A Video Workshop on How to Load and Work Through a Case Scenario

INTRODUCTION
Welcome

The Applied Learning Platform is a web-based tool that educators can use to teach and model critical thinking skills to learners, and learners can use to develop and practice their own.

Use of the Platform provides educators, learners, and stakeholders not only with evidence of learning, but more importantly, evidence of knowing that learners can apply course material in the context of authentic real-world settings.

In this video workshop, I will cover the features of the Applied Learning Platform, along with the mechanics of how educators distribute applied learning activities to learners, and how learners use the Platform to work through those activities.

The process for creating these activities using the Platform's authoring module is covered in a separate video.

Applied learning activities can range from simple drill and practice exercises, to comprehensive real-world cases and scenarios for any domain, at any level of detail.

For this workshop, I will use cases from the domains of veterinary medicine and psychotherapy.

I encourage you to view these cases through the lens of your own discipline, and think about how you and your colleagues would apply the features of the Platform to your unique teaching and learning environments.

Rest assured, you do not need to be a veterinarian, or a psychotherapist to understand what I will demonstrate.

And if you are a veterinarian or psychotherapist, I apologize in advance for the necessary simplification of these cases.

I will focus on eight processes of the Applied Learning Platform:

First, I will demonstrate how learners receive an applied learning activity in a word processing document, and then how they begin working through the activity using the Platform at the WhenKnowingMatters.com website.

Second, I will demonstrate how learners identify and record relevant observations in a learning activity.

Third, I will discuss the use of author-defined guiding and general frameworks for assisting learners in building an evidence-based assessment, along with the mechanics for doing so.

Let's take a quick look at an example of a case with a completed evidence-based assessment.

We will return to this case many times during the workshop.

Learners are presented with a case scenario.

They make relevant observations from the History, Physical examination, and Hematology.

Of course, these categories are author-defined.

Here are the relevant observations that were made by this learner.

I will add one by selecting it in the text.

Notice that it is automatically added to the list of Relevant Observations when I let up on my left mouse button.

I'll click on "Build assessment"

The Evidence-based assessment is on the left and the relevant observations are on the right.

Notice the series of assertions in outline form that are in bold and denoted with an "A."

Their justifying observations from the History, Physical examination, or Laboratory tests are denoted with an "O."

This learner thinks that the foal was excited, which resulted in the release of epinephrine, which caused the spleen to contract and the heart rate to increase.

The increased heart rate, tachycardia, caused the blood flow and pressure to increase, which resulted in white blood cells being washed off of the vessel walls into this foal's circulation.

This is important because the increased white blood cells, Leukocytosis and Neutrophilia, could be misinterpreted as an infection, except for the fact that the bands, which are immature white blood cells, are normal.

This evidence-based assessment demonstrates that this learner not only knows that these physiologic responses can occur, this knowledge has been applied appropriately to this patient.

As I said previously, we will go over this case in much more detail.

The fourth process I will cover, is how learners save their applied learning activity, including their changes, by copying it to their clipboard, and pasting the activity into a new word processing document that is stored on their computer.

In addition, I will demonstrate how learners can continue working on a previously saved activity by copying the contents of the document on their computer to their clipboard, and pasting it back into the Applied Learning Platform at the WhenKnowingMatters.com website.

The use of a word processing document to deliver and store applied learning activities allows an activity to include any word processor compatible source of data, such as images, tables, reports, and links to videos or other Internet resources.

In addition, the use of a word processing document and a browser with an Internet connection enables the Platform to be available to educators and learners in a cost-effective manner by eliminating the need to install additional software, manage a database of user names and passwords, or have developers and designers build applied learning activities. Educators create them on their own. There is also no need for institutions to buy, install, and maintain a centralized server.

Fifth, I will demonstrate how learners working at the website can save only their assessment for people to read, not the entire activity, by copying their assessment

to their clipboard, and then pasting it into a separate word processing document on their computer, and/or uploading it to a course management system,

Sixth, I will demonstrate how learners can peer-evaluate one another's assessment by adding comments, and then either return the entire activity that includes those comments for viewing in the Platform, or save only the assessment with their comments in report form for viewing in a word processor.

This evaluation report can be emailed, or printed out and brought to class for discussion.

Seventh, I will demonstrate how educators can work through an activity prior to class, and then during class progressively reveal their solution line-by-line using only a mouse click or the up and down-arrow keys.

This ability to progressively reveal their solution enables educators to actively engage learners in the thinking process, without having the additional cognitive load of working through the activity in real-time, while also teaching, asking and answering questions, facilitating discussion, advancing slides, and continually scanning the room for indications that learners understand and can apply the course material.

The eighth and final process I will demonstrate is how educators can easily adapt a colleague's applied learning activity for use in their own teaching and learning environment.

This will include a brief introduction to the authoring module.

&&WHAT ALP IS NOT
I want to take a moment and point out what the Applied Learning Platform is not.

The Applied Learning Platform is not an expert system.

In fact, the Platform is the **exact opposite of an expert system**.

An expert system **provides expertise to** its users; the Applied Learning Platform is used by educators and learners to **build expertise in** its users.

The Applied Learning Platform is not a secure grading tool that prevents dedicated cheaters from circumventing its constraints.

The Platform is primarily a teaching and learning tool, that when used appropriately by educators and learners, will improve learner competence in applying course material, and thereby improve performance on existing grading instruments that are secure.

That said, the Platform can still be useful in a properly controlled and supervised testing environment.

The Applied Learning Platform is not an automatic grading instrument.

If you are an educator of a large class, you should not attempt to grade the work product of every learner for every activity, which is not practical or necessary.

It is much more prudent to select and review a sample of work products to get an idea of how well the class as a whole comprehends and can apply course material.

That said, evaluating the body of work by a particular learner that has been submitted to a course management system will provide immediate insight into how and where the learner is either succeeding or struggling.

If you must grade learner work products, the Platform provides a self-evaluation option that learners can complete to help educators focus on specific topics of interest. I will demonstrate this feature later.

&&BEFORE I PROCEED
Before I proceed, I should note that the size of the browser in this video is restricted to accommodate standard recording dimensions.

When you expand your browser to the dimensions of your monitor at a higher resolution, your actual workspace will be larger.

The Platform is always opened in your default browser, though I have most thoroughly tested it in Mozilla's Firefox. Unfortunately, all browsers do not behave the same, so you may need to switch from time-to-time depending upon the particular browser you are using and its updates.

In order to maximize the working area of this video, I have limited the view of my browser to only include the Applied Learning Platform, and not other elements such as the menu, tabs, and url address bar.

You know that your learners learn best by doing… and since you are learning about this Platform…so will you.

That is why I encourage you to open the Platform in another browser window that is separate from the video, and follow along by working through each step that I demonstrate.

When you work along or learn on your own, please do so with the mindset that you are playing with the application, and nothing earth shattering will happen if you make a mistake.

That said, it is a good idea to copy work you do not want to lose to a series of word processing documents.

To facilitate your learning even more, it may be helpful for you to work through this workshop video with a colleague, so the two of you can share and build upon one another's ideas.

A word of caution: There is a lot of material in this workshop that will be new to you, so it is critical that you stay aware of your cognitive load, and do not become overwhelmed.

Feel free to hit the pause button at any time to think about and practice what was just presented.

If at any point you begin to feel frustrated by the pace and/or amount of material, please take a break for awhile, and then restart the video at the last place you felt comfortable.

The first case I will be using in this video can be downloaded using the link found next to the link for this video.

The remaining cases are included with the Platform, and are found by clicking on the Sample activities button in the main menu.

&&RECEIVING AN ACTIVITY

Let's begin with the first process that I will cover in this workshop, which is how learners receive an applied learning activity, and begin working through it.

Learners receive an applied learning activity in a word processing document that I will refer to as an activity document.

As I mentioned previously, this activity is a case.

Here is an example.

This activity document begins with an image that the author of the case asks learners to refer to when building their assessment.

I should point out that the term "assessment" is the default for the Platform, and can be changed by the author of an activity to any term or phrase that is appropriate for the domain of study.

Examples include, emergency response plan, Initial Project Plan, Problem-solving Approach, or Differential Diagnoses.

This activity document also contains directions for how to load the activity into the Applied Learning Platform at the WhenKnowingMatters.com website.

In addition, the activity document contains the XML markup tags required by the Platform to load the activity.

These markup tags are created using either the basic or advanced authoring modules of the Platform, and should not be touched by human keystrokes.

In fact, it's probably not even a good idea to look at them.

The reason I am showing them to you now is in the event you inadvertently scroll into them; you will know what you are seeing.

As I mentioned previously, this use of a word processing document to deliver an applied learning activity, allows the activity to include any word processor compatible source of data, such as images, tables, reports, and links to videos or other Internet resources.

To begin working through an activity, learners select the entire contents of the activity document, and copy their selection to their clipboard.

Selecting is accomplished using Ctrl+A for Windows, or command+A for a Mac,

And copying the selection is accomplished using Ctrl+C for Windows, or command+C for a Mac.

The reason you can select and copy the entire document is that the Platform only looks for specific markup tags and ignores everything else.

I'll move this activity document out of view.

Next, learners start the Applied Learning Platform by navigating to the WhenKnowingMatters.com website,

hovering their cursor over the Applied Learning Platform menu option,

and selecting, Start ALP Basic.

&&MAIN MENU

The first button on the menu is, Begin an activity, which is selected by learners to
1) load a new activity,
2) load and continue working on an activity,
3) review their finished work, or
4) view a peer or educator's evaluation of their activity.

The second option, "Create an activity," is used by educators or learners to…you guessed it… create an activity.

Since an interactive applied learning activity can only be as effective as the pedagogy upon which it is based, I will call your attention to additional videos at the WhenKnowingMatters.com website in the section,

Learning Principles and Effective Implementation of the Applied Learning Platform.

These videos provide excellent background information and guidance on how to develop effective and engaging applied learning activities that take into account cognitive load,

mental schema development,

context applied learning,

and the use of the Revised Bloom's Taxonomy for orienting an applied learning activity according to the cognitive processes that are required for successful completion.

The third option on the menu is either, Peer evaluate an activity, which is used by learners, or Evaluate an activity, which is used by educators. The former is available with the basic version, and the latter is available with the advanced.

This evaluation option is used to provide annotated feedback on a learner's assessment.

This feedback can also include an author-defined evaluation rubric for peers and educators to use, or a rubric can be imported at the time of evaluation.

Peer-evaluators are not allowed to make changes to a learner's work.

When an evaluated activity is returned, learners can view their original work, along with any comments and rubric scores that have been added.

This is accomplished by loading the returned activity back into the Platform using the Begin an activity option.

I will demonstrate the evaluation option in more detail later in this video

The fourth option, Sample activities, contains activities that educators and learners can study to learn how to create their own activities.

Many of these sample activities will be used in this workshop.

The fifth option, Display settings, is used to change the font sizes of individual elements of the display to accommodate the presentation of an activity in various sized rooms.

These changes can be individual,

or can be selected according to preset groups, such as for a desktop monitor, or for projecting the activity in a conference room, a classroom, or in a lecture hall.

The specific font settings for these groups are somewhat arbitrary, so you should always test a setting you plan to use in the environment in which you will use it.

I'll demonstrate.

If I want to change a preset group, I do so by selecting a different group.

The "Restore default settings" button only restores settings that were changed individually.

There are two additional checkboxes that pertain to real-time presentations of applied learning activities."

They are, "Presentation counters" and "Assessment entries hide/show buttons."

Presentation counters allow educators to progressively reveal their solution of an activity in real-time, and

Assessment entries hide/show buttons allow educators to show or hide individual entries in an assessment.

Both of these settings support in-class discussion, and will be demonstrated towards the end of this workshop.

Changed settings are saved with an activity, and take effect when the activity is loaded.

These settings can also be changed after an activity has been loaded.

I'll click on the same display settings button, which now is labeled "Close display settings.'

Let's continue by loading an activity.

&&BEGIN AN ACTIVITY
The foal demonstration case that I copied from the activity document is still on my clipboard.

I will select "Begin an activity,"

and paste the contents of my clipboard into the box.

If the Platform recognizes the activity as being formatted correctly, it will be loaded automatically as it has here.

If the Platform does not recognize the activity as being formatted correctly, what was pasted into the box will be displayed.

This happens most often when the clipboard is used for another copy operation, after the activity was copied.

It can also happen in the rare event that the activity document was not opened properly by the word processor, or has been corrupted when downloaded or received as an attachment to an email.

If an activity does not load properly, restart the Platform, close the activity document, reopen it, select all, copy, and paste again. If it still does not load properly, the document has likely been corrupted and must be downloaded, or sent again.

This is how this case appears to a learner when it loads properly.

The appearance of other activities will vary depending upon an author's design and learning objectives.

Before proceeding through this activity, I want to show you a convenience feature that is currently being tested for automatically starting the Applied Learning Platform directly from the activity document.

Notice the direct link in the activity document to the Applied Learning Platform at the WhenKnowingMatters.com website.

This link will automatically start the Platform without the need for learners to navigate to the website, manually start the Platform, and click on "Begin an activity" in the menu.

First, I will select the entire document,

copy it to my clipboard,

and click on the auto-begin link.

As before, I will paste the activity into the box.

As you can see, that was considerably quicker. I still need to test it on various word processors running on different browser platforms.

Now we can look at this case.

The title of the case is at the top.

Here is the presenting information,

and the table data.

I will move the divider to show you the attribution section. It can include Sponsors, Authors, Contributors, and/or a Copyright notice.

This section can also be used to acknowledge funding sources.

The image that is referred to in this case can be viewed by referring back to the activity document.

&&IDENTIFY AND RECORD OBSERVATIONS
Now we will look at the second process that I will cover in this video, which is identifying and recording relevant observations.

Learners can identify word-for-word observations in the presenting information that they think are relevant, and they can also create their own observations that are derived from reading the text.

Recording observations contained in the text can be accomplished in several ways.

Learners can use their mouse to select relevant sections of text,

which are automatically copied to the Relevant Observations List when the left mouse button is released.

I'll demonstrate.

I think it is relevant that this is a routine visit.

I also think it is relevant that this foal is high spirited.

And, makes the client chase him around the paddock.

Observations in the displayed text field are limited to 200 characters.

Selecting any more will result in a red highlight.

If the selection exceeds the 200-character limit,

the first 200 characters or less, depending upon word breaks in the selection, are placed in the displayed text field and underlined in the text,

and the entire selection is placed in the note field of the observation.

Hovering your cursor over an entry that is not fully in view, results in the appearance of the entire underlined section of the entry in a balloon assist.

If there is additional selected text in the note field, the entry will end with the word "more" in parentheses.

To view the entire note, click on the button labeled "N." Clicking again closes the note.

I can also select text for an observation using my mouse and the shift key.

I do this by positioning my cursor where I want the selection to begin.

Next, I hold down the Shift key, and place my cursor at the end of my selection using a left-mouse button click.

When I let up on the mouse button, my selection is automatically transferred to the relevant observations lists.

I can also make a selection in a similar way using only the keyboard.

First, I will select my last entry and delete it by pressing the Delete key.

As before, I position my cursor where I want the selection to begin.

Next, I hold down the Shift key, and use the arrow keys to move the cursor to the end of my selection, and then I let up on both keys.

As you can see, nothing happened when I released both keys.

Once I have made my selection using only the keyboard, I must transfer it to my relevant observations list by pressing Ctrl+T on Windows or with a Mac.

On a Mac I can also use command+t.

So what happens if I make an incorrect selection?

If an incorrect or incomplete selection is made, it can be removed using the context menu that is displayed in Windows by a right mouse click, or on a Mac by pressing both the Shift and Ctrl keys while performing a mouse click.

Some Macs will also display the context menu with a two-finger tap on the trackpad.

I'll click on "Delete last observation."

Notice that the underline in the text has been removed.

I'll make another incorrect selection.

I can delete this observation with Undo, and recall it with Redo, which are available in the context menu,

or by the keyboard shortcuts Ctrl+z and Ctrl+y on both Windows, and on a Mac.

If I change my mind I can redo with the Ctrl+y.

I can also undo the redo with another Ctrl+z.

The Undo and Redo feature has been implemented for all user inputs for which it is possible.

User inputs that are not able to implement undo and redo are denoted with, "Undo redo not available."

Observations can also be added as free text, which is accomplished using the context menu by selecting "Create an Observation,"

or by using the keyboard shortcut, Ctrl+N on Windows, or control+N or command+N on a Mac.

"Appears to have an abbrasion between his eyes."

I have intentionally misspelled abrasion.

If I right - click on it and bring up a context menu,

I am offered the correct spelling.

When I finish my entry, I can either click on "Save," or press the Enter key.

The "Enter key" saves all edits other than when editing the note field, where it moves the cursor to the next line.

An observation can be edited by double-clicking on it,

or by selecting it, and using the keyboard short cut, Ctrl+O.

To add a note, you must click the "Add note" button.

If a note already exists, the button will be labeled, "Edit note."

I will add the note, "It is nice that notes can be formatted."

I can do rudimentary formatting of notes.

And I can select text, and link it to a url.

Select "notes"

http://www.WhenKnowingMatters.com

I will Save.

Let's look at my note.

And click on the link.

Sections of text from other sources can be manually copied and pasted into observations.

The last feature I want to point out about the Relevant Observations list is that the order of observations can be changed by left clicking and holding down the left mouse button on the observation you want to move, dragging it to where you want in the list, and then releasing the mouse button.

This is useful if a learning objective is to identify relevant observations, and then rank them according to their perceived significance.

Now we will look at table data, which is created using the table builder in the advanced authoring version of the Applied Learning Platform.

The maximum number of columns that can be created in the table builder is seven due to limitations of screen width. The number of rows is unlimited.

When large or complex tables are required for a learning activity, they can be included in the activity document, and then referred to in the Presenting Information of the case.

Sections of text from the activity document can be manually copied and pasted into observations.

Data from tables contained in an applied learning activity itself, not the activity document, can be transferred to the relevant observations list in a number of ways.

An individual column of a row can be transferred by selecting the text in that column with your mouse or track pad in the same manner as with the presenting information.

For this activity, that doesn't make a lot of sense. However, one might be interested in the entire row of columns.

If I click on the Transfer button, the entire row of columns are combined and copied directly to the Relevant Observations list.

Clicking on the Interpret button creates a blank entry in the relevant observations list for learners to enter their interpretation.

There is no validation of this entry other than duplicate entries in the Relevant Observation list are not permitted.

I'll try "Polycythemia" twice; once capitalized and once not.

As you can see, Relevant Observations are not case-sensitive.

Even so, the test has been marked as processed.

There is a change in the behavior of the Transfer and Interpret buttons if the author has implemented a required interpretation for the data in a row.

When an interpretation is required, the author must also include the acceptable term and its synonyms if any.

I will use a different sample activity to demonstrate this.

When I try to exit this activity I am reminded that I have made changes and have not transferred this activity and my work to my clipboard. I am asked if I still want to exit the activity.

I'll click "Yes."

I'll go to Sample activities

and select, "Foal Demonstration Case – make table observations with validation."

I can either click on Proceed with the applied learning activity button at the bottom,

or I can double-click my selection.

Now when I click on either Transfer or Interpret, I am presented with an Interpretation window.

Once again, I will enter "polycythemia."

The interpretation is accepted and the test is checked as being completed.

If I click on the Build assessment button to proceed to the next screen,

I am greeted with an alert that I have not considered all of the required data.

This optional feature of required data ensures that learners identify all of the relevant table data before attempting to build an assessment.

Requiring learners to successfully complete one stage of a process before moving to the next is often referred to as "gating."

As learners grow in competence, this aid of gating should be removed because it does not accurately reflect most real-world case scenarios.

As you can see, the remaining required data elements are now denoted with a red R-e-q.

For this particular case, the interpretation of the second test is also "polycythemia."

When I submit it, the test is checked as processed.

A learner gets three chances before being shown the acceptable interpretations.

I'll demonstrate with the Hematocrit test.

As you can see, I am shown a list of acceptable interpretations.

Even when I have viewed the correct interpretations, I cannot copy and paste one into the text box.

I am still required to correctly type one of the accepted interpretations.

Requiring that the entry be typed and not copied supports the learning objective of correctly spelling discipline-specific vocabulary.

An interpretation can also include the data columns.

If I check the "Include columns" option, my interpretation and the columns will be combined, and added to the Relevant Observations list.

The button with a check mark is used to manually place a check in the box to the far left. This helps learners keep track of items they have considered that do not require an interpretation.

This button is a toggle button, so a check mark can be removed if the button was clicked inadvertently.

The two exceptions are that if I try to manually check a required interpretation, I am presented with the interpretation dialog box.

The other is that required interpretations that have already been completed cannot be unchecked.

I will place a check mark for several entries that are not required

Now, as learners scroll up and down through the data, those with a check mark can be ignored.

This capability reduces the cognitive load for learners who want to look at various sections of the data without having to process each in the sequence that it is listed.

Cognitive load is discussed in detail in a separate video in the section, Learning Principles and Effective Implementation of the Applied Learning Platform.

&&FRAMEWORKS
This brings us to the third process I will cover in this video, which is the use of guiding and general frameworks, along with the mechanics of building an assessment.

A more detailed discussion on the use of frameworks and how they are created is covered in a separate video.

I need to warn you in advance that this is the longest section in the workshop, so feel free to take a break if you need to.

Before I start, I need to load a different Sample activity.

In this version of the foal demonstration case, the author has included a list of questions to help guide learners and focus their thoughts.

Recall that the image this question is referring to is contained in the word processing activity document.

These questions are a guiding framework in that they guide learners as to what issues they should be concerned about with this foal.

As learners build competence, educators would not include these types of guiding questions in subsequent cases.

This is removing the scaffolding once it is no longer needed.

Before moving to the Build assessment screen, I need to make several Relevant Observations that will be included in my assessment

This was a "routine visit,"

which means the foal appeared normal to the owner with no signs of disease.

This is a "near weaning Thoroughbred foal;"

"foal is high spirited;"

"makes the client chase him around the paddock."

I'll also process the now very familiar red blood cell count.

As I mentioned before, please do not get caught up in the medical vocabulary of this case.

It is the creating, editing, moving, and deleting of these entries that matters.

When I click on "Interpret" an entry is opened in the observations list.

A validation dialog box does not appear because the author of this version of the case did not require that any of these tests be accurately interpreted before learners are allowed to begin building their assessment.

I will check the next two tests as processed because they have the same interpretation.

The following red blood cell values are within the normal reference interval, so I will also check them manually to indicate that I have looked at them.

I will show you a common mistake.

If I click on a check box, I get no response.

This is because the checked or not checked status is controlled either programmatically, or by using the check box button.

I will scroll down to look at tests related to the White Blood Cells.

The White Blood Cell count is high, which is called "Leukocytosis."

And there is an increase in segmented neutrophils, which is a specific type of white blood cell.

The interpretation is "Neutrophilia."

Bands are immature white blood cells that normally make up a very small percentage of the total circulating white blood cells.

Even though the bands are within the normal reference interval, I will add this observation because I think it is significant.

And the Platelets are high.

I'll click on "Build assessment."

The Assessment screen is divided into three sections.

The section to the left is the assessment workspace where learners build their assessment.

The case title is always the first entry.

The title cannot be removed, nor can entries be placed above it.

In the upper right is the list of relevant observations.

And in the lower right is a general framework that the author has defined and included in this particular version of the case.

There is a button at the bottom left of the screen that when clicked, will bring the presenting information into view.

Once again, the divider bars can be moved to change the working area of individual sections.

Now, within a single view you can see the presenting information, table data, the assessment, relevant observations, and the general framework.

Recall that your workspace will be much larger on your computer monitor than it is for the standard recording area of this video.

In this combined view you can still make additional relevant observations.

The framework in the lower right is a general framework.

Recall that the list of questions in the presenting information was a guiding framework in that it provided specific guidance for working through this specific activity.

General frameworks, on the other hand, differ from guiding frameworks in that a general framework provides a standardized and consistent approach for learners to use when analyzing similar activities.

General frameworks would be used when performing an inspection of an aircraft, or a safety evaluation of a facility, or a neurological examination of a patient who was experiencing a stroke.

Of course, these frameworks could vary depending on the circumstances, but their initial use provides a baseline approach so that elements of the inspection, evaluation, or examination are not inadvertently omitted.

I'll Hide the presenting information section to make more room for building the assessment.

The Applied Learning platform allows general frameworks to be implemented in three ways.

First, they can be selectable by learners to add to their assessment,

Second, they can be pre-loaded into a learner's assessment by the author,

and third, a framework can be a combination of both selectable and preloaded.

In this video I will discuss selectable and preloaded, not the combination.

Frameworks are discussed in more detail in a separate video, along with the use of a combination of selectable and preloaded.

The framework for this case is one that learners can select.

This Differential Diagnosis framework indicates that the author of this version of the foal demonstration case wants learners to consider their assessment from the perspective of developing a list of differential diagnoses.

Learners begin working on this assessment by first dragging the Differential Diagnosis Framework onto the assessment workspace.

I will select the first entry,

and hold down the Shift key when I select the last.

Now with a left mouse click that is held down, I will drag the framework onto my workspace and let up on the left mouse button.

According to this author-defined framework, each differential diagnosis should include findings that support and findings that do not support.

Under tests to request, learners are expected to enter a test, the rationale for choosing the test, and the anticipated result.

The author of this framework chose to have two entries for "Tests to request."

If I want to add another test, I select only that portion of the framework,

and place it after the second test.

The final entry in this general framework is for learners to propose an initial treatment.

As I mentioned previously, authors can customize their own frameworks,

or use one that is specific to their discipline or institution to provide continuity in the learning experience.

Authors can also use a portion of a complex framework for novice learners,

and include the additional elements as learners grow in their developing expertise.

For example, for novice learners an educator might initially limit the elements of this Differential Diagnosis framework to include only a differential diagnosis, along with the findings that support and the findings that do not support.

As these learners grow in competence, an educator would include additional elements, and eventually, require learners to use the entire framework.

For the most experienced learners, the prompting of a general framework may not be included at all, with the expectation that it has become an integral part of their thinking.

I will begin with the assertion that my first Differential Diagnosis is "Bacterial infection with dehydration."

Now, the relevant observations can be dragged and dropped under the appropriate entry.

Polycythemia can indicate dehydration.

And an increase in the White Blood Cell count, leukocytosis, can indicate infection.

As can Neutrophilia.

The checked boxes indicate that these observations have been used in my assessment.

But here is where some of my relevant observations do not support my diagnosis of, "Bacterial infection with dehydration."

The immature white blood cells, bands, are normal.

A bacterial infection usually causes bands to be increased.

And, this was a "routine visit." The owner had not noticed any problems.

And, finally "No abnormalities were found on physical examination."

If I did not recognize that these observations and laboratory tests do not support this diagnosis,

I might start this foal on antibiotics and intravenous fluids, which would not be indicated, and could cause harm.

I will not be recommending any additional tests or an initial treatment, so I will delete this section of the framework by selecting the first entry I want to remove,

then I will hold down the Shift key and click on the last,

And press the Delete key.

I can delete portions of this particular framework because the author has chosen to allow it, which is determined on an entry by entry basis.

I have another differential diagnosis, so I will drag another copy of the Framework onto the assessment workspace.

This time I will select only the elements I will be using.

I'll collapse my first differential so it will not be distracting and will give us more room.

I will enter, "Excitement with epinephrine release."

Once again, polycythemia and leukocytosis, support this diagnosis.

Consecutive observations can be added to the assessment by selecting the first observation with a mouse click, and holding down the Shift key while selecting the last.

For this differential diagnosis, the fact that the bands are within the normal range is also supportive,

as well this being a "routine visit."

If I try to delete "routine visit" from the Relevant Observations list, I get this warning.

In order to delete an observation, I must first remove all instances of it from my assessment.

Multiple observations that are not consecutive can also be added as a group by selecting the first entry I want to add,

and holding down the Ctrl key while selecting the others.

I will also add:
"near weaning Thoroughbred foal;"

and "foal is high spirited."

"makes the client chase him around the paddock."

and "No abnormalities were found on physical examination"

This group of observations can be dragged and placed under the appropriate entry.

Now that I think about it, I've changed my mind and I do want to make an initial recommendation for treatment.

First, I will add that component of the framework.

“Let the foal calm down and draw another blood sample.”

If I have another differential diagnosis to consider,

I can collapse this one, drag another instance of the framework to my assessment, and add the appropriate relevant observations.

As I look at these collapsed differential diagnoses, I don’t like this structure because I have to open each in order to see which differential it is.

I will make a minor change.

There. It is easier to tell which diagnosis is which.

Now that you have seen how a framework can be selected by learners and added to their assessment,

I will move on to how a framework can be preloaded into a learner’s assessment by the author of a case.

This design is most often employed when the use of a framework is mandatory, and only one instance is required.

The example I will show you is from the domain of psychotherapy.

I’ll exit.

I am notified that I have not copied my work to my clipboard.

Yes, I still want to exit.

Sample activities

And I will select, “Rochelle without formulation.”

This is a fictional case that is used with permission from Dr. Tracy Eells.

I'll click on Build assessment

Now you can see the General Case Formulation framework that has been preloaded.

This framework is a standardized approach to understanding clients and generating recommendations that the author wants learners to practice and internalize.

It is preloaded because only one copy is needed for a client.

As I scroll through this framework, it is understandable how it can be a bit intimidating when viewed in its entirety.

I will collapse it into its basic sections, which will reduce the cognitive load for learners and allow them to focus on one section at a time.

There are four major sections to this general framework.

Let's focus on the problem list without being distracted by the other sections.

Rochelle's problems can be related to her,

or her environment.

In addition, these problems have a time dimension that is broken down into past events, which is distal,

and recent or current events, which is proximal.

When learners complete this section, they can close it and move on to the Diagnosis.

This older version of the framework uses the axes approach of the Diagnostic and Statistical Manual version IV, though it could easily be edited to use the more current version, which is V.

When the Diagnosis is completed, learners can close this section and move on to the Explanatory hypothesis,

The author of this case wants learners to explain Rochelle's current situation from three different perspectives: Behavioral, Cognitive, and Psychodynamic.

And finally, learners are asked to formulate a Treatment Plan.

As I mentioned previously, a general framework such as this can be a recognized standard for a discipline, or one that is institution, or author-defined.

Therapists who have permission to use this case in their teaching could modify it, or use an entirely different framework of their own that reflected their unique approach.

This gives authors the freedom to teach in their own way with their own tools.

The process for creating author-defined frameworks will be covered in a separate video on how to Create an Applied Learning Activity, and even more thoroughly in a video that is dedicated to frameworks.

Let's take a quick look at Rochelle's completed formulation to give you an idea of the amount of assessment complexity that can be expressed in this outlined evidence-based format.

Exit this activity

Sample activities

Rochelle with formulation.

You might notice there are fewer underlines in the presenting information than there are observations.

This is because many of this learner's observations were not directly selected from the text of the presenting information, rather, they were conclusions that were generated from reading the text.

The author of this version of the case has included a guiding framework of questions.

Let's look at the assessment.

There's a lot here.

Let's focus on specific sections one at a time.

First, I will collapse all four sections.

Now we can look at any section individually.

This general framework has many benefits.

First, it helps learners organize all of these data points, which reduces cognitive load that otherwise could easily be overwhelming for a novice learner.

Second, the outline format of this framework supports an efficient and focused approach for assessing Rochelle's condition, and for discussing the results among learners and educators.

and third, for those who prefer a narrative report, the outline format of this framework can be used as a guide for organizing one's thoughts before writing the report.

As I will demonstrate later, if a learner uses explicit relationships among entries in an assessment, the assessment can be read in a way that sounds much like a narrative.

&&MECHANICS OF BUILDING AN ASSESSMENT
This brings us to the mechanics of building an assessment.

I will click on "Exit this activity."

I'll select "Sample activities."

Foal demonstration case - with solution including relationships.

As you can see, the relevant observations have been made.

I'll click on "Build assessment."

Notice that the Differential Diagnosis Framework is not used with this implementation of the case because the case has been repurposed for clinical pathology students, with the objective of applying what they have learned about the physiologic changes that occur during excitement and epinephrine release.

This ability for authors to easily modify or change frameworks, or to not use one at all, allows the same case to be reused for various learners at various stages of their developing expertise.

As I read through this evidence-based assessment, it is important to understand that the assessment consists of chains of assertions that are supported by the evidence of relevant observations.

This means that an evidence-based assessment is an explicit artifact created by a learner that represents an applied understanding of course material.

This assessment is evidence that the learner not only knows that excitement **can** cause the release of epinephrine,

which in turn **can** cause contraction of the spleen and an increased heart rate,

the learner also understands that this knowledge **applies to this case,** based on the evidence gathered from the history, physical examination, and laboratory testing.

Evidence-based assessments such as this demonstrate that learners can access the appropriate portion of their mental schema based on the relevant observations of a case.

This means that an evidence-based assessment is more than just evidence of learning; it is evidence of knowing.

While a case such as this is valuable in and of itself, it is most effective when used in a series of cases.

An educator can author and administer a series of cases that introduce and reinforce the learning objectives of a course.

These cases should be relatively simple at first, and increase in complexity as learners become more competent.

Each increase in complexity should be cognitively manageable, and according to Context Applied Learning, be presented in both the context of an authentic real-world scenario, and in the context of what learners already know and can apply.

This increasing complexity can be viewed as stair steps in which each requires the same manageable amount of effort.

For example, it might take 3 stair steps to get from the garage into the house, and it may take 15 to get from the first floor to the second.

Can you imagine a builder saying, "We didn't have time to make 15 steps to the second floor, so we only put in 3." It may be difficult for you, but do the best you can?"

Moving learners from a first floor mental schema of being a novice to a second floor mental schema of being competent requires a series of manageable steps.

I will illustrate this by looking at a sequence of applied learning activities that increase in complexity.

Foal Demonstration Case – identify history, physical examination, and laboratory data relevant observations only

In this activity, learners only focus on identifying relevant observations and analyzing laboratory data. They are not asked to build an assessment.

Foal Demonstration Case – rearrange assessment entries

This case focuses on building an assessment by rearranging a pre-existing set of entries.

Foal Demonstration Case – fill in the relevant observations

In this case, the assertions are provided and learners must organize the observations under the appropriate assertion or assertions.

The final step towards building and demonstrating competency is to give learners a case to complete on their own without any prompts.

Next, we will look at the mechanics of building an assessment.

I will exit this case and load a version of the foal demonstration case that has been solved and includes explicit relationships between assertions.

Load Foal Demonstration Case – with solution including relationships

Returning to the assessment, it is important to understand that the level of detail in an assessment should reflect the learning objectives of the course.

If this case was used in a course on cell biology,

the learning objective might be to focus on the series of physiological interactions that occur between the release of epinephrine, and the contraction of the spleen.

For this type of activity, the release of epinephrine would be the first entry beneath the case title,

and contraction of the spleen would be the last.

The assertions between the two would be the series of interactions that occur.

I will use these two assertions to demonstrate how to add entries to an assessment.

To add an entry under another, you must first select the existing entry by clicking on it.

I will select Epinephrine release, and bring up a context menu with a right-click of my mouse.

I could also use Ctrl+Click for Windows, or Shift+Ctrl+Click for a Mac.

On some Macs, the context menu can be accessed using a two-finger tap on the TrackPad.

I'll select "Add an indented entry."

And I will enter, “A new step.”

Abbreviations can be changed, though I will leave this one as an Assertion.

Relationships can be specified.

These abbreviations and the list of possible relationships were defined by the author when the case was created, and can easily be modified by educators who adapt this case to their own teaching and learning objectives.

This modification is easily accomplished by importing the case into the authoring module, creating a different set of abbreviations and/or relationships, and saving the case.

A note can be added.

I can do minor formatting of the note in the same way as for observations that I demonstrated previously.

I will Save.

As for observations, a wider button indicates the presence of a note.

If I want to view the note, all I need to do is click on Note.

The plus and minus signs are for changing the font size for the appropriate venue.

I will click note again to close it.

I’ll add one more step in the chain of assertions.

Once again, I need to make sure that the entry, “A new step,” is selected because I want to add the next step below it.

Entries can be moved, such as for realigning, which I need to do after inserting these new assertions.

They are moved by selecting and dragging them to the new position.

Collapsed entries can also be moved.

I'll will undo these moves and the collapse with a series of Ctrl+Zs.

I can also bold and unbold an entry using Ctrl+B in Windows and a Mac, or command B in a Mac.

Next, I will introduce you to some of the keyboard short-cuts that power users employ for adding entries to an assessment.

Describing them is much more difficult than using them.

That acknowledge, if you are comfortable using the context menu, feel free to disregard this section.

I will open the context menu with a right mouse click

Notice the keyboard shortcuts for these menu items.

There are four shortcuts that are used to add entries at various positions and indentations, with the most commonly used being the two in the context menu.

The other two shortcuts are used much less frequently and are not included in the menu in an effort to reduce the complexity of the menu.

As always, to add an entry under another, you must first select the existing entry.

A common mistake is to think the light blue background beneath the cursor means the entry is selected.

You must click directly on the text of an entry to select the entry, which changes the light blue background to a darker blue.

The light blue background is only for indicating which entry is ready to receive a mouse click.

In this case, I will select "NO OBVIOUS ABNORMALITIES."

There are four keyboard shortcuts for placing a new entry relative to this selected entry.

I will list the types of entries first, and then explain each in more detail, along with its keyboard shortcut.

The types of entries are:

The first sibling of the selected entry, which is added directly below the entry and at the same level of indentation.

The first child of the selected entry, which is added directly below the entry and indented one column.

The last sibling of the selected entry, which is added at the end of the existing siblings at the same level of indentation.

And finally, the last child of the selected entry, which is added at the end of the existing child entries for the selected parent entry.

As I mentioned previously, for simplicity, the context menu only has options for adding the first sibling, which is not indented,

and the first child, which is indented one column relative to the selected entry.

As I demonstrate the four keyboard shortcuts, it will help if you remember that Shift begins with S, so entries added using the Shift key will be a **sibling** to the selected entry and therefore, not indented.

Indented child entries of the selected entry are created using the Ctrl for Windows, and command for a Mac keys, which begin with C.

The other two keys that are required, are the “F” and “L” keys.

“F” is for first, and “L” is for last

I’ll demonstrate.

To create the first sibling entry directly under No Obvious Abnormalities, I will make sure it is selected, and press Shift+F. The S in Shift for sibling and the F for first.

I’ll Reselect No Obvious Abnormalities.

To create the first indented child entry under No Obvious Abnormalities, I will use Ctrl or command+F. The C in Ctrl or command is for child, and the F is for first.

I'll reselect No Obvious Abnormalities.

To create the last child under this selected entry, I will use Ctrl or command plus L. C in Ctrl or command for child and L for last.

This entry is placed at the end of the indented child entries.

I'll reselect No Obvious Abnormalities.

Finally, to create the last sibling directly under No Obvious Abnormalities, I will use Shift+L. Once again, the S in Shift is for sibling, and L for last.

It might be surprising to see the entry added so close to the bottom, but if you look carefully,

the first sibling of No Obvious Abnormalities is added in the same column and was placed just above Epinephrine Release

And this entry is the last sibling in the same column.

It does not matter if I get the indentation of an entry in the wrong place the first time because I can easily drag it to the level or row I want using a left mouse click and hold, while moving the entry.

When the entry is where I want it, I release the mouse button.

I've made a total mess of this assessment. I need to clean things up.

I will hold down the Ctrl key and select some of the entries I want to delete.

I will right click my mouse, and select "Delete the selected entry or entries."

I can delete contiguous entries by selecting the first entry and hold down the Shift key while I select the last.

This time I will use the Delete key.

I will collapse these entries so I can call your attention to two additional buttons that are next to the Show presenting information button.

I can Expand all entries.

And I can expand all notes.

&&SAVING AN ACTIVITY
Once learners are satisfied with their assessment,

It is time for them to save the applied learning activity, including their changes, which is the fourth process I will demonstrate in this video.

When I click on the Save to your clipboard button in the menu, I am presented with two options.

The first option is to save the entire applied learning activity with my changes,

and the second is to save only my assessment.

When I click the "Save this Learning Activity" button, the markup tags for this case and my work are copied to my clipboard.

As you can see, I am reminded to Save my work on my computer.

This is absolutely critical to remember.

No applied learning activities created by educators, or work done by learner's is saved at the WhenKnowingMatters.com website.

The only way for learners to save their activity and work is to store it locally on their computer in a separate word processing document.

In the same way, the only way educators can store the applied learning activities they create, is to store them in a word processing document on their own computer.

This design keeps confidential the applied learning activities created by educators, and the work done by learners.

In addition, as I mentioned earlier, the use of a word processing document and a browser with an Internet connection enables the Platform to be available to educators and learners in a cost-effective manner by eliminating the need to install additional software, manage a database of user names and passwords, or have developers and designers build applied learning activities. Educators create them on their own. There is also no need for institutions to buy, install, and maintain a centralized server.

I'll click Ok, and bring in my Saved foal case for the APPLICATION to read document, and paste the contents of my clipboard.

Let's look at these tags.

The rest of this case is encoded, which is done automatically to make significant features of the case, and the learner's work unreadable by other learners unless it is loaded into the Applied Learning Platform.

I'll move this document out of view,

Exit the activity,

Select Begin an activity,

and paste the contents of my clipboard into the window.

Let's take a look at my Assessment.

I'll click on Build assessment, and now you can see my work.

&&SAVING AN ASSESSMENT

Next, let's look at the fifth process I will cover, which is how learners save only their assessment for people to read.

Again, I will click "Save to your clipboard," and this time I will click,

Save your Assessment only.

It is absolutely critical to understand the difference between saving an entire learning activity, and only saving an Assessment.

A saved assessment cannot be reloaded into the Applied Learning Platform because it is only a text-based report of a learner's work for people to read,

and does not contain the markup tags that are necessary for the Platform to read when reloading the activity.

Now you can see that I am presented with a list of options.

I can include the Presenting Information in my report.

I can also include the abbreviations for each entry, and whether I want to use the full length, which is the abbreviation letter and the term it represents, or only a single character.

I can include a legend of the abbreviations,

the relationships between entries,

and notes.

I can also include a separate list of the Relevant Observations.

Including a self-evaluation is disabled because the author did not make that a requirement with this case.

The self-evaluation option is available in the advanced authoring version of the Platform, along with the option of including the author's solution in the form of a reference assessment.

I will demonstrate these advanced features later in this workshop.

The need for an option to use spaces, dashes, underlines, or periods to mark the indentation of an assessment is not obvious at first.

The default, spaces, is fine when the assessment is copied into a word processing document that recognizes and preserves indentation.

A problem arises, however, in that many course management systems do not recognize whitespace when text is pasted into a narrative textbox.

The result can be that all entries are consecutively added to one another, or, all entries maintain their vertical order, and are **left** justified.

Using dashes, underlines, or periods preserves the indentation in many of these systems.

If these options still do not preserve whitespace correctly in your particular system, contact me and I will work with you to create an option that does.

You can also choose the width of your assessment report to use Portrait or Landscape.

I will accept the defaults, and click, "Copy your assessment to your clipboard."

This next window is where learners can verify that they have the desired elements in their assessment report.

You can see that this output is for human consumption, with no markup tags for reloading into the Applied Learning Platform.

The more I look at this report, the output has elements that I don't need.

I will click Cancel.

Once again I will click Save to your clipboard.

Save your Assessment Only for people to read.

I don't need the presenting information.

I still want abbreviations, but I want them to only use a single character.

I also do not need the legend of abbreviations since this is a simple assessment.

I want to keep Relationships and Notes,

and I do not need a separate list of Relevant Observations.

This time I will select periods, and click Copy your Assessment to your clipboard.

I think that looks a lot less cluttered.

I will click Accept, which will place a copy of this text on my clipboard.

As before, I am reminded to save my work in a word processing document on my computer.

I will bring in my "Copied assessment ONLY for people to read" word processing document, and paste my assessment.

Learners can bring copies of their assessment to class for discussion or peer-review, or for turning in at the beginning of class as evidence of pre-class preparation.

Pre-class preparation can also be documented using a course management system by uploading the assessment report as a file, or submitting its text as a narrative answer to a quiz question.

The quiz option is accomplished when an educator creates a quiz on the system with one item that states, "Enter your assessment report in the narrative box below."

When learners enter their assessment report in the narrative box, and submit the quiz, their work is automatically stored and time-stamped.

Some course management systems can even respond to submitted work with a message that could be the educator's solution for learners to study once they have completed their work.

To reinforce a previous point, I will show you what can be a very disheartening moment for learners.

My saved assessment only report is still on my clipboard.

I will restart the Platform.

Select "Begin an activity."

And paste my report into the box.

This is obviously not readable by the Platform.

&&REFERENCE ASSESSMENT/SELF-ASSESSMENT
Before we move on to how educators can use the Applied Learning Platform to model critical thinking skills to learners, I will show you two features that I mentioned that are available in the advanced authoring module.

They are the author's reference assessment, and a self-evaluation.

A reference assessment is the author's solution to the case.

I will exit this activity,

Sample activities,

and select "Foal Demonstration Case – with solution, reference assessment, and self-evaluation.

As you can see, the presenting information and table data have been processed.

Let's look at the learner's assessment.

It has been completed as well.

There is a button on the menu bar that only appears if a reference assessment is available for learners to compare to their work while it is fresh in their mind.

I will click on it.

Now you can see the learner's assessment on the left, and the author's reference assessment on the right.

The advanced authoring version has an option to allow or disallow further modifications by learners.

There is another button in the menu bar that is new.

It is the Self-evaluation button.

When I click it, I see the learner's solution on the left, and a list of topics that the author of the case thinks should have been covered in the learner's assessment.

Learner's drag portions of their assessment and drop them under the appropriate topic to show that they considered it.

This allows educators to quickly see which learning objectives were covered in the learner's assessment, and which were not.

This process also enhances learning by requiring learners to reflect upon their assessment.

I will drag the No Obvious Abnormalities section and place it under the first topic, "Indications that the foal does not have an illness."

I will also place the Epinephrine release section under the second topic, "The effects of epinephrine release."

When I click "Copy your self-evaluation to your clipboard,"

I am presented with these options, which are a subset of those available for creating an assessment report.

I can include the abbreviations for entries, and whether I want to use the full length, which is the abbreviation letter and the term it represents, or only a single character.

I will select single character.

As with creating an assessment report, there is an option to use spaces, dashes, underlines, or periods to maintain indentation.

And, you can choose the width of your assessment report to use the Portrait or Landscape layout.

When these options are set and I click on "Copy," my self-evaluation is displayed for me to review.

When I click on "Accept," it is copied to my clipboard to be pasted into a new word processing document.

As with copied assessment reports, learners can bring copies of their self-evaluation to class for discussion or peer-review, or for turning in at the beginning of class as evidence of pre-class preparation.

A self-evaluation can also be submitted to a course management system in the same manner as an assessment.

Educators have real-time flexibility with the topics that are used in the self-evaluation.

Additional topics can be added, or existing topics replaced.

If I want to replace the existing topics, all I need to do is erase them before entering the others.

I should note that topics cannot be edited once they are added; they can only be removed.

I will add a topic.

First, I will click on the "Import from clipboard or manually enter topics to assess" button.

I can either paste a list of topics into the box; each on a separate line.

Or type them in manually with each on a separate line.

This ability to change self-evaluation topics in real-time during class is particularly effective when an educator wants to see evidence of a specific competency that was not anticipated when the case was created.

&&PEER EVALUATION
The sixth process I will cover is, "Peer evaluation."

The good news is that learners who know how to work through an applied learning activity, have already mastered all of the mechanics for doing a peer evaluation.

I'll exit this activity.

Learners receive a case to evaluate in the same way they receive an activity from an educator to work through.

Here is a learner's saved activity in a word processing document that was either emailed to a peer or downloaded by the peer from a course management system.

Notice there is no image or directions.

To include the image, a learner would need to add it manually, and directions are only added when an activity is created, not worked through and saved.

I will select all, and copy to my clipboard.

Now I will click on "Peer evaluate an activity.

This activity import box should be familiar.

I will paste the activity.

This screen should be familiar as well.

The only difference is that it opened automatically to the assessment.

If I want to look at the presenting information, I can.

I am not allowed to change any of the learner's work.

When I click in the Presenting Information, I am notified to that effect.

I will return to Build your evaluation. Notice that it says "evaluation" rather than "assessment."

I am also not allowed to edit or delete any of these entries.

So what <u>can</u> I do?

I can add my comments to the assessment using the context menu,

or the same shortcut key combinations of Ctrl or command plus F or L, or Shift plus F or L.

Recall that Ctrl and command are for a child entry that is indented one column from the selected entry, with F for the first child, and L for the last.

And Shift is for a sibling entry in the same column as the selected entry, with F for first, and L for last.

I will add a first sibling to Epinephrine release, which will be in the same column, and added at the end of the section.

It is added so far down because there are no other siblings.

I can also add a note.

My note can be as extensive as I want, and I can keep a set of frequently used notes in a separate word processing document that I can copy and paste into the note field.

I will click on Accept.

As you can see, my comment is clearly labeled, and the font is in red.

I can also move comments.

And I can edit my comments.

When I am finished, I will save my work to my clipboard.

This should also look familiar.

I can save the entire activity for sending to the learner for reloading into the Platform to review and make additional edits if necessary.

You have seen this process of loading an activity several times, so I will not demonstrate it again.

Or, I can save only the text of my evaluation.

This set of options should look familiar as well.

I will save it to my clipboard.

And once again, you have seen this review screen before.

I will click accept.

Now I need to paste my evaluation that is on my clipboard into a separate word processing document that is on my computer.

&& MODELING CRITICAL THINKING SKILLS

This brings us to the seventh process I will cover in this video, which is how educators can use the Applied Learning Platform during class to model critical thinking skills to learners.

Trying to use the Platform to work through an activity in real-time during class can cause severe cognitive overload if an educator is also teaching, asking and answering questions, facilitating discussion, advancing slides, and continually scanning the room for indications that learners understand and can apply the course material.

A solution provided by the Platform is for educators to work through an activity prior to class, and then during class discussion, progressively reveal their solution.

Let's look at another implementation of the foal case.

I will restart the application,

Open Foal Case Demonstration – progressively revealing the solution

The counters are already present in this case.

Here is the observations counter.

Here is the counter for the assessment.

These counters can be shown or hidden depending on their setting in the Display settings menu option.

See how the counter is shown or hidden.

I'll close display settings.

As I reduce the number in the counter using mouse clicks or the down arrow key, the displayed relevant observations are reduced accordingly.

Notice that the check marks in the laboratory tests are unchecked,

and the underlines in the presenting information are also removed.

As I increase the counter, the underlines and laboratory data check marks are restored.

Laboratory data that were manually checked as processed are unaffected because they are not linked to an observation.

Now an educator can ask learners what they think about the Presenting Information.

And after discussion, the educator's observations from the Presenting Information can be revealed.

Depending on the discussion, an educator can make additional observations,

or remove others.

Let's move to Build assessment.

The same can be done with the assessment entries.

I can add and remove entries as well.

One way of using this feature of adding entries is to omit a significant observation or assertion in the pre-class version to see if learners will notice that it is missing.

Or the opposite, include an erroneous assertion.

It is important to note that changes made to this case by an educator in preparation for class, should be saved and pasted into a new word processing document, so as to preserve the original work.

I want to show you something about the counter that could be confusing.

If I collapse "No obvious abnormalities,"

and begin decreasing the counter,

Epinephrine release is no longer visible.

But nothing seems to happen when I click to show rows 8 and the 7.

This is because the counter keeps track of all entries, including those that have been manually collapsed by an educator or learner, and are therefore not visible.

The counter will not reveal any sections that have not been opened intentionally.

I will increase the counter so Epinephrine Release is showing, which is row 9.

Now when I expand "No obvious abnormalities,"

Rows 7 and 8 are revealed,

and when I collapse them,

the counter still remains at 9 because the last element displayed, Epinephrine release, is the ninth element in the assessment.

This design allows educators to use these numbers as markers for discussion, and as cues in their notes or slides for when entries should be revealed.

With practice, progressively revealing relevant observations, and assessment entries, can facilitate engaging and meaningful discussions.

Another way of using the Applied Learning Platform during class or a group collaboration,

is to choose on a rotating basis one of the learners to be responsible for entering their findings into the case.

This modeling of critical thinking skills using the Platform is not limited to educators modeling their skills to learners. Modeling can also occur among peers, such as for patient presentations, a plan of action, or an environmental analysis.

&&SHARING AND MODIFYING AN ACTIVITY

The eighth and final process I will cover in this video is how quick and easy it is for educators to modify a colleague's applied learning activity for use in their own teaching and learning environment.

I'll exit

Let's say I have received this foal demonstration case from a colleague, and it isn't exactly what I want.

I will select all and copy it to my clipboard.

I'll restart the Platform.

This time I will choose "Create an activity."

As I mentioned before, how to create an activity is explained in detail in a separate video.

Rather than create a new case from scratch, I will import this case that is on my clipboard.

I will select "Import an activity."

Paste the contents of my clipboard.

As you can see, the elements of this case have been encrypted so learners are unable to view the markup tags for clues.

Accept imported activity

I want to change the title to, “Listless foal”

I will change upper and lower case Relevant Observations to Observations

I also will change Assessment to Evaluation

And I will change the history.

I will Maximize the working area.

Your client has called you and is very concerned about his foal. To his knowledge it hasn't eaten in several days, and is not drinking water.

Let’s delete the question.

Now I will update the attribution

Let’s also add a link to the Applied Learning Foundation.

Since there is no such entity as the Applied Learning Foundation, let’s be optimistic.

www.**nsf**.gov/

I also want to edit the framework because it doesn’t make sense to me to have two entries for tests.

I’ll maximize the framework builder,

and move the markup tags to the builder.

I will erase the current markup tags because I will be generating a new set.

I’ll select one of the Test sections, and delete.

And I will move the Initial treatment to the first column.

At this point, my edited framework is only in the Framework Builder. In order for it to become active for this case, I must commit it back to framework markup tags.

I want to make the framework available for learners to select, and I also want to preload it into their evaluation to help them get started.

Notice that the term, "evaluation" has replaced the default of "assessment."

Commit framework to this activity,

Now I will copy this modified case to my clipboard.

I am asked if I want to use the default system encoding.

I am also asked if I want learners to be able to navigate directly to the Applied Learning Platform, or to go to the WhenKnowingMatters.com website.

I will click "Copy."

Let's look at the results.

I will Exit the authoring module.

Click on "Begin an activity."

Paste the contents of my clipboard.
The title has been changed.

Observations no longer include the word relevant.

The history is changed, with no changes to the physical examination or laboratory data.

I've have changed the Presenting Information to make it seem as thought this foal is ill to see if the diagnosis made by learners will be influenced purely by the concerns of the foal's owner, without any change in the evidence.

I will select, "Build evaluation."

As you can see, the term "assessment" on the button has been replaced with "evaluation."

The framework has been preloaded into the evaluation,

and is available for learners to select.

The framework now only has one Test section.

Next, I will bring the activity document containing the original case into view.

I want to keep the image and replace everything else.

I'll begin by selecting and deleting everything except the image,

and then paste the markup tags of my modified case into the document.

What comes next is very very important and involves, "Save as."

Save this document with a new file name so as to not overwrite the original.

In fact, it is good practice to have a separate directory for storing the original version of all activities.

I can now send this modified case to my learners by attaching it to an email, or I can upload it to a course management system or file repository for them to download.

n this workshop video, I have shown you primarily the features that are available with the basic authoring version of the Applied Learning Platform.

The advanced authoring version that is available by subscription has many more features that educators can use to improve teaching and learning.

I have already mentioned the ability to provide the educator's reference solution, along with the option for learners to perform a self-evaluation.

In addition, the advanced authoring version provides educators with the option to reinforce learning objectives by including a set of multiple choice and short answer questions for learners to consider as they reflect upon the learning activity.

The advanced authoring version also has the ability for authors to provide a final discussion at the conclusion of the case as a summary explanation of the learning objectives, which can also include additional thoughts for learners to consider.

And finally, authors can include the ability for learners to select actions in the Presenting Information to gain additional data, with the option of tracking the costs of those actions.

This means that learners can demonstrate not only their competency, but also their ability to keep costs within budget.

The ideal use of the Applied Learning Platform is for a community of educators to share cases or other types of applied learning activities.

Educators can create sets of learning activities to accompany a textbook, or even create a repository of applied learning activities for use by others in their discipline.

This community approach maximizes the investments of time, effort, and finances by educators and stakeholders, which then can be easily extended to other educational institutions and organizations.

Of even greater significance is that the cost-effectiveness of the Applied Learning Platform brings the ability to create and administer applied learning activities within reach of any learning community, underserved, underfunded, or not.

Thank you for watching this workshop video.

If you get a chance to use the Applied Learning Platform, please do not hesitate to send me your thoughts and suggestions. It would be great to hear from you.