Forecasting Training Costs: Step-By-Step Guide for 1ˢᵗ Time Users

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1. Introduction

Two approaches are presented in this Guide:

Preliminary Cost Analysis #1: To quickly generate high order estimates. Key cost data is collected under the **Data Collection Wizard** and submitted for analysis. This approach: (a) is simple to use, (b) forecasts the costs of alternate delivery options within few minutes, and (c) estimates can be easily edited/refined under the **Course Analysis** folder.

Detailed Cost Analysis #2: To generate a detailed breakdown of training program costs. To facilitate the forecasting of development, hardware, administrative, management, travel, instructors, facilities, transmission, maintenance and support costs; templates can be created and made available to all analysts. In addition to speeding the analysis process, Cost Templates ensure consistency in cost estimates, as well as facilitates carrying out multiple "what if scenarios". Detailed analysis is conducted under the **Course Analysis** folder.

For in depth information, please refer to Chapters 3 to 10 of ADVISOR "Selecting the Right Blend of Delivery Options" User Guide. Remember that context sensitive help for each screen is also available by clicking on Help (button).

2. Table of Contents

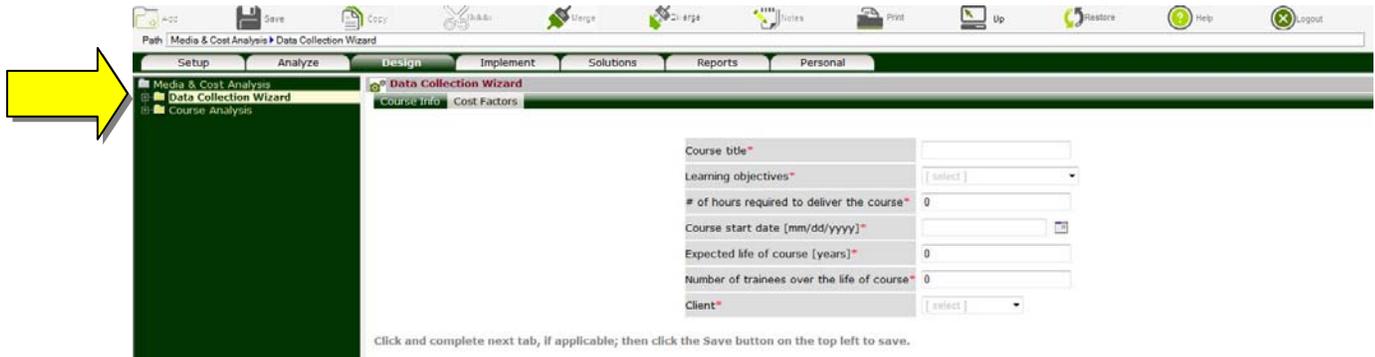## 3. Approach #1: Preliminary Cost Analysis

<u>Objective:</u> To quickly generate high order estimates of the costs of alternate delivery options.

Step 1. To analyze a new course, click on the 📁**Data Collection Wizard** folder.

P.S. To edit an existing course or conduct a detailed analysis of a new course, click on the 📁 **Course Analysis** folder.

Step 2. Click on Add (button) (top left corner).

Step 3. Critical data required for forecasting the costs of a new course is presented in this section. Course info is requested in the 1ˢᵗ tab and cost data in the 2ⁿᵈ [Cost factors] tab. All fields with an asterisk (*) should be completed. But of course, the more data you provide the better the results. Once all screens (i.e., the 2 tabs) have been completed, click Save.

For your reference, a brief description of data collected is presented below.

Step 3a. <u>Primary Information</u>

Course Title	Input the course title, maximum 200 characters
Learning objectives	What is the learning outcome/objective of this course? If more than one, what is the most dominant category?
# of hours required to deliver the course	Estimate the number of hours required to deliver the course in an instructor-led format.
Course start date [dd/mm/yyyy]	Indicate the expected delivery date of the course. If the course exists, then use today's date as a reference point.
Expected life of course [years]	Over how many years can the course be delivered before it becomes obsolete, irrelevant or requires major changes? If the course exists, estimate the remaining life, using today's date as a reference point.
Number of trainees over the life of the course	Estimate the number of learners over the Life of the course. If the course exists, estimate the number of learners using today's date as a reference point.
Client	Indicate the Client for this course. In other words, costs and resources for the course are allocated to which Client.

Step 3b. <u>Cost Factors</u>

% of course that changes each year	Estimate the percentage of the course content that may change each year. The estimate should be indicated as a percentage of the initial development effort [10% each year, for example]. Although a course may have a life span of three years, for example, 15% of the content may change each year.
Annual salary of individuals taking the course	Input the average annual salary of trainees [$40,000, for example]. Data on average annual salary of trainees may be obtained from personnel or payroll department.
Organization fringe benefits factor [%]	Input the organization's fringe benefits factor. This covers all expenses including employees' benefits such as medical and dental coverage; organization's contribution to pension and other funds; as well as general operational expenses such as rent, electricity, phone, security, etc. Fringe benefits factor generally varies between 25% to 75% of employees' salary. Data on the fringe benefits factor may be obtained from personnel or payroll department.
Average number of trainees per class	Estimate the average number of trainees per class, if course is delivered in a synchronous mode.
Average number of instructors per class	Estimate the average number of instructors/facilitators per class, if course is delivered in a synchronous mode.
% of trainees that travel to course	Estimate the percentage of trainees that would have to travel to and from the course site, if course is delivered in an instructor-led format.
% of instructors that travel to course	Estimate the percentage of instructors/facilitators that would have to travel to and from the course site, if course is delivered in an instructor-led format.
Average per diem cost per individual [per day]	This includes reimbursable daily expenses for lodging, meals and tips. Data on the average per diem costs may be obtained from the payroll or accounting department.
Average travel cost per individual	This includes round-trip air, bus or train fare, local automobile mileage, taxi or local public transportation costs. You may average these costs for participants in the course. However, the method used to compute the average should be documented. Data on average travel costs may be obtained from the payroll or accounting department.
Average instructor annual salary	Input the average annual salary of instructors/facilitators, if course is delivered in a synchronous mode. Data on the annual salary of instructors may be obtained from personnel or payroll department.
Average consulting fees per class	Input the average consulting fees per class, if external subject matter experts, instructors or facilitators deliver course in a synchronous mode.

If course exists, present delivery method	Select method presently used to deliver the training, if applicable.
Effort required to develop course	Indicate the effort required to develop the course, even if course already exists, as follows:

❑ Low – a course that deals with a simple subject. The course content can be adequately presented in text, graphics and simple animation, if developed in an asynchronous mode. That is, it does not require complex animation, simulation, audio or video.

❑ Medium – a course that deals with a moderately complex subject. The course content requires text, graphics, animation, simple simulations, some audio but minimal video, if developed in an asynchronous mode.

❑ High – a course that deals with an abstract/complex subject that is difficult to comprehend. The course content requires text, graphics, complex animations and simulations as well as audio and video if developed in an asynchronous mode.

Average cost of room rental per class	Estimate facilities costs per class (hotel or conference center room rental, for example), if course is delivered in an instructor-led format.
# of administrative days required [per class]	Estimate the number of days per class required to administer the course, if delivered in an asynchronous mode. This may include registering trainees, booking a room, arranging for equipment, etc. Note that this refers to working days and not calendar days.
Cost of computer/hardware required by course	Cost of special equipment (computers or trainers, for example] required for training. If remodeling the classroom is required, then the costs should also be included.

Step 4. To view and/or modify the preliminary cost estimates, click on the 📁**Course Analysis** folder. A list of available courses is presented.
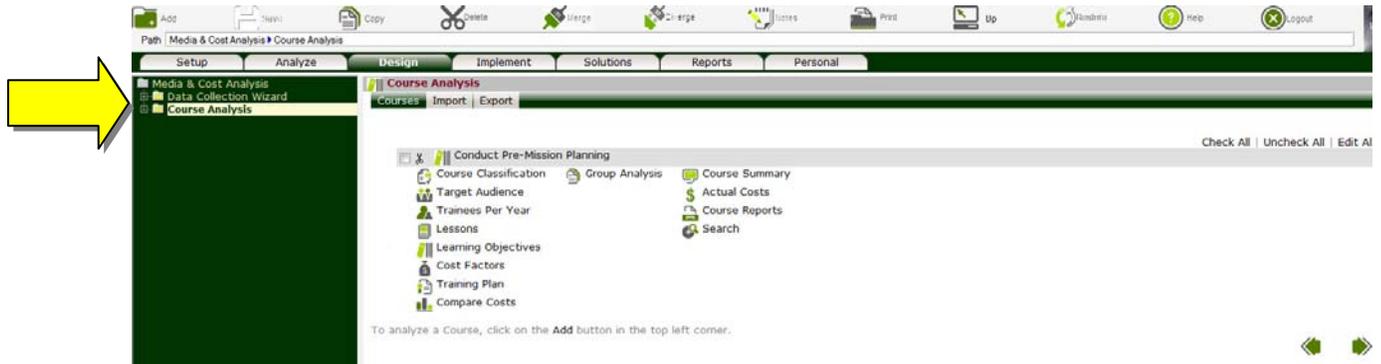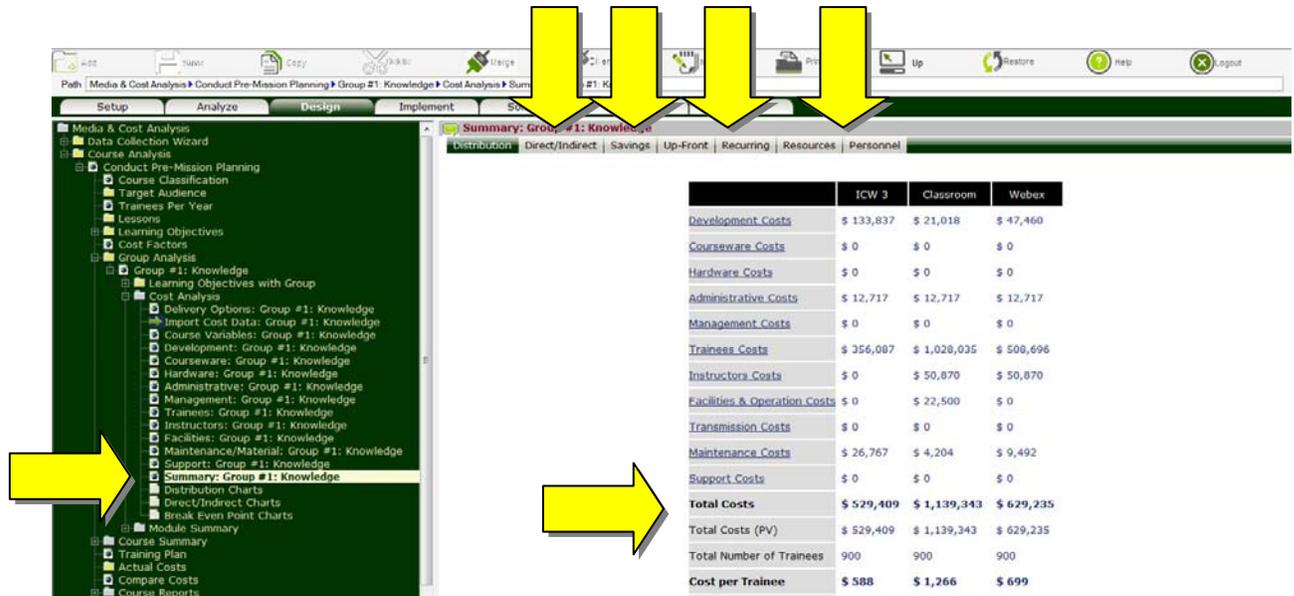

Step 5. Click on ⊞ next to the 📁**Course Analysis** folder to expand and the ⊞ next to the 🔵**(course title)** node to view available options.

Step 6. To view the results of the preliminary cost analysis, click on ⊞ next to the 📁**Group Analysis** folder to expand. A list of the sections within the course is presented. Only one group is generated by the 📁**Data Collection Wizard**.

Step 7. Each group (section) is analyzed separately to determine the most economical delivery option. Click on ⊞ next to the 🔵**(group title)** node to display the 📁**Cost Analysis** folder.

The forecasts for each module are presented under the 📁**Cost Analysis** folder. If the course has multiple modules, the costs for the entire course (i.e., all modules) are presented under the 📁 **Course Summary** folder.

Step 8. For a detailed breakdown of the costs of alternate delivery options, click on ⊞ next to the 📁 **Cost Analysis** folder to expand and then click on the 🔵**Summary** node. To hide and/or rename options, click on the 🔵**Delivery Options** node.

Step 9. You may also view direct (budget related) costs, indirect (productivity related) costs, savings that may result from utilizing alternate delivery options, start-up and recurring costs as well as personnel required to design, develop, deliver, administer, maintain and support this section by clicking on corresponding tabs.

To view graphical representations of the results, click on the 📄**Distribution Charts**, 📄**Direct/Indirect Charts** or 📄**Break Even Point Charts** nodes.

Step 10. To find out how each item (development costs, for example) is computed, click on the corresponding (🔵**Development**) node. You may also edit any field and click Save to re-compute.

Step 11. If the course has multiple sections, ADVISOR will recommend the most economical delivery option for each group. To create and compare alternate blends of delivery options, click on ⊞ next to the 📁**Course Summary** folder to expand.

Step 12. Two blends are automatically created by ADVISOR, namely: Currently Used and ADVISOR Recommendation. To view options recommended by ADVISOR, for example, click on ⊞ next to 📁**Delivery Options** folder to expand, click on ⊞ next to 🌐**ADVISOR Recommendation** node to expand, and click on the 🌐**Delivery Methods** node to view the delivery options recommended by ADVISOR.

To create additional blends, click on 📁**Delivery Options** folder, click Add (button), input the delivery option title (analyst recommendations, for example) and click Save. Click on ⊞ next to the 🌐 **(delivery option title)** node that was created, click on the 🌐**Delivery Methods** node, select the desired blend of delivery options and click Save.

Step 13. Click on 🌐 **Base of Comparison** node, select the delivery option to be used as base of comparison and click Save. In general, the Currently Used or method commonly used for the delivery of training should be selected as the base of comparison.

Step 14. For detailed breakdown of the costs of alternate blends of delivery options for course, click on the 🌐**Cost Distribution** node. You may also view direct (budget related) costs, indirect (productivity related) costs, savings that may result from utilizing alternate delivery options, start-up and recurring costs as well as personnel required to design, develop, deliver, administer, maintain and support course by clicking on corresponding tabs.

To view graphical representations of the results, click on the 📄**Distribution Charts**, 📄**Direct/Indirect Chart** or 📄**Break Even Point Charts** nodes.

Step 15. Once you have had the opportunity to evaluate and compare the costs of alternate blends of delivery options, an option should be recommended by clicking on 🌐 **User Recommendation** node, selecting the desired delivery option and clicking Save.

Step 16. A comprehensive report that documents process used to compute the costs of alternate delivery options can be generated by clicking on the 📄**Course Report** node, selecting items to be included and clicking Save. The report in html format is presented in a new window. You may print or save the report using the corresponding functions in your Browser.

Since the report is in html format, you can quickly advance to any section by clicking on the corresponding title in Table of Contents. To return to ADVISOR, close the Course Report window.

Remember that context sensitive help is also available for each screen by clicking on the Help (button). Enjoy!

4. Approach #2: Detailed Cost Analysis

Objective: To generate a detailed breakdown of training program costs.

Step 1. To analyze a new course, click on the 📁**Course Analysis** folder.

Step 2. Click on Add (button) (top left corner).

Step 3. Input requested data and click Save to create course.

> Note: You may share your analysis with colleagues (i.e., Users assigned to the same Client) by clicking on the [Sharing] tab, placing checkmarks next to their names and click Save.

Step 4. Click on ⊞ next to the 🔵**(course title)** to expand.

Step 5. Click on 🔵**Import Course Templates** node, select required Templates and click Save. You may view and edit imported data by clicking on the 🔵**Cost Factors** node.

> Note: If Templates are not available, the 🔵**Import Course Templates** node will not be presented.

Step 6. Click on the 📁**Target Audience** folder. To select audience for this course, place checkmarks next to the appropriate groups and click Save.

> Note: If Job Profiles have not been defined, the 📁**Target Audience** folder will not be presented.

Step 7. Click on 🔵**Trainees per Year** node, input the number of trainees in each year and click Save.

Step 8.   Click on **Learning Objectives** folder. To add a new learning objective, click on Add (button) (top left corner), input required information and click Save. The following issues should be considered when completing this section:

Learning Objective/Outcome:

➢ Software - refers to the ability of individuals to use a software application, an operating system, a legacy system or an information management system effectively and efficiently. Learning a software application requires the use of both cognitive and psychomotor skills. Select Software as a primary learning objective/outcome if the purpose of the learning objective is to provide personnel with the knowledge, comprehension and skills needed to use a software application and/or operating system. For example, "Personnel will be able to type and format a letter", "Personnel will be able to import charts into an MS Word document".

➢ Knowledge - refers to the ability of individuals to recall, recognize, understand, translate and interpret information as well as use learned material in specific instances. Select Knowledge as a primary learning objective/outcome if the purpose of the learning objective is to enable personnel to name parts of an object, point out certain object, state definition, classify an object into a category, contrast two objects, apply theoretical knowledge to perform a task or use a particular set of procedures. For example, "Personnel will be able to explain and describe the rules and procedures for lodging a complaint within the department."

➢ Mental Skills - refers to the ability of individuals to compare, contrast and break down a problem in order to arrive at a solution. In other words, issues that involve thinking, reasoning, analyzing, judging and inferring. Select Mental Skills as the primary learning objective/outcome if the purpose of the learning objective is to provide personnel with the skills to select and organize alternatives, or derive solutions to a problem. For example, "Personnel will be able to choose the most effective instructional strategy for specific learning outcomes", "Personnel will be able to solve mathematical formula by combining previous learned rules".

➢ Psychomotor Skill - refers to the ability of individuals to perform a physical task. A task that requires physical exertion or manipulation of an object. In other words, tasks that require physical movement. Skills are learned capabilities whose outcomes are demonstrated through speed, accuracy and quality of the performed task. Select psychomotor Skill as a primary learning objective/outcome if the purpose of the learning objective is to provide personnel with "practical skills" or "motor skills" that require perception, decision and action to perform the task. For example, "Personnel will be able to climb a telephone pole", "Personnel will be able to repair a flat tire".

➢ Attitude - refers to individuals' personal beliefs and/or preferences towards an object, situation or person. In other words, their mental state that influence behavior, choices and opinions. Select Attitude as a primary learning objective/outcome if the purpose of the learning objective is to change, in some way, the attitudes, behavior, preferences and/or value systems of personnel. For example, "Personnel will demonstrate positive attitudes and behaviors towards new work procedures", "Personnel will be more sensitive to colleagues with varied cultural backgrounds".

If a learning objective has more than one learning objective/outcome, then it should either be divided into multiple learning objectives or the most dominant category selected.

Classification:

To facilitate the process of grouping objectives with similar characteristics, each learning objectives can be classified in line with Bloom's Taxonomy. An [Auto Allocate] tab/function is also provide at the **Learning Objectives** folder to automatically group learning objectives based on learning outcome and classification.

Group:

Although it is feasible to analyze each learning objective separately to determine the most cost effective option for the delivery of training, the process can be extremely cumbersome. To drastically reduce the time needed to identify the most effective blend of delivery options without compromising the integrity of the analysis, learning objectives with similar outcome and characteristics can be grouped and analyzed as a single unit (group).

Indicate the group in which the learning objective should be placed. Please note that learning objectives can only be placed in groups with similar learning outcomes. That is, you may place all Knowledge objectives within the same group, but cannot place Knowledge objectives with objectives that deal with Mental or Psychomotor Skills.

Step 9. Click on **Cost Factors** node, input the required information under the [Trainees] and [Transmission] tabs and click Save.

If course is divided into multiple Groups (Step 8.), the costs for each group is forecasted separately. The results for each group are presented under the **Summary** node under the **Cost Analysis** folder. Once all groups have been analyzed, the results are combined to determine the most economical blend of delivery options for the course under the **Course Summary** folder.

To view the groups within the course, click on ⊞ next to **Group Analysis** folder to expand. Steps 10 through 26 should be repeated for each Group.

Step 10. Click on ⊞ next to the **(group title)** node to expand.

Step 11. Click on **(group title)** node, input required information and click Save.

Step 12. To view and modify the costs of alternate delivery options, click on ⊞ next to the **Cost Analysis** folder to expand.

Step 13. Click on **Delivery Options** node, select delivery options to be compared, input title, indicate current delivery option as well as base for comparison and click Save.
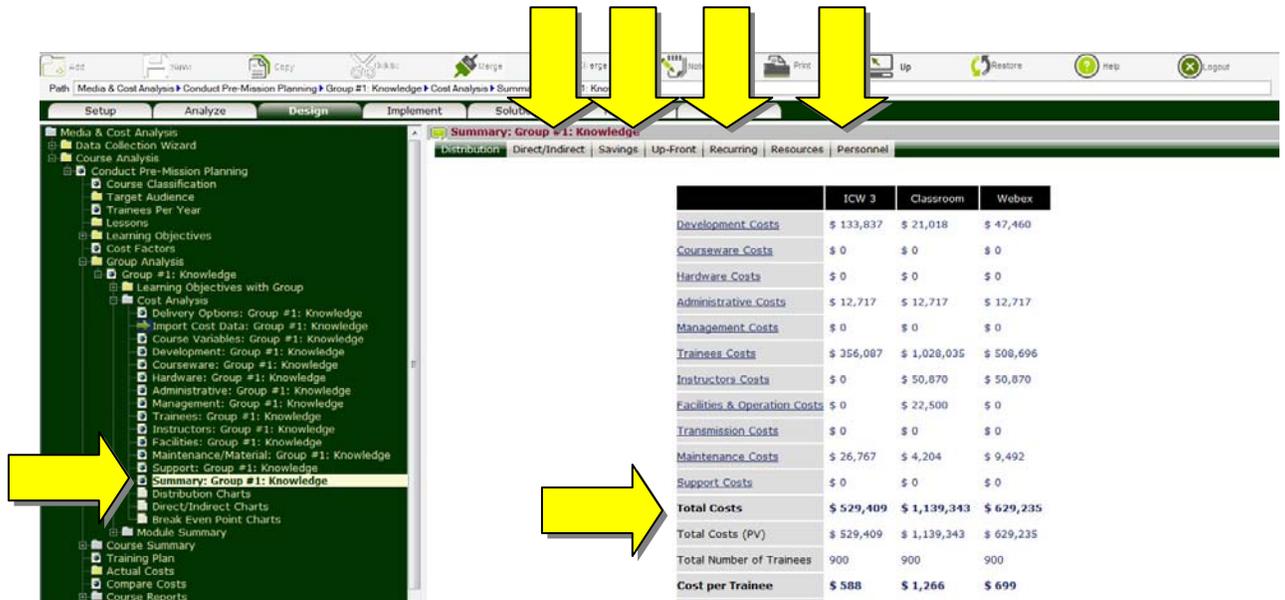
Step 14. Click on **Import Cost Data** node, select the desired Templates and click Save. You may view and edit imported data by clicking on the corresponding node under the **Cost Analysis** folder.

Note: If Cost Templates are not available, the **Import Cost Data** node will not be presented.

Step 15. Click on **Course Variables** node, input the required information for each delivery option and click Save.

Step 16. To estimate development costs, click on **Development** node, input the required information for each delivery option and click Save.

Step 17. To estimate hardware costs, click on **Hardware** node, input the required information under [Purchase] and [Operation] tabs for each delivery option and click Save.

Step 18. To estimate administrative costs, click on **Administrative** node, input the required information for each delivery option and click Save.

Step 19. To estimate management costs, click on **Management** node, input the required information for each delivery option and click Save.

Step 20. To estimate trainees' costs, click on **Trainees** node, input the required information for each delivery option and click Save.

Step 21. To estimate instructors' costs, click on **Instructors** node, input the required information for each delivery option and click Save.

Step 22. To estimate facilities' costs, click on **Facilities** node, input the required information for each delivery option and click Save.

Step 23. To estimate transmission costs, click on **Transmission** node, input the required information for each delivery option and click Save.

Step 24. To estimate maintenance costs, click on **Maintenance/Material** node, input the required information for each delivery option and click Save.

Step 25. To estimate support costs, click on **Support** node, input the required information for each delivery option and click Save.

Step 26. For a detailed breakdown of the costs of alternate delivery options, click on the 🌐**Summary** node. You may also view direct (budget related) costs, indirect (productivity related) costs, savings that may result from utilizing alternate delivery options, start-up and recurring costs as well as personnel required to design, develop, deliver, administer, maintain and support this module by clicking on corresponding tabs.

To view graphical representations of the results, click on the 📄**Distribution Charts**, 📄 **Direct/Indirect Charts** or 📄**Break Even Point Charts** nodes.

Step 27. If the course has multiple sections, the results are compiled under the 📁**Course Summary** folder to determine the cost for the entire course. To compute and compare the costs of alternate blends of delivery options, click on ⊞ next to the 📁**Course Summary** folder to expand.

Step 28. Two blends are automatically created by ADVISOR, namely: Currently Used and ADVISOR Recommendation. To view options recommended by ADVISOR, for example, click on ⊞ next to 📁**Delivery Options** folder to expand, click on ⊞ next to 🔵**ADVISOR Recommendation** node to expand, and click on 🔵**Delivery Methods** node to view delivery options recommended by ADVISOR.

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Step 29. Click on 🔵**Base of Comparison** node, select the delivery option to be used as base of comparison and click Save. In general, the Currently Used or method commonly used for the delivery of training should be selected as the base of comparison.

Step 30. For detailed breakdown of the costs of alternate blends of delivery options for the course, click on the 🔵**Cost Distribution** node. You may also view direct (budget related) costs, indirect (productivity related) costs, savings that may result from utilizing alternate delivery options, start-up and recurring costs as well as personnel required to design, develop, deliver, administer, maintain and support course by clicking on corresponding tabs.

To view graphical representations of the results, click on the 📄**Distribution Charts**, 📄**Direct/Indirect Charts** or 📄**Break Even Point Charts** nodes.

Step 31. Once you have had the opportunity to assess and compare the costs of alternate blends of delivery options, an option should be recommended by clicking on 🔵**User Recommendation** node, selecting the desired delivery option and clicking Save.

Step 32. A comprehensive report that documents process used to compute the costs of alternate delivery options can be generated by clicking on the 📄**Course Report** node, selecting items to be included and clicking Save. The report in html format is presented in a new window. You may print or save the report using the corresponding functions in your Browser.

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