A General Overview of the Applied Learning Platform

In this tutorial I will give you a general overview of the Applied Learning Platform.

As I mentioned in the Introduction video, the Applied Learning Platform is a set of comprehensive and cost-effective web-base tools that educators can use to teach critical thinking and problem-solving skills to learners.

Educators use the Platform at the WhenKnowingMatters website to create <u>interactive</u> applied learning activities, which are sent to learners, who then use the Platform at the website to work through those activities.

Applied learning activities can range from simple drill and practice exercises, to complex evidence-based assessments of real-world cases and scenarios.

The Platform can be used to create applied learning activities for any domain, and these activities can represent understanding at any level of detail.

The only required technical skills for using the Platform by educators and learners are the ability to type, and to select, copy, and paste text.

An educator can create a simple interactive applied learning activity in under five minutes.

Applied Learning Activities have many uses in a teaching and learning environment.

Activities can be assigned to be worked prior to class as evidence of pre-class preparation, and learners can also bring the results of their work to class for peer-evaluation.

In addition, activities can be used during class as team-based exercises.

Another powerful use of applied learning activities is that educators can work through them during class to model their own critical thinking and problem-solving skills to learners.

This modeling gives learners the opportunity to actually see critical thinking and problem-solving as it is occurring, which better enables them to develop and practice their own skills.

After all, merely giving learners the <u>opportunity to think critically and solve problems</u>, does not teach them <u>how</u> to do so.

While the opportunity is essential, it not sufficient.

The Platform is available in a basic version that is free, as well as an advanced version. The advanced version includes additional authoring features,

and is available by subscription.

There is never a charge for learners to use the Platform at any time to work through an activity,

 whether it is created using the free or advanced version.

Since the Applied Learning Platform is web-based and accessed through a browser, there is no additional software to install and maintain, nor is there a need for IT personnel or a database.

This design minimizes the cost of implementation, so the Platform can also be used by institutions and school districts with limited budgets.

This design also provides for a direct teaching and learning experience between educators and learners that is not modulated by others.

IT personnel and a database are not required because each learning activity is contained in a word processing document that is stored on an educator or learner's computer.

An educator either emails the word processing document to learners directly, or posts it online for download from a course management system.

Using a word processing document in this way means that an activity can include any word processor compatible resource such as images, tables, graphs, reports, and links to videos or other Internet-based materials.

This also means that existing teaching materials can be readily included in an activity document without having to be re-entered into a separate course management system.

Another benefit of this word processing document design is privacy, in that no activity or learner's work is saved at the WhenKnowingMatters.com website.

The Applied Learning Platform is extremely effective when using a series of exercises, cases, or scenarios that incrementally increase in complexity.

The authoring module of the Platform supports this effort by providing for the easy importation of an existing activity.

This allows and educator to begin with an activity, import it into the authoring module, make modifications such as adding new data, increasing the complexity, or progressing the scenario in time, and then saving the modified activity in a new file.

The same can be done with this new activity until a series of activities has been created that increase in complexity.
Educators often ask if the Platform is an expert system.

The answer is that the Platform is the exact opposite of an expert system. An expert system is used to provide expertise **to** its users,

while the Applied Learning Platform is used by educators to build expertise **in** its users.

A key benefit of the Platform is that exercises, cases, or scenarios can incorporate educator-defined frameworks, which can be guiding, or general.

A guiding framework is a series of questions included in the activity that assists learners in arriving at a solution.

These questions can range from a step-by-step process for thinking through the activity as might be appropriate for novice learners, to a list of general considerations for more advanced learners.

Let's look at one of the sample activities provided with the Platform to see how a guiding framework can be helpful.

To begin using the Applied Learning Platform, you first navigate to the WhenKnowingMatters.com website,

hover your cursor over the Applied Learning Platform menu menu pad,
and click on "Start ALP Basic."

Notice there is also a "Start ALP Advance," which is available by subscription,

And a "Quick Start Wizard"

for rapidly creating an applied learning activity using the Platform's default settings.

Since the specific browser that is used to access the Platform is not relevant to the operation of the Platform, I will limit the viewing area of these videos to the actual work space.

Future videos in this series will begin with this view.

I'll open the sample activity, Foal Demonstration Case with guiding framework

This case is about a foal that was to receive a routine pre-purchase examination, which included a blood sample. The foal was excited and had to be chased around the paddock before the blood sample could be obtained. The results of the blood sample were not within the normal range of values.

Notice the guiding framework of questions that has been included for a novice learner.

1) Is it relevant that your patient's owner scheduled this visit as a routine physical examination?
- The answer is "yes" because the owner has not noticed any signs of disease.

2) Are you concerned that the foal had to be chased for 15 minutes before obtaining the blood sample?
- Once again, the answer is "yes" because an excited foal can have increased levels of epinephrine.

3) Could chasing the foal affect the results of the bloodwork that you get back from the laboratory?
- Again, the answer is "yes" because increased levels of epinephrine can change a foal's normal resting physiology

And finally,
4) What do you see in Image 1 that could be of concern?

This question refers to an image that is included in the word processing document that contained the case that was emailed to the learner.

As a hint of what is to come, learners can select relevant observations with their mouse that are immediately transferred to the relevant observations list.

I'll do a couple.

Since we are already looking at this case, I'll load a version that has been worked through by a learner.

Notice the list relevant observations.

Now let's look at the learner's assessment. I'll click on "Build assessment."

The learner has created this outlined evidence-based assessment of what is happening physiologically in this foal.

The learner asserts that …

Notice the evidence for these assertions, which come from observations made during the visit,

and results of the blood work that was sent to the lab.

You might be wondering how these observations made it into the assessment.

A simple drag and drop is all that is required.

Their indentation can be changed.

Or they can be moved.

I will delete them by right clicking my mouse and choosing

"Delete the selected entry or entries."

Assertions are added to the assessment using the same context menu or short-cut keys.

A new assertion

The mechanics of building an assessment are covered in a subsequent video.

What makes this case important for veterinary students is that the high white blood cell count and the high concentration of red blood cells could be misinterpreted as being caused by infection and dehydration,

when in fact, both are caused by the release of epinephrine, and will return back to normal once the foal has had a chance to calm down.

You might take a moment and think about what scenarios are important in your domain of interest.

Then ask yourself what type of assessment would demonstrate competence in thinking critically to solve a problem in that scenario.

Also ask yourself what observations or other evidence you would include in the scenario that would support the assessment.

Next, I'll talk about a general framework, and my example will be from the domain of psychotherapy that is used with permission from Dr. Tracy Eells.

This case actually uses both a guiding and a general framework.

While this example is a fictionalized client, Rochelle,

who is struggling with depression, anxiety, difficulty sleeping, and chronic headaches;

interns, residents, or other health professionals could just as easily use the Platform to create a similar case with an assessment about a patient they were caring for,

and use it to organize their thoughts for a presentation or to write a narrative.

Notice the guiding framework of questions.

What are her main problems?

How are they interrelated?

Is she still grieving the loss of her son?

I'll click on "Build assessment" to show you the "General Case Formulation Model" that Dr. Tracy Eells has proposed.

This framework is a general outline of what topics he wants his students to consider when developing a patient formulation,

which in essence is a logical explanation as to what is happening and why, and what intervention is proposed.

The formulation begins with a Problem list consisting of Patient related factors, Environment related factors, and a Temporal dimension, which is time.

The diagnosis component of this version of the General Case Formulation Model includes the multi-axial approach of the the Diagnostic and Statistical Manual IV,

which has been replaced recently with a new release of the manual that does not organize findings under these axes.

Let's now look at Rochelle with a completed patient formulation

Notice the Relevant Observations that a learner has made.

I'll click on, Build assessment

Notice how involved this is.

All of this could be a bit overwhelming for a novice learner.

Let's simplify it by collapsing the major sections so we can focus on one at a time.

This will reduce cognitive load, which I will talk about in more detail in a separate tutorial on Cognitive Load Theory.

Now we can focus only on the patient-related factors, which include depression, anxiety, and mood instability.

I'll close these and look at the Environment-related factors.

These are all important considerations when trying to understand Rochelle's experience of her world, and her responses.

Next, let's look at the Explanatory Hypothesis.

The Precipitants are her husband's suspected infidelity, and the financial consequences of her sister-in-law moving out.

Her resources include being educated and the ability to form close relationships.

Dr. Eells would like therapists to explain Rochelle's situation from a Behavior, Cognitive, and Psychodynamic perspective.

Learners provide these explanations in the corresponding note field.

Notes can be formatted or simple text.

I hope you can appreciate that the use of a guiding and generalized framework for assessing Rochelle's situation promotes consistency and completeness in performing an assessment, as well as in communicating the results.

So you might ask, "What is the long-term role of frameworks?"

As learners gain expertise in critical thinking and assessment, they are presented with similar exercises, cases, or scenarios that do not include the framework.

This enables educators to know that learners have internalized the approach to an assessment, rather than develop a dependence on the prompting of a framework.

Of course, educators may differ as to the relevance of various types of general frameworks in their discipline, or even as to what constitutes a framework.

The Applied Learning Platform supports the expression of these differences by allowing educators to design and reuse their own general frameworks.

In addition, educators at the same institution can create and implement a standard set of institution-specific general frameworks for use across multiple courses.

These frameworks and other resources are developed and maintained in the Applied Learning Platform Resource Repository, which is covered in a separate video.

I have deliberately avoided the specifics of authoring and working through applied learning activities in this video because these topics will be covered in great detail in subsequent videos that are found in the Section, Using the Applied Learning Platform.

Additional videos will cover other features of the Platform such as,

modules for peer and educator evaluation of assessments using educator-defined rubrics,

self-evaluation of one's assessment using educator defined topics,

the ability to include a discussion and questions at the completion of an activity to reinforce learning,

and the ability to include the author's evidence-based assessment for learners to compare to their own once it is completed.

This immediate feedback supports the germane cognitive load of learning at the optimal moment when the activity is fresh in their mind.

While it may be tempting to skip the remaining videos on principles and concepts in this Introduction section,

future videos on using the Platform will expand upon these ideas, such as germane cognitive load which was just mentioned, and these videos will illustrate how these principles and concepts are effectively considered and implemented.

As I said previously, I will do my best to be mercifully brief.

Thank you for watching.