

Reusable Learning Objects

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Abstract

Civilization has advanced because of a solid educational system. In the process of enhancing learning through technology to assist in the delivery of learning, the idea of Reusable Learning Objects (RLO) came to be. The idea builds upon a framework of learning that can be both reusable but also be very modular in the way they are delivered. RLOs are learning objects that teach a granular topic in their own self-contained container. These objects of learning can be reused in multiple courses.

Introduction

Technology has moved forward many aspects of daily life to make things better. Reusable Learning Objects (RLOs) have helped advance learning by using a digital space. RLOs are digital resources that are designed to be reusable, modular, and self-contained. RLOs can be created for a vast number of topics where learning takes place. They also encompass a vast range of materials and delivery options including multi-media presentations, interactive simulations, quizzes, animations, and any other form of delivery you can think of. RLOs hold a vast potential to create a learning platform that is efficient for the authors and effective for the students in their education.

What is a Reusable Learning Object

Reusable Learning Objects are reusable objects either digital or otherwise that support learning (Noguera, et al, 2018). A key feature of RLOs is that they are both adaptable and versatile, allowing objects to be integrated into different learning environments (Pappas, 2016). They are designed to be modular in nature so that they can fit seamlessly into multiple learning environments. This style of collecting and reusing objects of learning is a better way to resource time and therefore money, into effective learning outcomes.

Benefits of Reusable Learning Objects

The Benefits of using RLOs comes in a few ways. Firstly, they are a one-time cost to an organization or teacher. You can develop a learning object one time and use it in many courses or lesson plans. You do not have to waste time and resources completing the same learning object repeatedly. This reduces the cost as Downes (2001) gives a practical example. If it costs 1000 dollars to produce a learning object and you use it even ten times. The cost is only 100 dollars in the end. But if you had to recreate the 1000 dollar cost 10 times then it would be 10,000 dollars. Therefore, these Learning objects save money when they are reusable (Downes, 2001).

Another Benefit of RLOs is the idea that the digital collection of learning objects can be searched using metadata. It allows instructors and students alike to find information on topics they need through searching tools. If you realize that you know a great deal about a

subject but are missing sections to one aspect. A student could search the one aspect and learn about that single aspect without touching the other sections of the lesson plan.

Interactive and Engaging

A key concept in RLOs is that they are not just learning objects like a textbook to read.

These learning objects are interactive and engaging. By using multimedia elements and interactive elements into the learning environment, the learning object becomes more appealing and interesting for the learner. Incorporating things like educational games, and simulations can really make learning fun and interactive. It has been proven that the more ways you learn the same thing the more you will retain (Loma Linda University, 2019).

Learning objects can be reinforced by instructing similar content in multiple formats.

Objective based Non-contextual

The content found in an RLO should be a single learning element. This is key to making these elements stand-alone learning objects or outcomes. You can then incorporate multiple learning objects into a series of learning objectives to teach a course. However, they need to be single elements of learning to make them work as reusable objects.

The content found in an RLO should be for the most part context free. This once again allows it to be reusable apart from any other part of the combined objects. Content, media, and the interactive components should be context free (Barritt and Alderman, 2004). They should still provide a meaningful structure so instruct the student; however the learning

object should stand apart from anything else so that that element of knowledge transfer can be taught without the other learning objects around it (Barritt and Alderman, 2004). This makes it portable and reusable while keeping the information contained within the element usable for learning (Barritt and Alderman, 2004).

Sharing

RLOs promote the sharing of learning objects between authors, educators, and professors. This knowledge sharing can help build up learning material and techniques among the educational community. Collaboration and working together can help with innovation and continual improvement between parties.

Challenges of RLOs

The challenges of RLOs start with sharing. Course sharing between educational institutions is difficult to agree to and maintain (Downes, 2001). In the world of paid-for online e-learning it's even more territorial. This is a hurdle that will have to be overcome to collectively have a database of learning object modules.

Another challenge is authorship and ownership of the modules if there would be a central repository. How does one deal with plagiarism and property rights of materials created by one author when they put their work into a repository for others to use? Does their learning object get associated with the author? What if the person using the module wanted to share a good section of the module but alter twenty five percent for their use, would that

be allowed, and does it infringe on the original author's intellectual property? These types of issues would have to be discussed and agreed to in a central repository of RLOs.

One final challenge to RLOs is that of consistent formatting and compatibility.

Compatibility and cohesiveness would have to be worked from the perspective of a Learning Management System that would store and use RLOs. To ensure that there were no incompatibilities between the RLOs created, the types of technologies and the way the Management Systems work. There are many pieces to develop and think about when trying to make RLOs work across multiple platforms and through multiple delivery methods.

Conclusion

In conclusion, Reusable learning objects show us a new approach to learning in a digital way. This approach will save time and money for those that implement it effectively. The reusable aspect of these learning objects is very RLOs transform the interaction of learning by diversifying the deployment of the material across multiple platforms. The objects must be context-free to allow the objects to be independently learned apart from the whole. Reusable Learning Objects are a digital source of independent learning objects that are reusable, educational, and modular. A single object can take place in many teaching courses and across many institutions all at once.

References

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