



ENTER-CBL

# Boosting Entrepreneurial Mindset of Students with Challenge-Based Learning

Digital training material for teachers

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**Boosting Entrepreneurial Mindset  
of Students with Challenge-Based Learning**

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## WP 2.2 RECOMMENDED READINGS ON CBL METHODOLOGIES AND INTERDISCIPLINARY COLLABORATION

This document encompasses educational content delivered through a variety of media formats, such as videos and podcasts, all rooted in the principles of CBL methodology and practices. Aimed at providing an interactive and immersive learning experience, these resources utilize the dynamic capabilities of multimedia to deepen learners' understanding of the CBL framework. By illustrating both theoretical concepts and practical applications, this multimedia approach serves diverse learning styles and encourages the exploration of CBL's practical aspects, thus fostering enhanced problem-solving capabilities and teamwork skills in real-world settings.

Building on this foundation, the document also presents a suite of digital training materials specifically designed for educators. This includes a wide range of audiovisual content, textual materials, guidelines, and comprehensive toolkits that address the core aspects of CBL methodology. Covering the theoretical underpinnings (encompassing theories, concepts, and frameworks), the potential benefits and challenges of applying CBL in educational settings, the key elements, and tools integral to CBL, as well as detailed procedures and workflows for its implementation, these resources aim to equip teachers with the knowledge and skills required to effectively incorporate CBL into their teaching practices. Furthermore, the inclusion of firsthand experiences from educators who have successfully implemented CBL methodologies offers invaluable insights and real-world perspectives on the transformative potential of CBL in the classroom.

## C. WEBSITES

### Website 1: Challenge Based Learning

- <https://www.challengebasedlearning.org>
- CBL Toolkit: <https://www.challengebasedlearning.org/toolkit>
- CBL Framework: <https://www.challengebasedlearning.org/framework>

This is the official website for CBL, providing general information, resources, implementation examples, and research on CBL. It includes guides and strategies for educators looking to apply CBL in their teaching practices.

### Website 2: George Lucas Educational Foundation

- <https://www.edutopia.org>

Edutopia is a comprehensive resource for innovative teaching methods. You can find articles and videos about BPL or similar educational models on this site.

### Website 3: Buck Institute for Education (BIE) – PBLWorks

- <https://www.pblworks.org>

This website specializes in PBL but also shares concepts and methodologies that overlap with CBL. The site offers numerous resources for teaching strategies and projects.

### Website 4: Digital Promise Challenge Based Learning

- <https://digitalpromise.org/initiative/cbl>

This page offers detailed information about Challenge Based Learning, including case studies and guidance on how teachers can implement this learning approach.

### Website 5: Apple Education

- <https://education.apple.com/learning-center/R006554>

Apple has been a proponent of Challenge Based Learning and has supported resources and toolkits that can be very useful for educators looking to implement this methodology.

## Website 6: University of Delaware PBL

- <https://sites.udel.edu/pblworkshop>

The University of Delaware has been a leader in promoting Problem-Based Learning, especially in higher education. Their website offers numerous resources, including tutorials, problems from various disciplines, and assessments tailored to PBL environments.

## Website 7: Illinois Mathematics and Science Academy - Problem-Based Learning Network

- <https://www.imsa.edu/educator-development/problem-based-learning>

IMSA's Problem-Based Learning Network provides a platform where educators can access resources, find training, and connect with other educators to discuss and develop PBL strategies.

## Website 8: University of Twente

- <https://www.utwente.nl/en/cbl>

The university's commitment to interdisciplinary research and education fosters an environment where students can engage deeply with global issues, utilizing cutting-edge technology and collaborative projects to devise practical, impactful solutions.

## Website 9: Eindhoven University of Technology

- <https://www.tue.nl/en/education/why-study-at-tue/challenge-based-learning>

Eindhoven University of Technology is at the forefront of incorporating CBL into its educational model.

## Website 10: Dublin City University

- <https://www.dcu.ie/teu/challenge-based-learning>

According to DCU, Challenge-Based Learning (CBL) is a process of collaborative engagement with peers, academics, and stakeholders to develop solutions to real-world social, technological, environmental, and economic challenges of urgency and significance.

## Website 11: Università di Trento

- <https://www.soi.unitn.it/challenge-based-learning/>

The Università di Trento embraces CBL as a core element of its educational philosophy, particularly within its School of Innovation. This approach encourages students to engage directly with real-world problems, combining interdisciplinary knowledge and collaborative teamwork to develop innovative solutions.

## Website 12: Times Higher Education

- <https://www.timeshighereducation.com/campus/challengebased-learning-design-and-delivery-undergraduate-courses>

Times Higher Education provides a comprehensive exploration of CBL in the context of designing and delivering undergraduate courses. This resource serves as an invaluable guide for educators and academic institutions looking to integrate CBL into their curriculum.

## B. VIDEOS

### Video 1: Explained: Challenge-based Learning | 1:55 min |

- [https://www.youtube.com/watch?v=MyiFPIJivPY&ab\\_channel=UniversityofTwente%2FUniversityTwente](https://www.youtube.com/watch?v=MyiFPIJivPY&ab_channel=UniversityofTwente%2FUniversityTwente)

### Video 2: Challenge Based Learning in Practice (CBL) | 4:03 min |

- [https://www.youtube.com/watch?v=CFC5vvsPWUA&ab\\_channel=UniversityofTwente%2FUniversityTwente](https://www.youtube.com/watch?v=CFC5vvsPWUA&ab_channel=UniversityofTwente%2FUniversityTwente)

### Video 3: CBL: Framework Overview | 4:18 min |

- [https://education.apple.com/learning-center/T052487A-en\\_EMEA?backTo=%2Flearning-center%2FR006554%3FbackTo%3Dhttps:%2F%2Feducation.apple.com%2Fforum%2Fapple-groups%2Fchallenge-based-learning](https://education.apple.com/learning-center/T052487A-en_EMEA?backTo=%2Flearning-center%2FR006554%3FbackTo%3Dhttps:%2F%2Feducation.apple.com%2Fforum%2Fapple-groups%2Fchallenge-based-learning)

### Video 4: Engage: Create Your Own Challenge | 5:42 min |

- [https://education.apple.com/learning-center/T052488A-en\\_EMEA?backTo=%2Flearning-center%2FR006554%3FbackTo%3Dhttps:%2F%2Feducation.apple.com%2Fforum%2Fapple-groups%2Fchallenge-based-learning](https://education.apple.com/learning-center/T052488A-en_EMEA?backTo=%2Flearning-center%2FR006554%3FbackTo%3Dhttps:%2F%2Feducation.apple.com%2Fforum%2Fapple-groups%2Fchallenge-based-learning)

### Video 5: Investigate: Participate in a Challenge | 7:14 min |

- [https://education.apple.com/learning-center/T052489A-en\\_EMEA?backTo=%2Flearning-center%2FR006554%3FbackTo%3Dhttps:%2F%2Feducation.apple.com%2Fforum%2Fapple-groups%2Fchallenge-based-learning](https://education.apple.com/learning-center/T052489A-en_EMEA?backTo=%2Flearning-center%2FR006554%3FbackTo%3Dhttps:%2F%2Feducation.apple.com%2Fforum%2Fapple-groups%2Fchallenge-based-learning)

### Video 6: Act: Create and Implement Your Solution | 5:38 min |

- [https://education.apple.com/learning-center/T052490A-en\\_EMEA?backTo=%2Flearning-center%2FR006554%3FbackTo%3Dhttps:%2F%2Feducation.apple.com%2Fforum%2Fapple-groups%2Fchallenge-based-learning](https://education.apple.com/learning-center/T052490A-en_EMEA?backTo=%2Flearning-center%2FR006554%3FbackTo%3Dhttps:%2F%2Feducation.apple.com%2Fforum%2Fapple-groups%2Fchallenge-based-learning)

### **Video 7: Document, Reflect and Share: Facilitate the CBL Process | 3:38 min |**

- [https://education.apple.com/learning-center/T052491A-en\\_EMEA?backTo=%2Flearning-center%2FR006554%3FbackTo%3Dhttps%3A%2F%2Feducation.apple.com%2Fforum%2Fapple-groups%2Fchallenge-based-learning](https://education.apple.com/learning-center/T052491A-en_EMEA?backTo=%2Flearning-center%2FR006554%3FbackTo%3Dhttps%3A%2F%2Feducation.apple.com%2Fforum%2Fapple-groups%2Fchallenge-based-learning)

### **Video 8: Challenge Based Learning: an overview | 20:44 min |**

- [https://www.youtube.com/watch?v=MH0xbc-xMNI&ab\\_channel=ESU8WednesdayWebinars](https://www.youtube.com/watch?v=MH0xbc-xMNI&ab_channel=ESU8WednesdayWebinars)

### **Video 9: Challenge Based Learning - An Introduction | 7:24 min |**

- [https://www.youtube.com/watch?v=\\_zQODH4b0Aw&t=9s&ab\\_channel=NSS](https://www.youtube.com/watch?v=_zQODH4b0Aw&t=9s&ab_channel=NSS)

### **Video 10: What is Challenged Based Learning? | 3:27 min |**

- [https://www.youtube.com/watch?v=JlBbT8I49oI&t=2s&ab\\_channel=MCSDMiddies](https://www.youtube.com/watch?v=JlBbT8I49oI&t=2s&ab_channel=MCSDMiddies)

### **Video 11: Ciena Solutions Challenge Quick Tip: Introduction to the Challenge and the CBL Framework | 2:57 min |**

- [https://www.youtube.com/watch?v=QP5sicZR-qo&ab\\_channel=DigitalPromise](https://www.youtube.com/watch?v=QP5sicZR-qo&ab_channel=DigitalPromise)

### **Video 12: Challenge vs Problem Based Learning | 36:59 min |**

- [https://www.youtube.com/watch?v=XhyWuenuEeY&ab\\_channel=DiscoveryEducation](https://www.youtube.com/watch?v=XhyWuenuEeY&ab_channel=DiscoveryEducation)

### **Video 13: What is Problem Based Learning | 5:03 min |**

- [https://www.youtube.com/watch?v=RGoJIQYGpYk&t=5s&ab\\_channel=JohnSpencer](https://www.youtube.com/watch?v=RGoJIQYGpYk&t=5s&ab_channel=JohnSpencer)

### **Video 14: Problem Based Learning | 16:13 min |**

- [https://www.youtube.com/watch?v=-iwV9LjZwm8&ab\\_channel=NCFE](https://www.youtube.com/watch?v=-iwV9LjZwm8&ab_channel=NCFE)

### **Video 15: The Advantages of Challenge-Based Learning | Tomorrow University of Applied Sciences | 1:39 min |**

- [https://www.youtube.com/watch?v=mtYIuqn4nk&ab\\_channel=TomorrowUniversityofAppliedSciences](https://www.youtube.com/watch?v=mtYIuqn4nk&ab_channel=TomorrowUniversityofAppliedSciences)

### **Video 16: Brain-On-Chip: Challenge Based Learning (CBL) course | 4:05 min |**

- [https://www.youtube.com/watch?v=08pTD1a03CY&ab\\_channel=TUEinnovationSpace](https://www.youtube.com/watch?v=08pTD1a03CY&ab_channel=TUEinnovationSpace)

### **Video 17: Introduction to Team Based Learning | 8:47 min |**

- [https://www.youtube.com/watch?v=aZd4GBdiwY4&ab\\_channel=LAMS](https://www.youtube.com/watch?v=aZd4GBdiwY4&ab_channel=LAMS)

### **Video 18: Challenge based learning: The learning process | iMooX | 7:55 min |**

- [https://www.youtube.com/watch?v=lEPbt8-OQGQ&ab\\_channel=iMooXat](https://www.youtube.com/watch?v=lEPbt8-OQGQ&ab_channel=iMooXat)

### **Video 19: Challenge based learning: Input, assessment, benefits and drawbacks | iMooX | 7:55 min |**

- [https://www.youtube.com/watch?v=VDBQ-pYD2gI&ab\\_channel=iMooXat](https://www.youtube.com/watch?v=VDBQ-pYD2gI&ab_channel=iMooXat)

### **Video 20: Challenge Based Learning in Higher Education" | iMooX | 3:22 min |**

- [https://www.youtube.com/watch?v=RoKZe6hF5bw&ab\\_channel=iMooXat](https://www.youtube.com/watch?v=RoKZe6hF5bw&ab_channel=iMooXat)

### **Video 21: Testimonials: Role of a teacher in a CBL activity | iMooX | 2:37 min |**

- [https://www.youtube.com/watch?v=zj8UnJ2R5cA&list=PLhy2nHJciTEDB2Jl69cN5JnEBk-CLkriP7&index=9&ab\\_channel=iMooXat](https://www.youtube.com/watch?v=zj8UnJ2R5cA&list=PLhy2nHJciTEDB2Jl69cN5JnEBk-CLkriP7&index=9&ab_channel=iMooXat)

## **C. PODCASTS**

### **Podcast 1: Improving Student Collaboration in Remote and Hybrid Learning | 22:53 min |**

- <https://spencerauthor.com/remote-collaboration/>

### **Podcast 2: Chapter 5: Challenge Based Learning: A Future Full of Challenges | 35:28 min |**

- <https://open.spotify.com/episode/4tGeaXPG7DfzpxrGutJPxm>

### **Podcast 3: Chapter 4: Challenge Based Learning: A Future Full of Challenges | 41:23 min |**

- <https://open.spotify.com/episode/1P4XuL1t1mOqHrxYHygrtA>

### **Podcast 4: Problem Based Learning Gaby Barreto and Jennifer Choi | 47:49 min |**

- <https://open.spotify.com/show/5GpLTBIbODWqAhsHpdXfeu>

### **Podcast 5: Challenge Based Learning (ECBO) | 29:18 min |**

- <https://open.spotify.com/episode/0mYFMEPJrq1RijKAcPDNwl>

## Podcast 6: Project-based Learning with A.I. and Improving Friendships | 11:01 min |

- [https://music.youtube.com/watch?v=MG\\_dCELwZuo&si=19iA7rjPzDLj0gK0](https://music.youtube.com/watch?v=MG_dCELwZuo&si=19iA7rjPzDLj0gK0)

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