



Challenge Based Learning

Challenge Based Learning is learning through meeting a challenge while developing the needed skills, knowledge, and abilities through a set of performance supports. The elements of a Challenge Based Learning (CBL) module are the challenge, performance supports, the solution, reflection, and contributions to the community of learners.



Challenge

The challenge presents something to do or create. The information provided with a challenge includes a description, purpose, requirements, and assets. The description is a high-level view of what is to be accomplished. The purpose describes why this challenge is important and what meeting it is meant to achieve. The requirements are the details of what is to be done or created. The goal of the challenge is to meet the requirements. If an application is to be built or a module of code is to be written the requirements are the software requirements. Resources are tools, digital media assets, code or other entities that are provided or needed to complete the challenge.

A challenge should be studied and attempted before accessing the performance supports. What skills, knowledge, and abilities are needed is best understood once there has been engagement in attempting to meet the challenge. In cognitive psychology terms, it is important to develop cognitive hooks on which you will hang the skills, knowledge, and abilities that you develop. Attempting the challenge and not being able to meet it establishes the motivation for what needs to be learned and that makes it easier to actually learn and retain what has been learned.

Performance

Certain performances are needed to meet a challenge. Performance supports are provided to help develop the knowledge, skills, and abilities needed to meet the challenge. Performance supports include resources that provide demonstrations, explanations, illustrations, and documentation in the form of videos, documents, web sites, or other informational and interactive assets.

Primary and secondary performance supports are provided. Primary performance supports typically need to be utilized because they are based on knowledge, skills, and abilities that likely do not already exist at the time the challenge is pursued within the sequence of challenges. Secondary performance supports are related to knowledge, skills, and abilities that are necessary to meet the challenge but are already possessed if the sequence of challenges has been followed. The secondary performance supports are provided for convenience in case review is required or if a challenge is being accessed out of sequence.

Solution

The solution shows how to meet to meet the challenge. The solution should not be accessed until after a valid attempt is made at completing the challenge and utilizing the performance supports.

Reflection

Reflection is thinking more deeply about the challenge and how it was met. The goal of meeting the challenge is to develop understanding and not simply make things work. Students should engage in self-reflection regarding the challenge and what has been created as part of the challenge. In addition, a surrogate reflection is provided where one or more students reflect on the challenge and the solution. Typically the surrogate reflection is in the form of a video.

Contribution

Contributions made to the community of learners improve the overall instructional experience. Contributions can be made by asking and answering questions, providing feedback about the challenge, performance supports, solution and surrogate reflection, and contributing additional materials, examples and alternative solutions. Ultimately this element of the CML module will be in the form of a rich social space for all kinds of contribution and engagement in the community of learners. Initially this may be limited to discussion forums or, in some instance, it will not exist at all because of technical constraints.

Meeting the Challenge

1. Read the challenge description.
2. Read the challenge purpose.
3. Obtain the challenge assets (if provided).
4. Read and study the challenge requirements. Use them to plan your course of action in meeting the challenge. The goal of the challenge is to meet these requirements.
5. Attempt to meet the challenge.
6. Utilize the primary performance supports to develop the knowledge, skills, and abilities needed to meet the challenge.
7. Utilize the secondary performance supports if needed.
8. Only after making a valid attempt at meeting the challenge, review the solution.
9. Reflect on the challenge and how it was met. Work at developing a deeper understanding than simply meeting the requirements. View the surrogate reflection if one is provided.
10. Contribute to the community of learners.