on the ability of the observer to judge the appropriateness of a behavior.
<p>Effectiveness checklist. Allows an observer to analyze the effectiveness of a learner's behavior. Focuses on the results of the behavior rather than the behavior itself.</p>	<ul style="list-style-type: none"> • Effectiveness criteria have a high degree of credibility as they focus on results. • Relatively easy to train observers. • Can provide learners with feedback during the learning process. 	<ul style="list-style-type: none"> • No attention to actual learner behavior. • Does not measure the degree of ability as the <i>Specific Behavior Measurement Scale</i> or the frequency as the <i>Behavior Frequency Observation Checklist</i> does.
<p>Best response. Allows for identification of several acceptable responses/solutions as best choices.</p>	<ul style="list-style-type: none"> • Recognizes there are good, better and best responses/solutions. • Recognizes that responses/solutions can be classified in a hierarchy of acceptability. 	<ul style="list-style-type: none"> • Does not allow for analysis of different ability levels nor for the process of how a response/solution emerged. • An excellent response/solution can be obtained without use of a targeted behavior.

Regardless of the type of test items you create, follow these guidelines:

- Keep course objectives clearly in mind. The test item must perfectly match the objective.
- Start with a few easy to answer questions to help relieve test anxiety.
- Write the test items at the language/reading level of the learners.
- Avoid negatives and double negatives in the questions.
- Construct questions and answers that are precise and non-ambiguous. Questions should have only one correct answer.
- Do not replicate statements from the participant manual. When you do so, you test memorization of the material and not its comprehension.
- Make sure that the test items do not include clues about other test items.
- Make sure that the answer to one test item is not dependent on the answer to another test item.
- Avoid trick questions. When you do so, you test the ability to guess, not the comprehension of the material.
- Group same type questions together: binary, multiple-choice, etc. This reduces the number of instructions and facilitates the learner's task.
- Provide examples for complex question types.
- Provide clear instructions to the instructor concerning the length of the test and the material required. Provide him/her with answer sheets and correction guidelines.
- Try out the test and revise before implementation.

The following provides guidelines for creating specific types of test items.

Binary

This item presents the learner with a statement that s/he must determine as true or false or answer by yes or no.

- Use when the answer leads to only two alternatives.
- Keep the statement as brief as possible.
- Avoid double-barrelled questions. Keep one idea per statement.
- Make sure the statement is clearly either true or false, yes or no.
- Avoid a pattern of correct answers.

Matching

This item consists of two lists of words, sentences, definitions, etc., and asks the respondent to match items in one list to items in the second list.

- Use mostly to evaluate memorization or comprehension of facts, concepts and principles.
- Specify how entries should be matched.
- Make sure that all entries on a list are related to the same content.
- Arrange the response list in logical order (e.g. chronologically or alphabetically).
- Create between five and fifteen entries per list.
- To avoid cueing or guessing, include more entries for responses than entries to be matched.
- When appropriate, specify the number of times an entry response can be used.
- Keep both lists on the same page.

Multiple-Choice

This item presents the learners with a question, called a "stem", and three or four alternative answers of which one is correct.

- Use to evaluate most abilities, except decision and action procedures.
- Write the stem in the affirmative form. If negative words have to be included in the stem, highlight them.
- Keep alternative answers as short as possible, but at about the same length.
- If the question is long or complex, put most of the wording in the stem rather than in the alternative answers.
- Make sure that a learner who has mastered the material can clearly select the correct answer.
- To avoid cueing the correct answer, make sure that the stem and all the alternative answers match grammatically.
- Do not use words such as *always*, *never*, *too much*, *none*, *all*, etc. These words usually indicate an incorrect answer.
- Avoid a pattern of correct answers.

Effective alternative answers are:

- incorrect paraphrases;
 - similar statements;
 - true statement, but not for this particular question;
 - common errors learners make;
 - irrelevant technical jargon.
- Avoid using "All of the above". If the learner recognizes two of the alternatives as correct, s/he may choose this answer without considering the other alternatives.
 - Use "None of the above" sparingly. If you use this alternative for several questions, make sure it is the correct answer at least some of the time.

- Avoid alternatives which combine other alternatives (e.g. "Both *a* and *b* are correct", "*b* and *c*, but not *e* are correct", etc.) This evaluates more "syllogistic reasoning" than comprehension of the material.
- The number of alternatives may vary from one question to another.

Completion

This item consists of an incomplete statement in which the learner must fill in the answer. The answer consists usually of one word or a few words.

- Use when learners have to recall the correct answer.
- State the item in such a way that the answer consists of only one or two words.
- Whenever possible, place the blank at the end of the statement.
- Provide sufficient space to write the correct answer.
- Give equal length to all blank lines to avoid cueing the correct answer.
- Specify the degree of precision expected for numerical answers (e.g. "in meters").

Short Answer

This item is also called an open-ended question. It requires a response of one page or less.

- Use mostly to evaluate comprehension and application of concepts and principles.
- Write the question clearly and succinctly.
- Indicate the approximate length of the answer expected.
- Make sure that the answer can be given in one page or less.
- Provide sufficient space to write the answer.

Essay

- Indicate if points will be deducted for misspellings, mistakes etc., and how many.

Also an open-ended question, the essay requires a response from one page up to several pages in length.

- Use mostly to evaluate writing skills, creation of an original answer or other cognitive abilities.
- Write the question clearly and succinctly.
- Indicate the approximate length of the answer expected.
- Provide performance criteria (e.g. overall structure of the essay, presence of introduction, conclusion, etc.)
- Indicate if points will be deducted for misspellings, errors, etc., and how many points.

Apply the checklist to each criterion test item including:

- Oral and/or written test items
- Performance test items

1. Line up each criterion item with its corresponding objective or objective cluster.
2. Ask each question checking off either "Yes" or "No".

	Yes	No
1. Does the item require the same performance stated in the objective*?	<input type="checkbox"/>	<input type="checkbox"/>
2. Is the main intent of the item the same as that of the objective*?	<input type="checkbox"/>	<input type="checkbox"/>
3. Is the learner performance required in the item directly verifiable?	<input type="checkbox"/>	<input type="checkbox"/>
4. Is the type of item (e.g. multiple choice, completion, short answer) the most appropriate one for measuring objective* attainment?	<input type="checkbox"/>	<input type="checkbox"/>
5. Are all the resources required to respond to the item available to the learner?	<input type="checkbox"/>	<input type="checkbox"/>

If you check off even one "No", the item does not match the objective perfectly. In that case, rework the item until you can check off "Yes" for each question.

* or objective cluster.

Instructional Methods are the essential triggers for learning. They may be embedded in a variety of instructional strategies in the same way that nutritional elements such as proteins or vitamins may be found in a broad range of foods (e.g. protein: fish, beef, poultry, cheese, tofu).

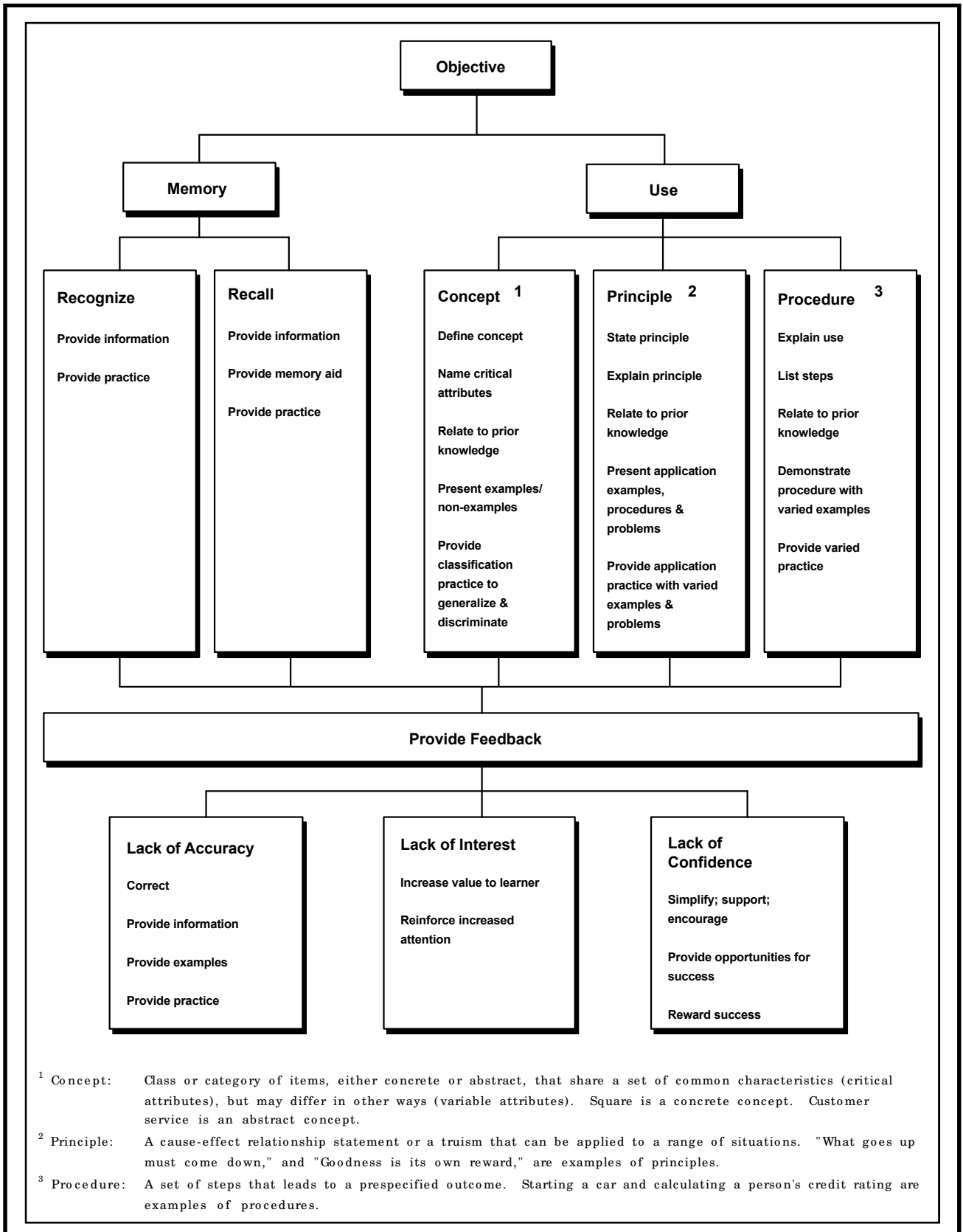
The first step toward selecting all the elements for a sound and viable instructional design is **instructional methods selection**. Using the job aid on the next page, do the following for each specific objective.

1. Determine whether the objective requires learning at the **memory** (retrieve from long term storage) or **use** (apply) level.
2. For objectives that require memorization, determine if learning is for **recognition** (e.g. Spot a danger. Recognize a faulty piece of equipment. Recognize an edible mushroom.) or **recall** (e.g. Recite the multiplication tables. State Boyle's Law. Name the critical attributes of a square.). Select the instructional methods in the appropriate box.
3. For objectives that require use (actual application), determine if learning is for a **concept, principle** or **procedure**. (For definitions and examples see next page.) Select the instructional methods listed in the appropriate box.
4. Regardless of type of learning required, include with each set of instructional methods means for providing feedback to overcome lack of **accuracy, interest** or **confidence**. Select these from the job aid and be sure to build them into each **instructional strategy** you choose in the next step.

Note: For **use** objectives, adjust the amount of

- information you provide
- connections with prior knowledge you build
- practice you offer/require
- feedback you include

to the characteristics of the learners as determined from the learner analysis.



This job aid lists a set of instructional strategies (structures that permit a number of instructional methods to be organized and delivered to learners).

Most instructional strategies can accommodate a broad spectrum of instructional methods, depending on how they are developed.

Four essential factors come into play in selecting an instructional strategy:

- **Methods:** Can the strategy readily and naturally deliver the selected methods to the learner at the required levels?
- **Economics:** Is the strategy the most cost-effective (delivers required methods at the highest impact for the least cost) and the most cost-efficient (delivers the required methods in the least amount of time for the least cost)?
- **Feasibility:** Can the development team build the strategy, given its resources and constraints?
- **Acceptability:** Given the climate and culture of the organization and the characteristics of the learners, is the strategy appropriate?

Procedure

1. For each objective, enter a rating for each factor beside each instructional strategy on the worksheet provided. Note that space has been left to include other strategies.

Rating System

- 4 = Excellent fit
- 3 = Good fit
- 2 = Could fit with considerable effort
- 1 = Poor fit
- 0 = Inappropriate (any strategy receiving even one "0" is eliminated)

2. Add up the ratings for each strategy. The highest total rating suggests the most likely strategy for the objective.
3. If you are uncertain about rating a factor or about the rating totals, work with your mentor or experienced colleagues.

4. Many other instructional strategies exist. Add these to your list in the space provided and rate them when selecting appropriate strategies.
5. Examine strategy ratings to determine whether a combination of strategies (two or more integrated together such as a game that incorporates listening teams and peer learning) may be more effective than a single instructional strategy.
6. More than one strategy may receive a high rating. While a particular type of learning requires a specific instructional method, several strategies may be equally effective in delivering the required method or methods. All other things being equal, select the strategy that is the most likely to captivate learners' attention.
7. More than one strategy may receive high ratings for an objective. Vary your strategies to maintain interest.

Job Aid DD-2

Instructional Strategy Selection

Specific Performance Objective/Objective cluster: _____

Strategy	Methods	Economics	Feasibility	Acceptability	Total	Rank
• Interactive lecture						
• Hands-on laboratory						
• Reading						
• Reading with exercises and feedback (paper and pencil or electronic)						
• Self-study (programmed Instruction; print; audiovisual; CBT; IVI; CD-ROM; multi-media)						
• Simulation/simulator						
• Game						
• Simulation game						
• Peer learning						
• Case study						
• Behavior modelling						
• Role play						
• Listening teams						
• Guided discussion						
•						
•						

Strategy/Strategies Selected: _____

Rationale: _____

Interactive lecture: Learners listen to and participate in a live, conference call or televised lecture. Learners may ask questions, make comments or respond to questions from the instructor.

Hands-on laboratory: Learners practice procedures in an equipped environment that contains all required resources and materials. Generally, learners are assigned exercises, problems or cases on which they work using live or simulated equipment. Instructors or lab assistants observe and provide feedback.

Reading: As the name suggests, learners receive print materials containing relevant information. They are expected to read the materials. They may or may not be questioned on the content.

Reading with written exercises and feedback (paper and pencil or electronic): Learners receive reading materials in hard copy or on screen accompanied by exercises which they are expected to complete. They receive instructor/expert or computer mediated feedback on their responses.

Self-study: Learners receive materials which are designed specifically for instruction according to the logic of learning. Learners interact solely with the material and engage in active responding. The materials may be print, audiovisual, computer mediated, interactive video instruction, multi-media, etc. Feedback on accuracy is immediate and continuous.

Simulation: Learners interact with a simplified and dynamic representation of a system. They can discover the elements of the system, the rules that govern its elements and interactions and the consequences of their decisions and actions.

Game: A highly participative and challenging activity for a single learner or a number of learners. The activity involves some form of conflict, rules and a means for declaring a winner or winners. Excellent for building enthusiasm, providing practice or trying out a strategy.

Simulation-game: This learning structure contains elements of both game and simulation. Learners play a game in which a model of a system has been embedded. As in a game, the object is to win, generally by mastering the model. Chance or random factors can be built in to simulate real-world conditions. Generally the more *playable* the simulation-game, the less realistic it is. Conversely, the more *realistic* the simulation-game, the more complex it frequently becomes and thus less playable.

Peer learning: This strategy provides structured materials to learners who then teach their peers using the materials. Peer learning requires clearly defined objectives, materials for peer teachers/tutors, evaluation instruments and an instructor/facilitator to provide guidance and feedback.

Case study: Learners receive information about a situation or case either orally, through written or mediated materials or combinations of these. Either individually or in teams, learners examine the facts and incidents of the case, critically analyze them and develop solutions. Case studies work best when several are used within a program. Cases may be closed-ended, i.e. have only one best solution or open ended, i.e. have any number of best solutions as long as they are well supported or require group consensus for resolution.

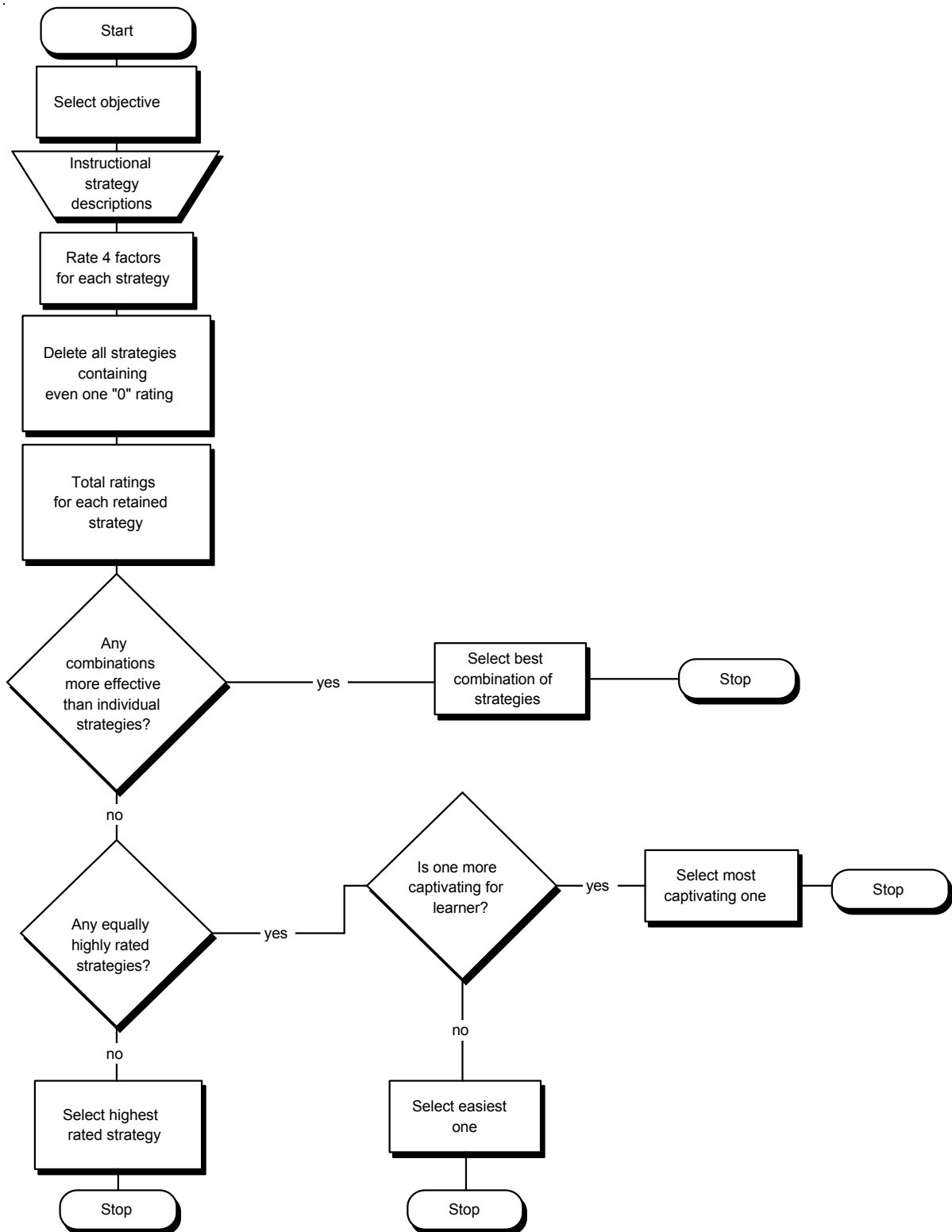
Behavior modelling: Learners acquire new behaviors by observing live or televised models who display ideal behaviors and then rehearsing these. Learners receive information on their behavior, generally through structured feedback (e.g. observation checklists, video recording and playback). This cycle is repeated as the model is faded out until learners have mastered the behavior.

Role play: This strategy focuses on the acquisition of new attitudes and/or discovery of how people feel about specific issues. It helps learners explore the implications of these attitudes and feelings. Two to five individuals assume roles -- either themselves in new situations or others in new or familiar situations -- and interact on a given topic. Role play has many variations including multiple role play in which learners take turns or take over playing the same role, simultaneous roleplay in which a number of learner teams play out a roleplay scenario at the same time, and role reversal in which learners exchange roles part way through a scenario. Debriefing is key to roleplay. This can be done by an instructor/facilitator or by the team itself through structured materials.

Listening teams: Learners in a classroom are divided into teams. The instructor assigns the task of listening to, observing and making notes on a specific part of a speech, lecture, panel, demonstration, etc. The listening teams then report back to the whole group.

Guided discussion: Learners discuss issues to share knowledge, uncertainties, opinions and feelings about a given topic or issue. A facilitator guides and mediates the exchange.

In summary:



From the list below, check off (✓) those delivery systems and media that your organization might potentially consider using. Note that similar entries may appear under both delivery systems and media. Definitions appear on the following pages.

Delivery Systems

- | | |
|--|---|
| <input type="checkbox"/> Live instruction | <input type="checkbox"/> Sound-slide instruction |
| <input type="checkbox"/> Non-interactive print documentation | <input type="checkbox"/> Video based instruction |
| <input type="checkbox"/> Interactive print documentation | <input type="checkbox"/> Computer-mediated instruction |
| <input type="checkbox"/> Audio-based instruction | <input type="checkbox"/> Simulator-mediated instruction |

Instructional Media

- | | |
|---|--|
| <input type="checkbox"/> Live instructor | <input type="checkbox"/> Slide-audiotape |
| <input type="checkbox"/> Non-interactive print | <input type="checkbox"/> Videotape |
| <input type="checkbox"/> Interactive print | <input type="checkbox"/> CD-ROM |
| <input type="checkbox"/> Writing boards | <input type="checkbox"/> Computer media |
| <input type="checkbox"/> Display boards/wall charts/posters | <input type="checkbox"/> Real objects/equipment |
| <input type="checkbox"/> Overhead projection | <input type="checkbox"/> Models/maquettes |
| <input type="checkbox"/> Photographs | <input type="checkbox"/> Part-task trainer |
| <input type="checkbox"/> Slides | <input type="checkbox"/> Low fidelity simulator |
| <input type="checkbox"/> Audiotape | <input type="checkbox"/> High fidelity simulator |

Delivery Systems

Live instruction: Instruction provided mainly by an individual or team face to face with learners (trainer, guest speaker, facilitator, master performer, etc.) Activities may include lecture, question and answer, demonstration, guided practice (including in a laboratory situation) or any other "learner-teacher" interaction. Live instruction may include use of instructional media aids.

Non-interactive print documentation: All printed material such as books, magazines, handouts, technical documentation, etc., with or without photographs and/or graphics, used for instruction. The documents are organized around a specific topic and are systematically arranged to facilitate learning and performance. As a delivery system, they are the principal vehicles for creating learning. Learners read the material and "absorb" it or use it to perform.

Interactive print documentation: Print materials that are designed to elicit learner responses. Printed workbooks, programmed instruction, interactive teaching texts fall into this category. Feedback on learner responses are provided to learners.

Audio-based instruction: Audiocassettes act as the primary instructional vehicle. Instruction is recorded and organized in a logical learning sequence. Opportunity for learner response (e.g. pause for answer followed by audio response feedback, exploration of an environment and finding of required locations or artifacts, writing/calculating responses then turning audio back on to receive feedback). Audio-based instruction as the primary delivery system can be combined with a variety of other media.

Sound-slide instruction: A set of slides or a filmstrip accompanied by a synchronized (or audible tone cue) audiocassette sound track provide instruction. This form of instruction is frequently modular. Learners select sound-slide modules for learning. Response opportunities can be designed in. Sound-slide instruction as the primary instructional delivery vehicle can be readily combined with print or hands-on exploration.

Video-based instruction: Instruction is delivered to learners via live video transmission or videocassette and can be either one-way or interactive (instructor-learner/s; learner/s-learner/s). As a delivery system, video-based instruction can easily be integrated with other supporting media such as print-based, computer-based or hands-on exercises. Video-based instruction is generally associated with distance learning programs, self-contained video-based modules and learning kits.

Computer mediated instruction: The computer and its peripherals provide two-way interaction with learners. Using a stored instructional program, the computer instructs through text, graphics and/or video sequences, guides, adapts to learner responses, tests and provides feedback. Sound capability is possible with this delivery system that can also record student performance and provide progress reports. This delivery system can also be combined with other media to create complex multimedia interactive and adaptive systems.

Simulator-mediated instruction: Simulators are devices constructed and programmed to reproduce the relevant features of an operational system/environment. This substitute for reality (mostly due to cost, risk, availability of real system/environment and ability to be programmed to present a broad range of situations) offers learners opportunities to practice and perfect skills in close to real-world conditions. Simulators can provide learners with feedback, test abilities and provide reports on learner performance.

Instructional Media

Live instructor: Any individual alone or in a team who is the primary source of instruction. This person may lecture, demonstrate, facilitate, guide practice, evaluate, provide feedback or supervise any activity that includes direct interaction with the learner.

Non-interactive print: Any printed material such as books, magazines, articles, handouts, technical documentation, etc., with or without photographs and/or graphics used for instruction. The material is organized around a specific topic and systematically arranged to facilitate learning and performance. Learners read the content of the material for purposes of learning and/or subsequent performance.

Interactive print: Printed material designed to elicit learner responses. Printed workbooks, programmed instruction sequences, interactive teaching texts, printed exercises all fall into this category. The printed material also provides feedback on learner responses.

Writing boards: Any type of surface used for presentation or recording of learner responses. Such boards include chalkboards, white boards, electronic white boards, flipcharts and all other large surfaces designed to write on. Writing materials include chalk, crayon, felt pen or electronic pen. Writing boards are best for recording learner responses, presenting key words and ideas, displaying illustrations and providing a surface for public practice.

Display boards/wall charts/posters: Large surfaces, either fixed or portable used to present information which is to remain publicly available to learners for an extended period of time. These surfaces are generally prepared in advance and are not modified during instruction. They may include a variety of photographs, graphics, tables, charts and text. Text is usually short and either designed as a mnemonic, job aid or as a supplement to an illustration.

Overhead projection: Image or brief text on a transparent 8 1/2" X 11" sheet intended for projection from an overhead projector to a screen or wall surface. Words and graphics as well as color can be combined to form a projected image. Overlays can be used to add more information or to highlight. Opaque sheets can be placed on the transparency to hide information and then successively disclose projected material. Overhead transparency content should contain very few words.

Photographs: Detailed exact images of objects or scenes recorded on photographic paper. Photographs may be in black and white or color and of any size. Photographs are used to display objects and events and are rarely used to present instructional text.

Slides: A photographic transparent image, either black and white or color used for projection. Usual size is 35 mm. Requires some degree of darkness. Generally not used for text other than key words or titles. Provides very sharp and clearly detailed images of real objects or events.

Audiotape: Long strip of magnetic tape on which sound is recorded. Usual format is the standard audiocassette. Audiotape is very effective for reproducing sounds of all kinds. Its key advantages are portability, ease of use on any cassette player including car, relative low cost for production and reproduction, high fidelity and user friendliness, particularly for poor readers.

Slide-audiotape: A set of slides or filmstrip accompanied by an audiotape containing a synchronized sound track that advances images either automatically or with an audible tone cue. Requires either a slide/filmstrip projector and audiocassette player or a special apparatus designed to handle both. Can be used for group or individual presentation.

Videotape: Magnetic tape, generally in 1/2" VHS cassette format, that records video and audio information. Videotape captures live or animated sequences with a high degree of realism. It offers a strong sense of immediacy. Video rarely presents text other than key words or titles. Quality video is expensive to produce and requires playback equipment found in most homes. It is especially useful with poor readers and/or to present dramatically realistic content.

CD-ROM: An optical disc on which are recorded video and audio information. CD-ROM discs present all the advantages of videocassette plus random access capability when linked to a computer. Playback equipment is relatively inexpensive. CD-ROM is very useful for creating visual data bases.

Computer media: The computer and its peripherals create two-way interaction for learners. The effectiveness of computer media depends on the nature of the instructional program. Computer media can be used to inform, direct, guide, control, manage and test until a prescribed level of proficiency is reached. Text and graphics can be presented in color and in varying levels of complexity. Animation, sound, scanned in images are also possible. Presentation of text is feasible, but speed of reading on screen is considerably slower and tolerated less long than with print materials. Artificial intelligence programs adapt to individual learners. Cost of producing computer-mediated instruction can be very high. Considerable time (ratios of 100 to 400:1) is required to produce instructional programs beyond the basic instructional design.

Real objects/equipment: Real objects, tools and artifacts used to facilitate learning. The advantage is that learners interact with the "real thing". Disadvantages include cost, risk, sufficient quantities and frequently size and portability.

Models/maquettes: Artificially created replicas of real equipment, objects, tools and artifacts designed specifically for instructional purposes. These may be either exact duplications, scaled models (either larger or smaller) or distortions to emphasize features. Models and maquettes have the advantage of being able to be taken apart and examined closely and/or manipulated at low risk.

Part-task trainer: Single purpose training device used to facilitate the acquisition of specific abilities associated with a task or limited number of tasks as opposed to the complete set of tasks associated with job performance. Part-task trainers are especially useful to learn how to operate or maintain complex equipment.

Low fidelity simulator: Device and/or program constructed to reproduce the relevant features of an operational system and/or environment and its variations to changing conditions. Acting as an instructional substitute for real systems, simulators provide learning activities which make practice as close to the real situation as possible. Low fidelity simulators are restricted in physical appearance and/or functionality and do not exactly reproduce reality. Advantages are close to reality practice at lower cost and risk than with real systems. Data on learner performance can be recorded.

High fidelity simulator: Similar to low fidelity simulator except that it accurately reproduces reality with all necessary details. Advantages are that learners practice and receive feedback in an environment that is so close to reality that they can transfer learning with almost 100% effectiveness. High fidelity simulators are usually extremely costly and are employed where real systems are even more costly, involve risk and/or are inaccessible.

1. Retain the instructional delivery systems you might potentially use (checked off in Job Aid DD-3) in the left hand column of the tables on the next page. Add new delivery systems to this list as appropriate.
2. Review the overall objective (desired outcome) for your course and the selected instructional methods and strategies for each objective.
3. Delivery system selection depends upon four factors:
 - **Methods/strategies:** Can the delivery system readily and naturally deliver the selected methods and strategy at the required levels?
 - **Economics:** Is the delivery system the most cost-effective (delivers instruction at acceptable levels for the least cost) and cost-efficient (delivers instruction in an acceptable time frame at the least cost)?
 - **Feasibility:** Can the development team create the delivery system given its resources and constraints?
 - **Acceptability:** Given the traditions, climate and culture of the organization as well as the characteristics of the learners, is the delivery system appropriate?

Rate each delivery system against each of the four factors and enter the ratings in the table on the next page.

Rating System

- 4 = Excellent fit
- 3 = Good fit
- 2 = Could fit with considerable effort
- 1 = Poor fit
- 0 = Inappropriate (Any delivery system receiving even one "0" is eliminated.)

If you are uncertain about rating a factor, consult with your mentor, experienced colleagues or delivery system experts.

4. Total the ratings. Rank order the retained systems.
5. Examine the ratings and rankings to determine whether a combination of delivery systems (two or more integrated together such as live instruction with interactive print documentation) may be more effective than a single delivery system.

6. More than one delivery system or combination of systems may receive equally high ratings. All other things being equal, select the least expensive and least time consuming as well as the easiest to manage and maintain.

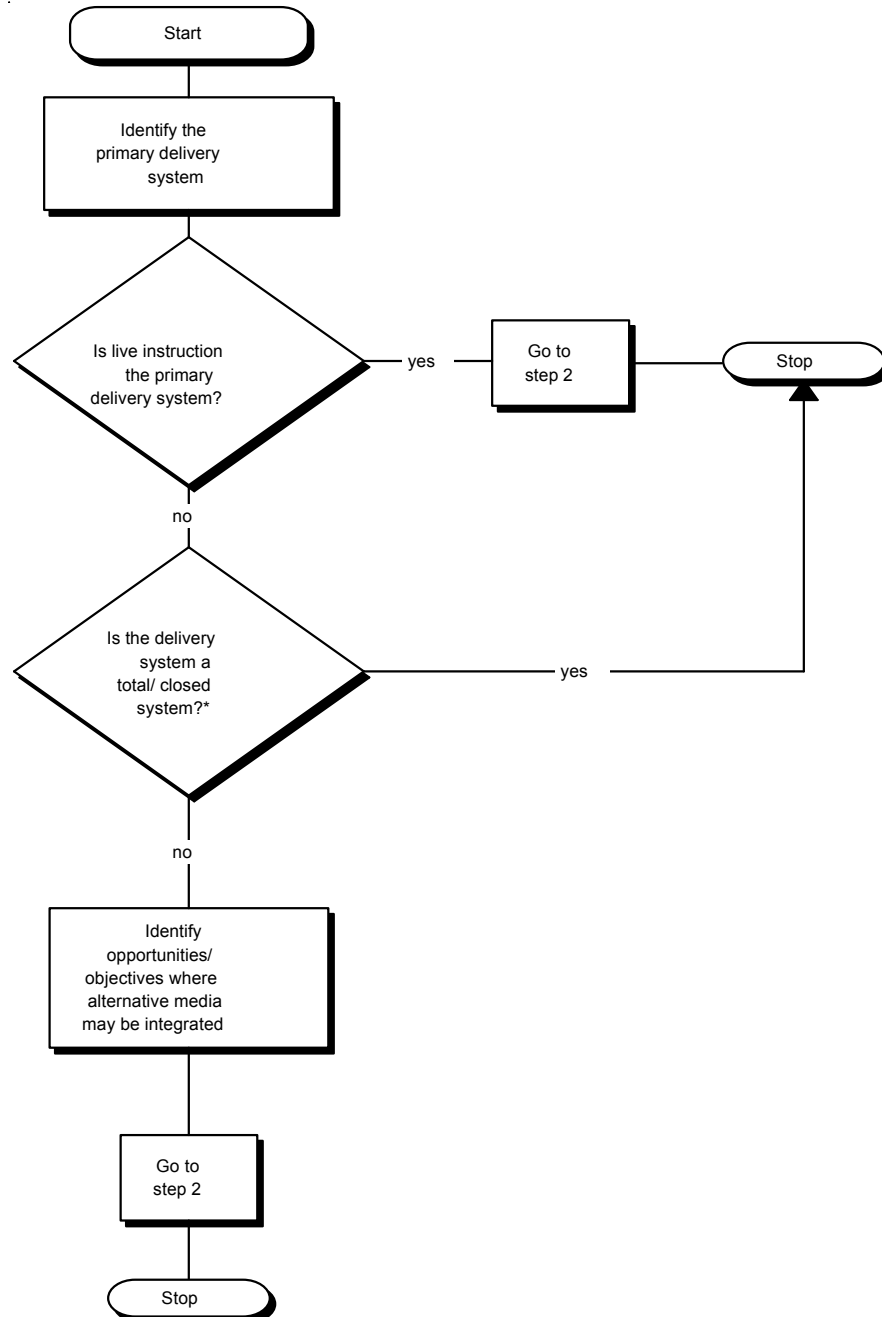
Overall Performance Objective: _____

Delivery system	Methods/ Strategies	Economics	Feasibility	Acceptability	Total	Rank
Live Instruction						
Non-interactive print documentation						
Interactive print documentation						
Audio-based instruction						
Sound-slide instruction						
Video based instruction						
Computer-mediated instruction						
Simulator-mediated instruction						

Delivery System Selected: _____

Rationale: _____

1. Determine whether media selection is feasible using the following decision algorithm:



2. Retain the media your organization might potentially use (checked off on Job Aid DD-3) in the left hand column of the table on page 52. Add media to this list as appropriate.

* The delivery system is complete. All instruction will be delivered by this system without use of any other media.

3. Media selection depends upon four factors:

- **Methods/strategies:** Can the medium readily and naturally deliver the selected methods and strategy at the required level, given the delivery system?
- **Economics:** Is the medium the most cost-effective (delivers instruction at acceptable levels for the least cost) and cost-efficient (delivers instruction in an acceptable time frame at the least cost)?
- **Feasibility:** Can the development team create the mediated instruction given its resources and constraints?
- **Acceptability:** Given the traditions, climate, culture of the organization, characteristics of the learners and selected delivery system, is the medium appropriate?

For each objective or objective cluster, rate each medium against each of the four factors and enter the ratings in the table on the next page.

Rating System

- 4 = Excellent fit
- 3 = Good fit
- 2 = Could fit with considerable effort
- 1 = Poor fit
- 0 = Inappropriate (Any medium receiving even one "0" is eliminated.)

If you are uncertain about rating a factor, consult with experienced instructional designers and/or media experts.

4. Total the ratings. Rank order retained media.
5. Examine the ratings and rankings to determine whether a combination of media (two or more integrated together such as audiotape with interactive print) may be more effective than a single medium.
6. More than one medium or media combination may receive equally high ratings. All other things being equal, select the least expensive, least time consuming and easiest to maintain.

Job Aid DD-5

Instructional Media Selection

Specific Performance Objective/Objective Cluster: _____

Medium	Methods/ Strategies/ Format	Economics	Feasibility	Acceptability	Total	Rank
Live Instructor						
Non-interactive print						
Interactive print						
Writing boards						
Display boards/wall charts/posters						
Overhead projection						
Photographs						
Slides						
Audiotape						
Slide-audiotape						
Videotape						
CD-ROM						
Computer media						
Real objects/equipment						
Models/maquettes						
Part-task trainer						
Low fidelity simulator						
High fidelity simulator						

Media Selected: _____

Rationale: _____

Course Title:

Target Audience (including projected volume):

Primary:

Other:

Overall Performance Objective:

Total Training Time:

Projected Implementation Date:

Proposed Instructional Delivery System

Rationale

Key Implementation Information:

Module Title: _____

Performance Objective	Instructional Events	Evaluation Method	Media/Resources Required	Instructional Time Required

Training Program Title: _____

Target Population: _____

Items	Evaluation				Comments
	Excellent	Good	Needs Improvement	Re-do	
1. Appropriateness of delivery system selection.					
2. Match between specific objectives and instructional events.					
3. Match between specific objectives, instructional events and evaluation methods.					
4. Appropriateness of media selection.					
5. Reasonableness of time allotments.					
6. Sequence of instructional events.					

Additional Comments:

[course title] Design Narrative

This document describes the rationale and schedule for the [length of course] [course title] for [target population/s]. It lays out a thematic approach of how the [number of training hours/days/weeks] can be structured to obtain maximum learning and achieve the highest probability of transfer back to the job.

In creating the design narrative, the following factors were considered:

- **Current knowledge about how adults learn.** The most recent and best knowledge we possess about how adults learn suggests that instruction must be created in ways that "compensate" for what the learners bring to the learning situation. The elements that most influence how adults deal with instruction are: general ability, motivation and prior knowledge. The higher the general ability of the learners, the easier it is for them to assimilate, comprehend and use what it is that they are taught. The more "motivated" they are, the more willing they are to learn what is taught. Motivation is the result of two main influences: the value learners place on what it is they are to learn, and their judgment of how well they can learn it. If they perceive it as too easy or too hard, they will not invest the effort to learn. They must view the learning tasks as challenging, but achievable with effort. Prior knowledge refers to what they already possess about what they are being asked to learn prior to the learning event. The more "connections" they can make between the new learning and what they already know, the better and stronger the learning result and the longer they retain it.
- **Adult learning principles.** Adults learn best if the following four conditions are met:
 1. **Readiness:** Adult learners must see a clear benefit for themselves before they will invest time and energy in learning. The instruction must constantly answer the question: "What's in it for me?" Failure to convince learners that there are direct, immediate benefits to them results in low interest and little or no retention.

2. **Experience:** Instruction must address adult learners at their level. It must take into account what they already know and help make connections with this knowledge. If instruction is aimed too high, they cannot connect and will not comprehend nor retain. If it is pitched too low, they will tune out from boredom. The instruction must be aimed at their level of knowledge and experience and constantly tie into it.
3. **Autonomy:** Adults are self-directed individuals who make decisions about their lives every day. The instructional event must not put them back in the classroom where they are given passive roles to play. Adults learn best and most efficiently when they are actively engaged in learning activities. They must participate and contribute to their learning. The more they do, the more they learn.
4. **Action:** Adults are concerned about immediate application. If they see that they can/must apply what they are learning right away to their lives, they learn better. Unlike children, adults must see that there is a short-term pay-off to what they are being asked to learn. The instruction must make frequent reference to immediate application on the job.

- **Assumptions about the learners and their work situation.**

(List in point form key relevant items from learner and context analysis)

Given these assumptions, the suggested approach to the [training program title] is outlined below.

Theme: (Summary, catchy theme for the training program)

The purpose of the training program is to...

(Include level of information/training, what learners will take away from the training, types of activities, types of instructional strategies and delivery system, character of the training i.e. hands on, interactive, learner involvement, special features, intended outcome.)

Training Structure: The training is divided into three major components:
(Provide a two to three sentence overview for each component.)

- Pre-training: (What it does. Why it does it.)
- Training event: (What it does. Why it does it.)
- Post-training: (What it does. Why it does it.)

Component	Features	Learner Benefits	Company Benefits
Pre-training	<ul style="list-style-type: none"> • Pre-course booklet • Pre-course survey 	<ul style="list-style-type: none"> • Motivates to attend; informs learners of course content; provides opportunity to review prerequisite information • Training targeted to learner needs 	<ul style="list-style-type: none"> • Prepares learners and opens them to receive training. Reduces training time because of appropriate learner mind set • Schedules homogeneous participant groups; only provides appropriate materials and products for each group
Training event	<ul style="list-style-type: none"> • Theme; success stories; real scenarios; etc. 	<ul style="list-style-type: none"> • Direct application to the job 	<ul style="list-style-type: none"> • Creates immediate linkage to job performance
Post-training	<ul style="list-style-type: none"> • Review of open questions and issues • Post-course questionnaire 	<ul style="list-style-type: none"> • Resolves open questions and issues • Provides course feedback that can result in more targeted training for learners 	<ul style="list-style-type: none"> • Ensures learners leave with complete information and ability to perform • Identifies needs for remedial instruction or future courses • Provides feedback and revision recommendations that can lead to more effective and efficient training

Pre-training

(Explain what each participant will receive/experience prior to training. Include supervisor role if relevant. List events in point form with brief explanations.)

Training event

(Describe in narrative form how the training proceeds.) As an example: Participants begin to arrive between 7:30 am and 8:00 am. They mill around drinking juice and coffee and chatting with fellow employees. The instructor circulates, shakes hands to introduce self and learn a little about the participants. At 8:00 am precisely, the instructor requests participants to take their seats. The course is about to begin...

8:00 **Welcome.** The instructor welcomes the group and introduces himself briefly. The instructor emphasizes that the [course title] requires their participation to make it work and that it will also be an enjoyable learning experience.

8:05 **Assessment of current competencies.** Participants turn to the [course title] objectives of the and rate themselves (5-point scale) on how competent they feel they are with respect to each one...

8:10 **Rationale for the program.** The instructor flips on an audiotape. A telephone rings... and immediately participants are plunged into a dialogue...

Post-training

(Explain what each participant will do once the training is completed. Include supervisor role, if relevant. List events in point form with brief explanations. Describe post-course questionnaire, if relevant.)

[course title] **Design Document**

What is a Design Document?

A design document for a course is analogous to the blueprint for a house. It defines and describes the final products. This document specifies the objectives and structure that the course designer recommends for the [course title].

These specifications, like a blueprint, offer reviewers a chance to examine the structure before the finished product is built. If any of the fundamental components (e.g. objectives, learning activities, media, tests) require changing, it is much easier to make the modifications before actual draft development begins.

This design document has several features that will not be included in the prototype draft. Specifically, it contains more detailed objectives for each module than the learners will see. The design document also gives a brief description of the instructional events and evaluation methods that will be used to present the content.

The prototype draft materials, on the other hand, will include several features not found in the design document. These draft materials will contain introductory, transitional and summary text to move participants through the program. In addition, the drafts will include fully written instructor guides, presentation materials and participant exercises. In short, the prototype draft materials will contain all the pieces that make up the finished course including specifications for all illustrations and graphics.

Reviewing Suggestions

The following guidelines will help ensure that the course developer can take full advantage of your expertise and feedback based on your review of this document.

Use the following questions to guide your review of this design document:

- Is all critical information included in the course? If no, specify what is missing?
- Are there topics that can be removed, shortened or which seem inappropriate to the target audience and goals of the course? Please specify.

- Are the instructional strategies appropriate for the target audience? If not, recommend changes.
- Do the exercises and activities seem appropriate for the target audience? If not, make recommendations.
- Do the suggested tests appear to appropriately measure skill and knowledge of the objectives? If not, recommend changes.
- During your review, please make your comments as **specific** as possible. Write all your questions and/or comments directly on this document as they occur to you.

TABLE OF CONTENTS

Introduction

Introduction to the Instructor Guide
Course in brief (including schedule)
Course preparation checklist
Final instructions
Registration information (if appropriate)

At the beginning

Welcome, course objectives, introduction
Pre-test (if appropriate)
Pre-test answers (if appropriate)

Course Activities

Activity One
Activity Two
Activity Three
...

At the end

Post-test (if appropriate)
Post-test answers (if appropriate)
Objectives revisited
Course evaluation

Wrap-Up

Steps to follow at the end of a course
Course report

Appendices

Exercise sheets
Overhead transparencies
Resources

ACTIVITY TITLE

#

PREPARATIONS :

OBJECTIVES :

LENGTH OF ACTIVITY :

ACTUAL TIME :

Do / Resources / Time

Say

ACTIVITY TITLE

#

Do / Resources / Time	Say

TABLE OF CONTENTS

Introduction

Objectives of the course

Course notes and exercises

(in same sequence as activities specified in Instructor Guide)

Objectives of the course - - revisited - -

Course evaluation

Glossary

Resources

TABLE OF CONTENTS

Introduction

Prerequisite skills

Module objectives

Time required

Equipment/Material required

Preparation checklist

Whom to contact for assistance

Activity sequence

Allotted time for each activity

Learner instructions

Activities (in sequence)

(includes all exercises and notes -- notes can also be in a separate manual)

Exercise answer sheets

Module test

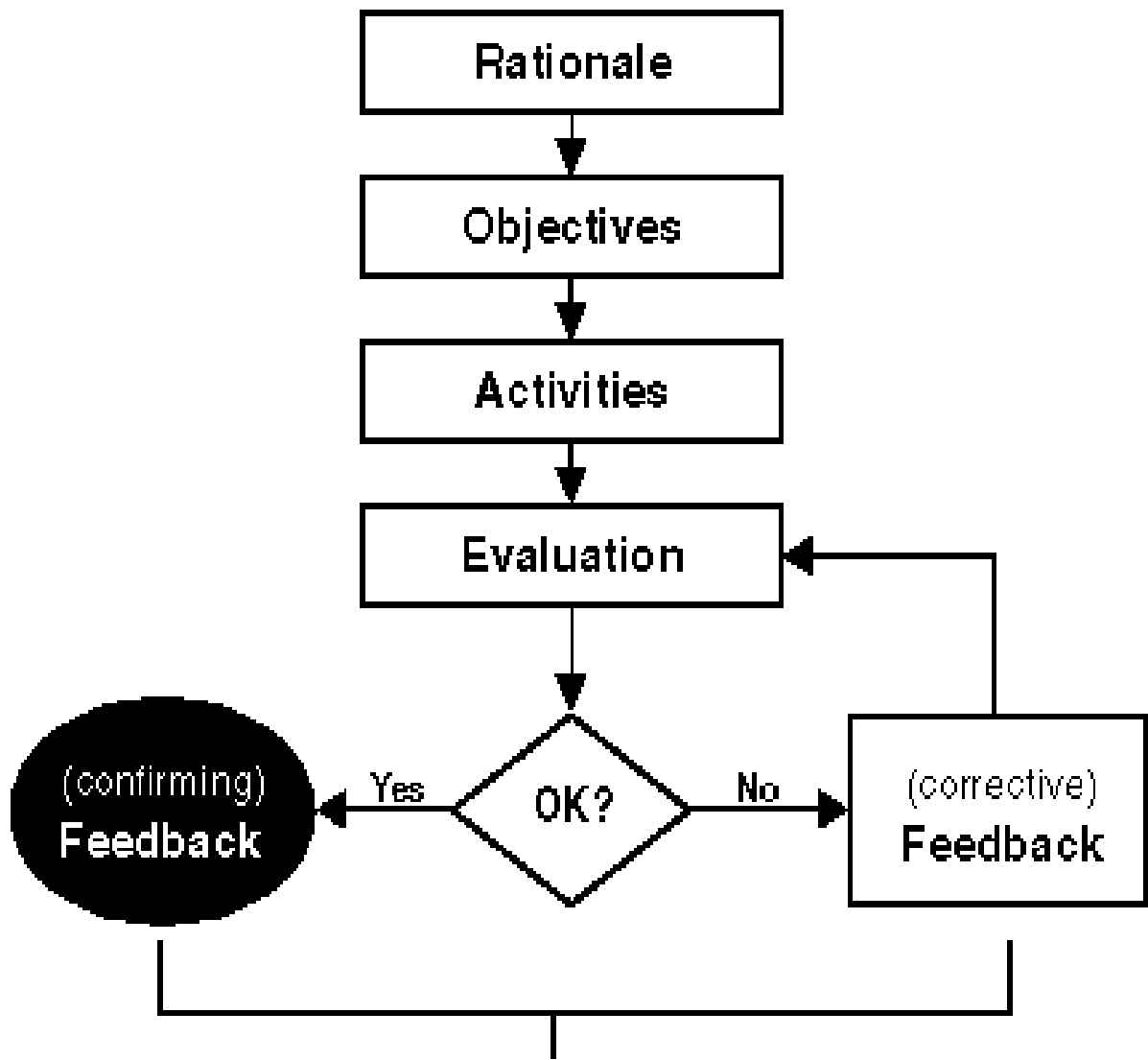
Module test answer sheet

Video and/or audio scenarios (if necessary)

Course evaluation

Glossary

Resources



Tell them if they've got it right. Correct them where they've gone astray.

Based on the need for training, the characteristics of the target population, nature of the course content, training context, course design and delivery system/media, the following experts are required to review the prototype materials:

Type of Expertise	Name and Contact Information
<input type="checkbox"/> Subject-matter content	
<input type="checkbox"/> Instructional design	
<input type="checkbox"/> Media Selection	
<input type="checkbox"/> Communications	
<input type="checkbox"/> Management	
<input type="checkbox"/> Cultural/religious/gender/race	
<input type="checkbox"/> Legal	
<input type="checkbox"/> Labor relations/union	
<input type="checkbox"/> Regulatory	
<input type="checkbox"/> Language	

Course Information

Course Title: _____

Reviewer Information

Name: _____ Date reviewed: _____

Department and location: _____

Phone number: _____

This section has three parts:

Part A: Technical Content -- questions concerning the technical accuracy of the material and its completeness.

Part B: Relevance -- questions concerning the job relevance and timelines of the course.

Part C: Course Design -- questions concerning the instructional integrity of the course.

Directions:

1. If there is an opportunity, take the entire course just as the learners would. If this is not possible, review the content of the major units, exercises, case problems, audio-visual media, screen displays, general course organization, and so on.
2. Complete an *Error/Modification List* as you work through the course. Note any errors in the content or any areas requiring modification in order to meet company standards or training needs. This sheet will help you develop your recommendations at the end of the review.
3. Answer all questions in each part.
4. Using the Subject-Matter Expert Evaluation Guidelines, which give an explanation of the evaluation ratings, complete the summary sheet at the end.

Note: Only answer those questions which are relevant to the course under review.

Error/Modification List

Course: _____

Evaluator: _____ Date: _____

Page Number/Script Reference/ Programming Reference	Error/Required Modification

Part A: Technical Content

Indicate your response with a check mark (✓). Use the "Comments" section to explain your response, if you wish.

	Yes	No
1. Is the content accurate? (All information is correct.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
2. Is the information in the course complete? (All important topics are included.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
3. Is all information given to students necessary? (The course does <i>not</i> contain superfluous information.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
4. Is the level of difficulty appropriate for the target population? (Material is neither too easy nor too difficult.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
5. Are exhibits, charts, diagrams, etc., accurate? (There are no technical errors.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		

	Yes	No
6. Do exhibits, charts, diagrams, etc., contain realistic, relevant material that supplements learning? (Material is meaningful.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
7. Is/are case problem(s) relevant? (It [they] simulate[s] job tasks, skills, and knowledge.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
8. Are contents and solutions of case problem(s) accurate? (There are no technical errors.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
9. Is content of audiovisual media and/or software accurate and current? (There are no technical errors.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		

Part B: Relevance

	Yes	No
1. Is the course content job-relevant? (It is applicable to company personnel, standards, and procedures.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
2. Is the content "state-of-the-art" in its field? (The material is up-to-date.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
3. Does the course meet the needs of the target population? (It satisfies identified training requirements.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
4. Will learners completing this course be able to perform back on the job at least to a minimum level? (Learners can transfer the skills and knowledge to the job.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		

	Yes	No
5. Are performance aids provided where appropriate? (Learners do not have to study unnecessary facts or computations.)	<input type="checkbox"/>	<input type="checkbox"/>

Comments: _____

6. Are instructions to learners clear and complete? (Learners know what they are supposed to do.)	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------

Comments: _____

Part C: Course Design

Yes

No

1. Is the training sequence logical? (The course flows smoothly and is organized properly.)

Comments: _____

2. Are the media appropriate to the subject matter? (For example, "paper and pencil" is not used when a terminal for "hands-on" would be better.)

Comments: _____

3. Do the audiovisual media support the subject matter? (They contribute to learning and are not just superfluous.)

Comments: _____

4. Is the number of exercises provided sufficient for learning? (There are neither too many nor too few.)

Comments: _____

5. Do the exercises measure the appropriate skills and knowledge? (They focus on those needed to perform well.)

Comments: _____

- | | Yes | No |
|---|--------------------------|--------------------------|
| 6. Is there an adequate glossary?
(All necessary terms are correctly defined.) | <input type="checkbox"/> | <input type="checkbox"/> |

Comments: _____

- | | | |
|--|--------------------------|--------------------------|
| 7. Is there an adequate resource list?
(All references are included.) | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|

Comments: _____

Subject-Matter Expert Evaluation Guidelines

Rate the course using the following table:

If...	And...	Then...
You have checked at least one "No" in "Relevance" or "Technical Content"	You feel the course design is inappropriate or unworkable	Rate course "Unacceptable".
	You feel the course has potential	Rate course "Acceptable with major revisions".
	You feel the course is generally accurate and relevant except for minor corrections	Rate course "Acceptable with minor revisions".
You have checked "yes" for all items in "Relevance" and "Technical Content"	You would recommend the course to members of the target population/s	Rate course "Acceptable as is". (Can be implemented as designed.)

Summary Sheet**Overall rating:**

- Acceptable as is
- Acceptable with minor revisions
- Acceptable with major revisions
- Unacceptable

Recommended revisions or additional comments:

Course Information

Course Title: _____

Reviewer Information

Name: _____ Date reviewed: _____

Department and location: _____

Phone number: _____

This section has three parts:

Part A: Course Design -- questions regarding the overall characteristics and details of the course structure.

Part B: Media -- questions concerning the media design, relevance, and placement (use one sheet for each type of medium).

Part C: Administrative Information -- a checklist of administrative details that should be covered.

Directions:

1. If possible, observe instructor-led courses when taught.
2. Answer the questions in Part A, concentrating on overall course structure and unit details.
3. Complete Part B after reviewing all media.
4. Complete the checklist in Part C concerning administrative details.
5. Total the "Yes" and "No" answers for each part.
6. Complete the summary sheet at the end.

Note: Only answer those questions which are relevant to the course under review.

Part A: Course Design

Indicate your response with a check mark (✓). Use the "Comments" section to explain your response, if you wish.

	Yes	No
1. Is there an adequate introduction and/or overview? (Purpose of course is offered):	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
2. Is the overall objective well written? (Performance is clearly stated.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
3. Are the specific objectives well written? (Performance is clear.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
4. Do the criterion test items evaluate the stated performance objectives? (There is a match.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
5. Are the objectives taught in the same order in which they are listed in the Instructor Guide and the Participant Manual? (The sequence is evident.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		

	Yes	No
6. Are all stated objectives covered in the course materials? (The relationship is evident.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
7. Does the instruction provide a balanced approach to learning -- that is, explaining, exercising and evaluating? (The instruction requires frequent learner interaction through questions, exercises, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
8. Is feedback given to the learners after all exercises, tests, case work, and so on? (This may be provided via an answer key, evaluation guidelines, screen displays or it may be covered in class.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
9. Is feedback keyed to instruction to help students review weak areas? (References are stated or provided.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
10. Are all instructions clear? (You can understand them.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		

- | | Yes | No |
|---|--------------------------|--------------------------|
| 11. Are the course materials well organized for ease of use? (Learners do not have to skip around a lot or juggle books.) | <input type="checkbox"/> | <input type="checkbox"/> |

Comments: _____

- | | | |
|--|--------------------------|--------------------------|
| 12. Are performance aids used to minimize the need for training in background subjects? (Job aids are included.) | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|

Comments: _____

Part B: Media

Use one sheet for each type of medium. Indicate with a check mark (✓) the type of medium reviewed:

Audiotape Videotape Slide/tape Computer

Other (describe): _____

Indicate your response with a check mark (✓). Use the "Comments" section to explain your response, if you wish.

	Yes	No
1. Does the medium contribute to learning? For example, does it do any of the following:		
• Supplement or reinforce text?	<input type="checkbox"/>	<input type="checkbox"/>
• Introduce new subject matter?	<input type="checkbox"/>	<input type="checkbox"/>
• Provide a change of pace?	<input type="checkbox"/>	<input type="checkbox"/>
• Guide learners through exercises?	<input type="checkbox"/>	<input type="checkbox"/>
• Provide examples or demonstrations?	<input type="checkbox"/>	<input type="checkbox"/>
• Provide adequate opportunities for practice?	<input type="checkbox"/>	<input type="checkbox"/>

Comments: _____

2. Does the medium's placement in the course coordinate logically with the other materials? (Transitions are smooth.)	<input type="checkbox"/>	<input type="checkbox"/>
---	--------------------------	--------------------------

Comments: _____

	Yes	No
3. Is the medium professionally designed and presented? (It is aesthetically pleasing.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
4. Are all media contents clear and understandable? (They are legible and comprehensible.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
5. Is the type of medium used appropriate for the material being presented? (Slides are not used when motion is required, for example.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
6. Are the content and style of the medium current? (They are up-to-date.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		
7. Does the medium content satisfy concerns regarding sex, race, creed, and national origin? (There is no sexist language, various groups are positively represented in visuals, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____ _____		

8. If written, is the reading level appropriate for the target population? (It is at a readability level suitable for the anticipated population.)

Yes

No

Comments: _____

Part C: Administrative Information

Indicate with a check mark () which items are included in the training materials.

	Yes	No
1. Instructor guide	<input type="checkbox"/>	<input type="checkbox"/>
2. Target population description	<input type="checkbox"/>	<input type="checkbox"/>
3. Average course length	<input type="checkbox"/>	<input type="checkbox"/>
4. Recommended training flow or pathing	<input type="checkbox"/>	<input type="checkbox"/>
5. Course schedule	<input type="checkbox"/>	<input type="checkbox"/>
6. Time frames (unit and whole program)	<input type="checkbox"/>	<input type="checkbox"/>
7. Course administrator's qualifications	<input type="checkbox"/>	<input type="checkbox"/>
8. Recommended learner/instructor interaction	<input type="checkbox"/>	<input type="checkbox"/>
9. List of learner materials	<input type="checkbox"/>	<input type="checkbox"/>
10. List of administrative materials	<input type="checkbox"/>	<input type="checkbox"/>
11. Evaluation measures (tests, answer keys, completion requirements)	<input type="checkbox"/>	<input type="checkbox"/>
12. Instructor/learner ratio (if relevant)	<input type="checkbox"/>	<input type="checkbox"/>
13. Facilities requirements	<input type="checkbox"/>	<input type="checkbox"/>
14. Equipment requirements	<input type="checkbox"/>	<input type="checkbox"/>
15. Learner prerequisites	<input type="checkbox"/>	<input type="checkbox"/>
16. Description of course evaluation	<input type="checkbox"/>	<input type="checkbox"/>
17. Follow-up evaluation	<input type="checkbox"/>	<input type="checkbox"/>
18. Glossary	<input type="checkbox"/>	<input type="checkbox"/>
19. References, resources and/or additional readings	<input type="checkbox"/>	<input type="checkbox"/>

Course Design Evaluation Guidelines

Rate the course using the following table:

If...	And...	Then...
You have checked at least one "No" in any of the three parts	You feel the course design is inappropriate or unworkable	Rate course "Unacceptable".
	You feel the course has potential	Rate course "Acceptable with major revisions".
	You feel the course is generally accurate and relevant except for minor corrections	Rate course "Acceptable with minor revisions".
You have checked "Yes" for all items	You would recommend the course to members of the target population/s	Rate course "Acceptable as is". (Can be implemented as designed.)

Summary Sheet**Overall rating:**

- Acceptable as is
- Acceptable with minor revisions
- Acceptable with major revisions
- Unacceptable

Recommended revisions or additional comments:

Reviewer Information

Name: _____ Date reviewed: _____

Department and location: _____

Phone number: _____

You have agreed to conduct a [type of review] review of [course title]

Directions:

1. Please examine all materials thoroughly. Note inadequacies and/or make corrections right on the materials.
2. On completion of your review, please rate the course:
 - Acceptable as is
 - Acceptable with minor revisions
 - Acceptable with major revisions
 - Unacceptable
3. Please attach this sheet to the materials, write your comments and recommended revisions below and return the entire package to: [designer's name] by [date].

Comments and recommended revisions: (Attach extra sheets if necessary.)

Course Title: _____

Part of Course: _____

Date: _____ **Number of learners interviewed:** _____

At convenient moments during the course (e.g. at lunch breaks, after a tryout session), discreetly interview one learner or a small group of learners using the following questions. Ten to fifteen minutes is sufficient.

1. Which parts of the course/material did you find the best and most useful? Why?

2. Which parts of the course/material did you find unclear or ambiguous? Why?

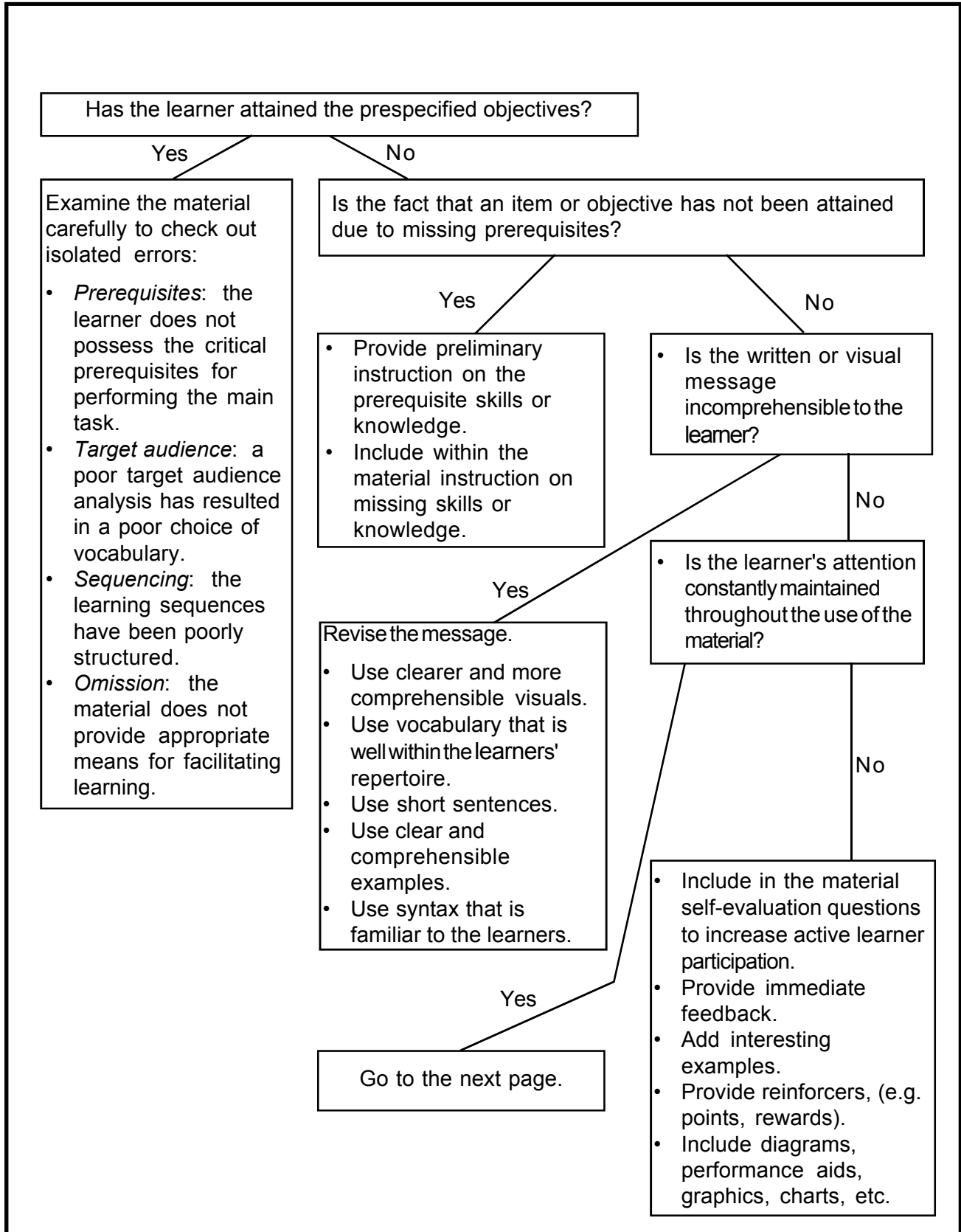
3. What is your overall reaction to this course/material? Why?

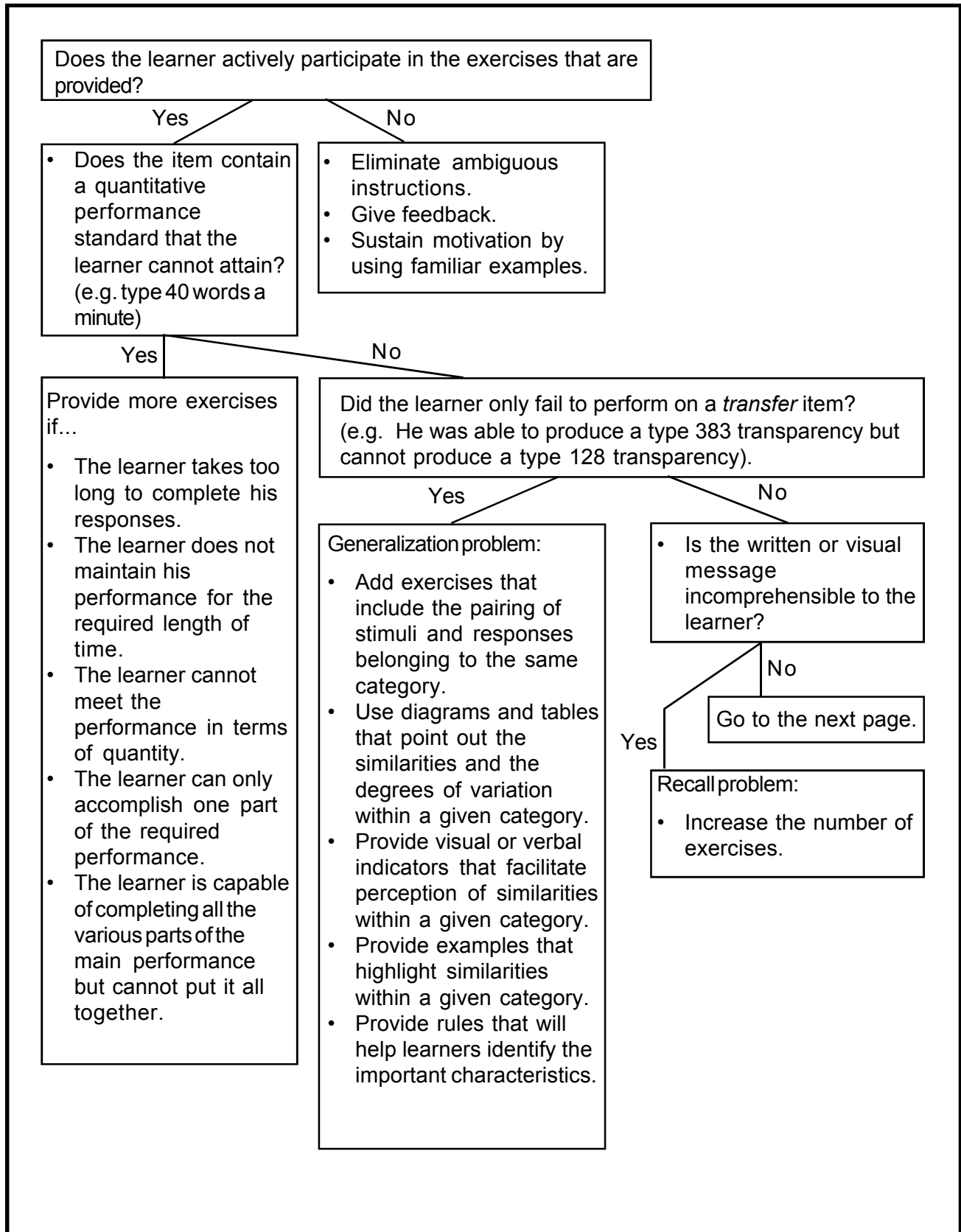
4. Make two suggestions to improve this course/material.

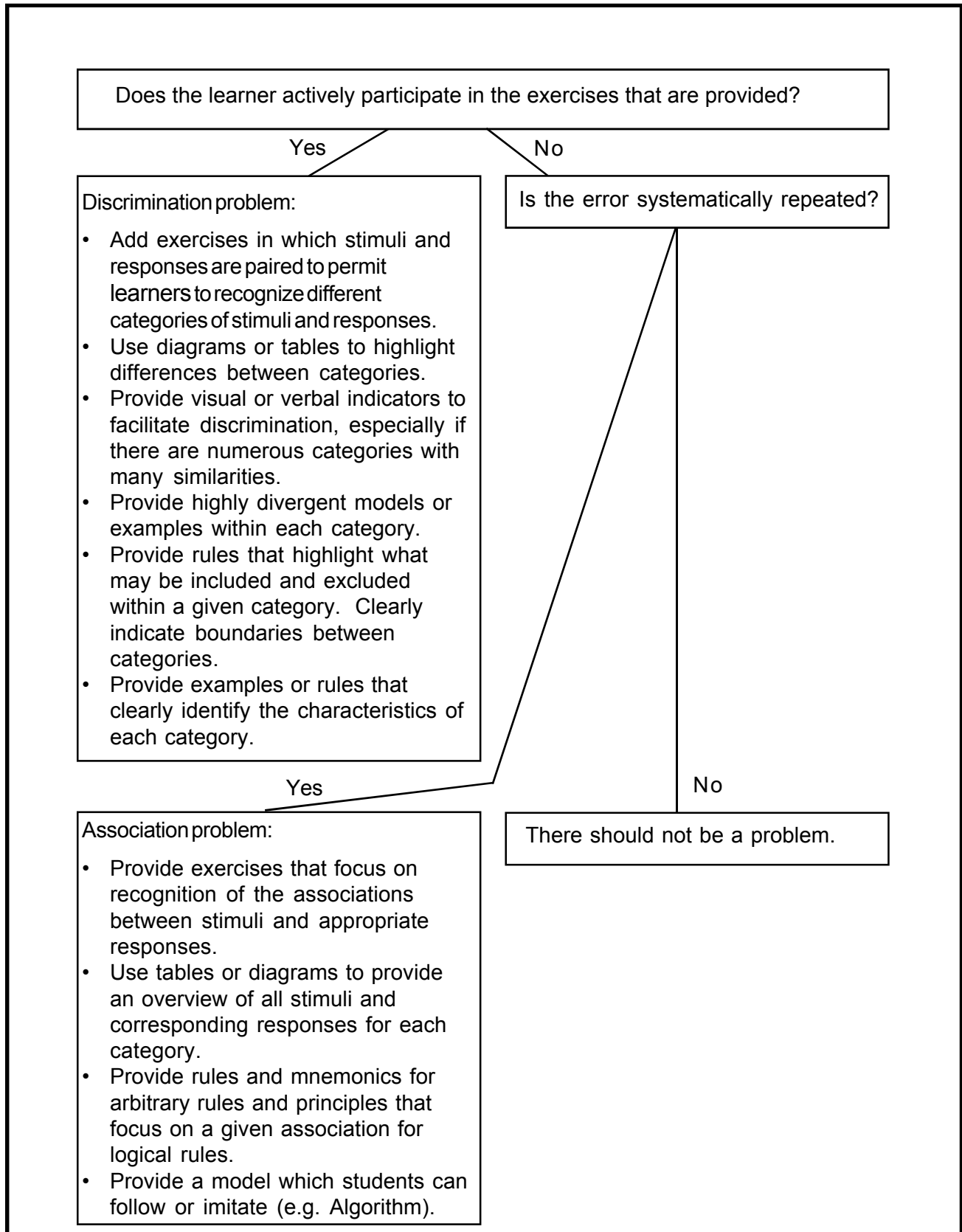
As soon as possible after a learner verification tryout session, transfer all information recorded directly on the course materials to the **Data Recording Sheets (DRS)** as follows:

1. Go through all sets of materials page by page.
2. When you spot a problem or correction, no matter how minor, indicate the reference in the **Reference** column. Give page and line number counting down from the top (e.g. Transparency #, line #; Instructor Guide page #; Participant Manual page #, exercise #, line #).
3. In the **Original Version** column, write what the original says or refer to the visual that is shown.
4. In the **Feedback** column, state what reactions, responses or remarks the learners (or instructor) made or did not make. Do not interpret this feedback. Describe it only.
5. In the **Revision Prescription** column, state succinctly what revisions you recommend. Use the imperative form to be succinct (e.g. Change "he" to "he or she").
6. In the **Comments** column, give any reason, opinion or explanation you would like to make relative to the item. Limit entries in this column to essential clarification - to help the course developer understand why you recommended a particular revision.
7. If you interviewed any subjects using the **Learner Interview Guide** attach these to the DRS.

Reference	Original Version	Feedback	Revision Prescription	Comments







1. Determine standards to provide page-to-page consistency. Examples of standards include:
 - Top, bottom and side margins
 - Typeface, type size and spacing specifications for text, titles, sub-titles and captions
 - Spaces between columns and around figures and illustrations
 - Borders for graphics, tables or charts.
 - Type of highlights for titles, warnings, notes, key points, etc.

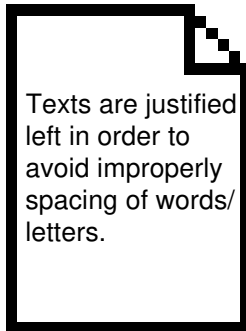
Being consistent doesn't mean being boring!

2. Use contrasting elements such as:
 - Large, bold titles, dark illustrations or blocks of text offset by lighter areas, white spaces or small type.
 - Shades of "gray".
 - Asymmetrical illustrations or blocks of text.

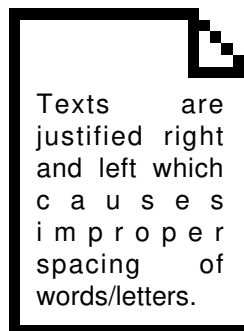
Checklist for Evaluating Print Instructional Materials

- Texts are left justified in order to avoid improper spacing of words/letters.

Like this:

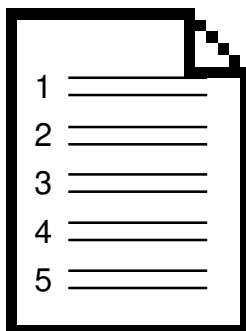


Not like this:

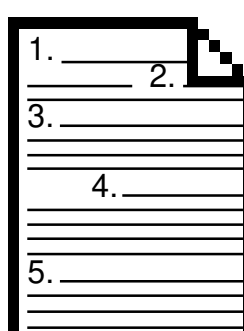


- Blocks of text and step-by-step instructions are organized to make information easy to follow.

Like this:

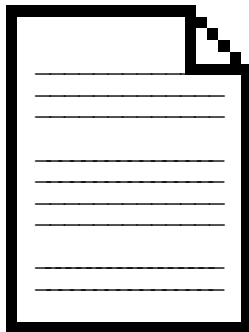


Not like this:

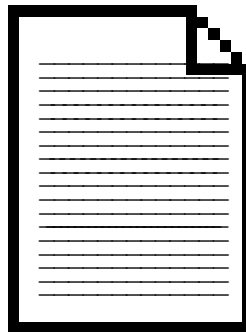


- Paragraphs are separated and set off by sufficient white space.

Like this:

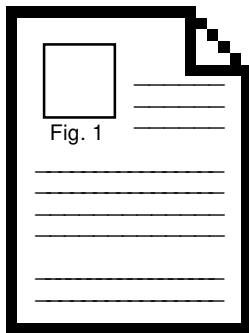


Not like this:

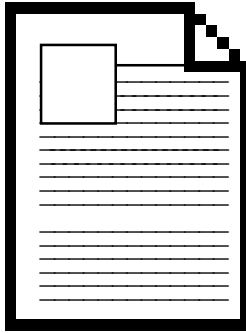


- Pictures or diagrams are clearly identified and set off by sufficient white space.

Like this:

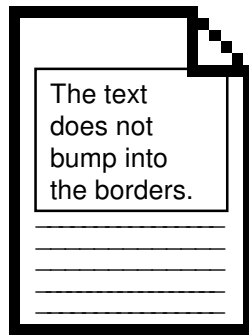


Not like this:

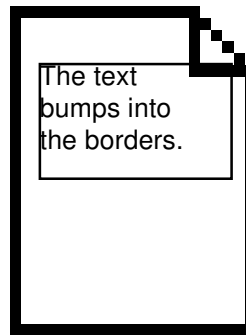


- Text in boxes is indented on all sides and doesn't bump into the borders.

Like this:

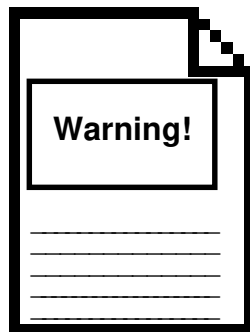


Not like this:

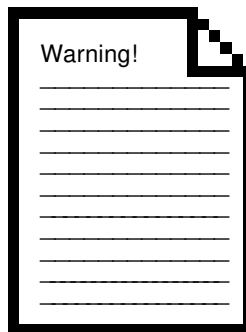


- Warnings or key points are highlighted and easy to locate.

Like this:

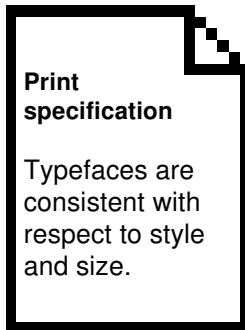


Not like this:



- Typefaces are consistent with respect to style and size.

Like this:

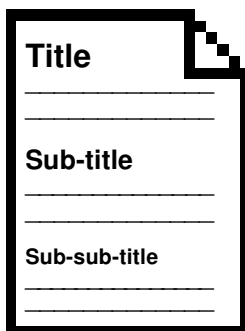


Not like this:

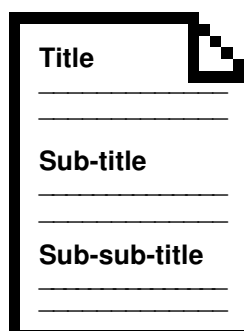


- Sub-title sizes clearly indicate the hierarchy of information and are easy to locate.

Like this:

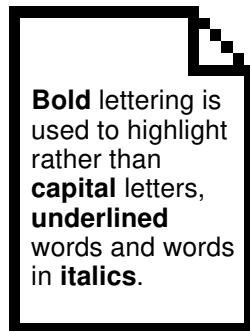


Not like this:

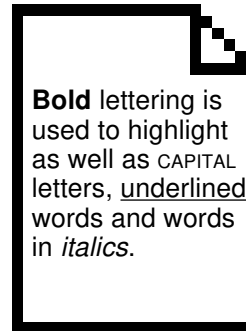


- Bold lettering is used to highlight rather than capital letters, underlined words and words in italics.

Like this:

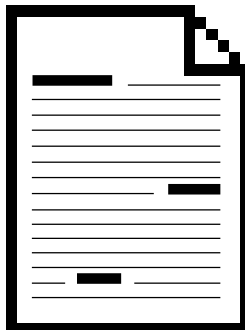


Not like this:

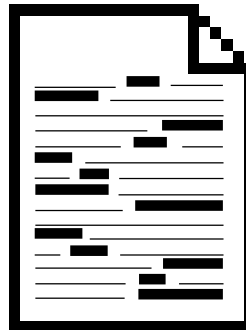


- Highlights are used sparingly so as to maintain their impact.

Like this:



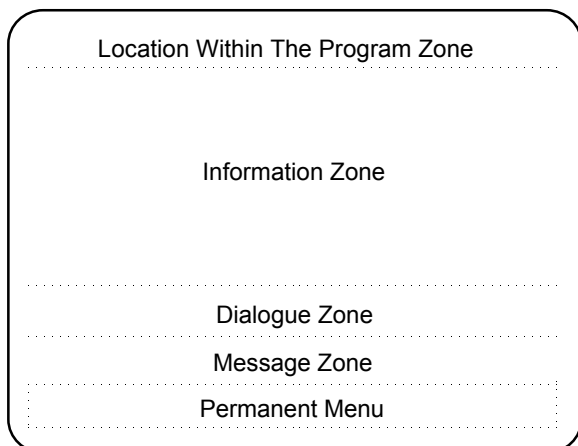
Not like this:



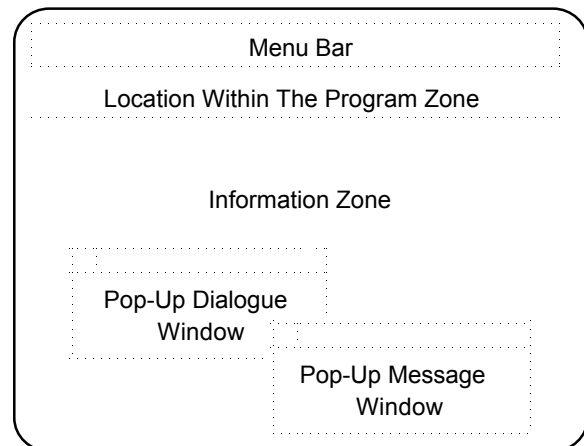
1. Divide the screen lay-out into zones. Examples of zones include:

- Location within the program (e.g. Page 1/3, Module 2/5, Lesson 3/10): position at the top right or bottom right of the screen.
- Information: use the major space of the screen.
- Dialogue: position in a pop-up window, dialogue box or in the lower part of the screen.
- Menu bar or permanent menu: position near the top or bottom of the screen.
- Message: position in a pop-up window or near the bottom of the screen.

First example:



Second example:



2. Determine standards and attributes for each zone and element. Examples of standards include:

- Format of all zones and screens.
- Background color for the program or different parts of the program such as modules, lessons, exercises, etc.
- Color for blocks of text, graphics, menu items, etc.
- Size and color for characters.

Checklist for Evaluating Screen Display

- Zones and elements are well organized and balanced.
- There is a good contrast between the background color and the text so as to make it easy to read.
- Colors used are harmonious, gentle on the eyes and legible.
- Blocks of text and graphics are set off by sufficient white space.
- Blocks of text consist of three or four short sentences.
- The number of words per line is limited to ten to twelve.
- Blocks of text, menus, pop-up windows and messages, are consistently placed in the same zone and displayed in the same format on all screens.
- In the menus, the most frequently used items are displayed first.
- Graphics are simple, easy to interpret and set off by sufficient white space.
- Symbols and icons are simple and meaningful.
- The user can return to a previous screen-page or section any time.
- The user can quit the program any time.

Print Materials	Yes	No	Comments
1. Is type legible?	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. Is there sufficient space for learner responses?	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. Are print colors correct?	<input type="checkbox"/>	<input type="checkbox"/>	_____
4. Is paper stock correct?	<input type="checkbox"/>	<input type="checkbox"/>	_____
5. Are pages clean?	<input type="checkbox"/>	<input type="checkbox"/>	_____
6. Is the layout clear?	<input type="checkbox"/>	<input type="checkbox"/>	_____
7. Are pages numbered correctly?	<input type="checkbox"/>	<input type="checkbox"/>	_____
8. Are there typographical errors?	<input type="checkbox"/>	<input type="checkbox"/>	_____
9. Do printed instructions match verbal/visual instructions?	<input type="checkbox"/>	<input type="checkbox"/>	_____
10. Is the language consistent with other course components?	<input type="checkbox"/>	<input type="checkbox"/>	_____
Audio Materials	Yes	No	Comments
1. Are voices clear?	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. Can every word be understood?	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. Are there distracting noises in the narration?	<input type="checkbox"/>	<input type="checkbox"/>	_____
4. Are there tape noises?	<input type="checkbox"/>	<input type="checkbox"/>	_____

	Yes	No	Comments
5. Are there script errors?	<input type="checkbox"/>	<input type="checkbox"/>	_____
6. Can edit sounds be heard?	<input type="checkbox"/>	<input type="checkbox"/>	_____
7. Are voices credible?	<input type="checkbox"/>	<input type="checkbox"/>	_____
8. Are pauses the right length?	<input type="checkbox"/>	<input type="checkbox"/>	_____
9. Is music appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	_____
10. Is music well integrated?	<input type="checkbox"/>	<input type="checkbox"/>	_____
11. Is music level balanced with narration?	<input type="checkbox"/>	<input type="checkbox"/>	_____
12. Is the amount of leader correct?	<input type="checkbox"/>	<input type="checkbox"/>	_____
13. If used with synchronized visuals, is synchronization accurate?	<input type="checkbox"/>	<input type="checkbox"/>	_____
Slides	Yes	No	Comments
1. Is picture in focus?	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. Is there sufficient depth of focus?	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. Is exposure correct?	<input type="checkbox"/>	<input type="checkbox"/>	_____
4. Is lighting correct?	<input type="checkbox"/>	<input type="checkbox"/>	_____
5. Is color balance even and correct?	<input type="checkbox"/>	<input type="checkbox"/>	_____

	Yes	No	Comments
6. Is the object of importance prominent enough?	<input type="checkbox"/>	<input type="checkbox"/>	_____
7. Are there distracting visual elements?	<input type="checkbox"/>	<input type="checkbox"/>	_____
8. Are titles and words legible?	<input type="checkbox"/>	<input type="checkbox"/>	_____
9. Does the visual match the audio/verbal script?	<input type="checkbox"/>	<input type="checkbox"/>	_____
10. Is there consistency among visuals?	<input type="checkbox"/>	<input type="checkbox"/>	_____
11. Are visuals clear?	<input type="checkbox"/>	<input type="checkbox"/>	_____
Overhead Transparencies	Yes	No	Comments
1. Is print sufficiently large?	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. Are there few enough words?	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. Are there spelling/typographical errors?	<input type="checkbox"/>	<input type="checkbox"/>	_____
4. Are color and contrast appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	_____
5. Is there a correct balance between words and graphics?	<input type="checkbox"/>	<input type="checkbox"/>	_____
6. Are graphics clear?	<input type="checkbox"/>	<input type="checkbox"/>	_____
7. Is the format consistent across transparencies?	<input type="checkbox"/>	<input type="checkbox"/>	_____

	Yes	No	Comments
8. Do the transparencies match the verbal script?	<input type="checkbox"/>	<input type="checkbox"/>	_____
9. Are transparencies clean?	<input type="checkbox"/>	<input type="checkbox"/>	_____
10. If there are overlays are they properly aligned?	<input type="checkbox"/>	<input type="checkbox"/>	_____
Video Materials	Yes	No	Comments
1. Is the format correct?	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. Are titles and logos accurate/appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. Is music appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	_____
4. Are visual sequences accurate (according to script)?	<input type="checkbox"/>	<input type="checkbox"/>	_____
5. Are voices/actors credible?	<input type="checkbox"/>	<input type="checkbox"/>	_____
6. Are scenes credible?	<input type="checkbox"/>	<input type="checkbox"/>	_____
7. Are all visual sequences technically accurate?	<input type="checkbox"/>	<input type="checkbox"/>	_____
8. Are stereotypes avoided?	<input type="checkbox"/>	<input type="checkbox"/>	_____
9. Is cultural diversity represented?	<input type="checkbox"/>	<input type="checkbox"/>	_____
10. Is editing smooth?	<input type="checkbox"/>	<input type="checkbox"/>	_____
11. Is lighting correct?	<input type="checkbox"/>	<input type="checkbox"/>	_____

	Yes	No	Comments
12. Is color balance even and correct?	<input type="checkbox"/>	<input type="checkbox"/>	_____
13. Are objects of importance appropriately displayed?	<input type="checkbox"/>	<input type="checkbox"/>	_____
14. Are there auditory distractions?	<input type="checkbox"/>	<input type="checkbox"/>	_____
15. Are there visual distractions?	<input type="checkbox"/>	<input type="checkbox"/>	_____
16. Are titles legible?	<input type="checkbox"/>	<input type="checkbox"/>	_____
17. Do audio and visual match?	<input type="checkbox"/>	<input type="checkbox"/>	_____
18. Is the tape clean of electronic noise?	<input type="checkbox"/>	<input type="checkbox"/>	_____
19. Is the video of appropriate length?	<input type="checkbox"/>	<input type="checkbox"/>	_____
20. Does the video match the treatment and script?	<input type="checkbox"/>	<input type="checkbox"/>	_____
Computer-based Materials	Yes	No	Comments
1. Is the software compatible with the hardware?	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. Is the software accurate (no technical/content errors)?	<input type="checkbox"/>	<input type="checkbox"/>	_____

	Yes	No	Comments
3. Is the software learner friendly?	<input type="checkbox"/>	<input type="checkbox"/>	_____
4. Is the software interactive and learner responsive?	<input type="checkbox"/>	<input type="checkbox"/>	_____
5. Is feedback accurate and timely?	<input type="checkbox"/>	<input type="checkbox"/>	_____
6. Are screen displays legible?	<input type="checkbox"/>	<input type="checkbox"/>	_____
7. Are visuals clear and comprehensible?	<input type="checkbox"/>	<input type="checkbox"/>	_____
8. Are there glitches or bugs?	<input type="checkbox"/>	<input type="checkbox"/>	_____
9. Are learner responses appropriately recorded?	<input type="checkbox"/>	<input type="checkbox"/>	_____
10. Are learner results appropriately displayed for verification by training staff?	<input type="checkbox"/>	<input type="checkbox"/>	_____
11. Are colors (if available) appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	_____
12. Is the software coordinated with other course components?	<input type="checkbox"/>	<input type="checkbox"/>	_____
13. Is the software readily accessible?	<input type="checkbox"/>	<input type="checkbox"/>	_____

	Yes	No	Comments
14. Can the software be readily updated?	<input type="checkbox"/>	<input type="checkbox"/>	_____
15. Is necessary confidentiality maintained?	<input type="checkbox"/>	<input type="checkbox"/>	_____
16. Can the software be easily distributed and maintained at various required locations?	<input type="checkbox"/>	<input type="checkbox"/>	_____