

SCORM is outdated here are the better alternatives



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Chapter 1 Introduction

Enterprises across the world are investing in digital learning more than ever. Employers want to train their workforce to meet business goals, and in a world of remote work, it is highly evident that the business world has successfully transitioned to e-learning space to meet such training requirements. Organizations are working to integrate this approach into their culture. The immediate concern for many Learning and Development (L&D) professionals, however, is to ensure that digitized content becomes available to all their workforce, no matter where they are located or when they access it. Additionally, L&D teams need to be able to track and evaluate the progress of their learners and measure the impact of the course content. Through this, they can see the success of the content and create a sound business case for future training investment. Not only this, but as a rule of thumb it is crucial to be able to evaluate the quality of course content and analyze the way employees are engaging with it. So, with this in mind we may question, what are the ways teams have been able to measure the success of their learning content thus far?

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Most common e-learning standards

There are numerous standards available that allow L&D professionals to track learner journeys and measure engagement. Each standard comes with its own set of pros and cons. Ultimately, the choice depends on the requirements organizations have in terms of the analytical tracking reports and training delivery systems that are enough to justify the investment. The most used standards are:

AICC

Developed in 1993, Aviation Industry Computer-Based Training Committee (AICC) is the pioneer standard that came into play for Learning Management Systems (LMS). AICC-compliant LMS can distribute all types of e-learning content. It has high data security due to HTTP messages that it uses to communicate with an LMS. With a server that is separate from that of the LMS, AICC allows for greater flexibility in deployment configuration. On the downside, however, because it is one of the first standards, uploading AICC content into an LMS can be a multi-stepped process.

LTI

Learning Tools Interoperability (LTI) is a standard for Learning technology Integration. It helps you

connect learning technology in different ways. For example, Single Sign-On helps learners and authors safely log in to different learning tools without creating various login credentials. LTI can track results on a high level to show if someone has failed or passed. The usage of LTI is very limited for result tracking.

SCORM

Shareable Content Object Reference Model (SCORM) stands for Sharable Content Object Reference Model. It is a standard in e-learning that tracks and traces your learners' results in a Learning Management System (LMS). SCORM-based content ensures the legitimacy of test scores through smart metrics and guides learning managers to focus further on specific gaps in learner knowledge. It makes sure the content you create in any compliant authoring tool works seamlessly with any other SCORM LMS or on the web or as standalone. The results can be easily tracked in an LMS, LRS, or LXP.

xAPI

xAPI is an e-learning standard that communicates with your LRS or LXP. It gives an in-depth tracking of learners' behaviors. For example, it shows earner engagement through mouse-clicks, comments, and other on-screen actions. That way, it shows exactly where content is making an

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impact. Organizations can use this to make real-life performance improvements. xAPI can also track learners' behavior when they're outside of the organization's network. Allowing every interaction to be transferred to the LRS.

CMI5

xAPI offers so many possibilities that it needed a set of rules to be able to have focus and impact. That set of rules is what we now call CMI5. Short for computer-managed instruction, it can track learners' results in an LMS, just like SCORM.

Tin Can

Have you come across the term Tin Can? That used to be the name of xAPI when it was being developed before it became an official standard.

With an overview of the different standards available to L&D professionals working to develop elearning training platforms for their organizations, another set of questions arises. Should one stick to the most popular standards or adopt new standards that will guarantee to prove a worthy investment? And how does one make such a decision? Traditional and formal training is in the past. Now, new methodologies have arisen. Microlearning, continuous learning, social learning, and more have all come to the forefront as the desired format for learning material. L&D professionals should be cognizant of the new formats and ensure that the chosen standard will not limit the data that can be drawn from the content.

Below, we will explore why some standards have become outdated and why a popular standard like SCORM is increasingly losing favor within the e-learning world.

The new age of corporate learning

The new age of corporate learning is based on flexibility. It does not limit the learner to the scheduled formal training, whether it is an e-learning module in an LMS or classroom-based training. Employees are continuously learning new skills and expanding on domain-related knowledge. In the actual workspace, learners should not be restricted to an LMS. They are constantly on the move and want the ability to further their knowledge no matter where they are located. The learners of today strongly exhibit a proactive approach to personal and professional development. Mobile learning has become a key component of a distributed learning strategy.

Most informal e-learning activities happen on the fly. Employees find their knowledge gaps on the job, then use informal ways of learning to fill the gaps. These performance support resources vary from how-to's and videos to webinars, podcasts, and more.

With these resources, an LMS is merely a small part of a much wider sphere of knowledge being accessed by the learner. In the present scenario, this data and knowledge remain invisible to the trainer. In such a case, an LMS is the only place where data can be gathered. With so much learning taking place outside of an LMS, it becomes almost useless.

Measuring learner behavior and analyzing employee engagement when consuming learning content is crucial as it helps L&D teams ensure employees get access to effective content. The data gathered gives the team insight into the quality of the course content or assessment parameters.

It is here that results tracking, behavior, and engagement tracking along with analyzing the impact of training on performance gains immense importance for L&D managers. The bottom line remains, training should be optimized to fulfill the needs of the learner, ultimately empowering them to perform better and drive business goals.

Evaluating e-learning standards through an L&D lens

It is evident that learning has entered a new 'digital' era where oversights into the progress and engagement of learners is very important. L&D managers must be able to show the effectiveness of their training and are expected to report on the return on investment for their training by responding to queries:

- How did the training help in achieving business objectives?
- Are there any long-term positive business impacts of the training?
- Is there any direct correlation between training and enhanced team performance?

In today's world, training directors and L&D professionals need deeper learning analytics to provide critical answers that drive strategic decisions to maintain business competitiveness. Measuring engagement and behavior patterns to indicate a successful training require metrics and reporting on:

- Learners who sign in and quickly begin their learning
- Areas of training where learners are most engaged
- Learners that are actively engaging with the content
- Which learners access optional material and in what sequence

These learner analytics help in identifying:

- Who is actively on a path toward learning?
- Who might need a reminder or some coaching?
- Is it possible to achieve the training goals within a certain time frame?

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The standards outlined earlier in the book come with their own related compliance and security issues. Their upside and downsides have to be carefully scrutinized to judge the alignment to L&D goals. Let us compare the positives and negatives of the options to identify the best fit for L&D teams:

AICC

AICC was disbanded in 2014, so no new updates are expected. AICC requires several complicated steps to be implemented in an LMS, and it provides only pass-fail metrics. Moreover, it does not provide for any other tracking data that can be leveraged by L&D managers. Therefore, this standard is out of the question.

LTI

LTI is device agnostic through single sign-on and tracks result on a very high metric of the pass and fail. But it is quite insufficient in giving any meaningful insight into the learners and their behavior. It is popular in academic circles but does very little for corporate training.

SCORM

This protocol has been steadfast in offering standardized LMS functionality and content interoperability for over two decades. In the present era of traditional web-based training (WBT) it has revolutionized the ability to develop and deliver standardized content as a single package upload to any compliant LMS to track learner's interaction. SCORM tracks user completion and

the time taken to finish a task, in addition to pass/fail metrics. The improved sequencing and navigation functionality provides for substantially richer content interactions.

Many organizations continue to rely on SCORM to this day. It fails miserably, however, in addressing our modern learning enterprise challenges. It is incapable of tracking how learner-generated data is collected and does not have the functionality to record informal learning activities. Additionally, SCORM does not allow for elaborate reporting nor in-depth analysis of user activity due to the availability of very basic metrics.

Presently, as little as 10% of workplace learning takes place as formal training. Conventional SCORM content delivers an average engagement rate of 20%, whereas advanced solutions built around human interactions and informal learning interventions achieve engagement rates of more than 90%. Moreover, SCORM has struggled to keep up with the new requirements of the new era of digital learning. It is relevant when learning is highly linear or quiz-based. But new-age learning pathways which are diverse and adaptive do not work well in the SCORM format. UX-focused designs, that give liberty to the learner movement through content and testing, have rendered SCORM unreliable to capture and report learner data.

The biggest challenge in using SCORM is that learners must be operating within a web-based SCORM compliant LMS that is online. This completely cuts off the mobile users who are increasingly accessing training content on the move, at their own pace, place, and time. SCORM is thus not useful in serving most learning activities that will future-proof the business by bringing in innovative practices.

Tin Can API

Tin Can (which later became xAPI and will be explained in more detail below) trumped SCORM as it made learning on mobile devices possible and does not always require an internet connection. The program collects data and sends it to a Learner Record Store (LRS) when an internet connection is available. Hence, the delivery of the content to a wide range of devices and browsers became a reality. Much richer data about learner progress is also possible. This gives a more comprehensive and detailed picture of the learner's performance.

The advantages of making the switch to Tin Can (now xAPI) in a nutshell are:

- No requirement of a web browser for course creation
- More control over the e-learning content
- Platform transition through a single sign-on
- Virtually any learning activity; online or offline, can be recorded
- Possibility to work outside an LMS
- Greater portability due to LRS

xAPI

Experience API (xAPI) is the "new" name of the Tin Can API reporting standard. xAPI is quickly evolving as a game-changer and rapidly redesigning the fabric of e-learning. The worlds of mobile learning, simulations, virtual worlds, gaming, and more with behavioral tracking are now possible.

With xAPI, data is recorded in a consistent format across technologies. A variety of technical systems that are xAPI compliant can securely communicate by capturing and sharing this stream of activities using its simple vocabulary.

xAPI facilitates a variety of ways in which training can be delivered, including:

- A compliant system can host the content itself or be linked to externally hosted content
- The learner can sign into the system to find learning materials or have it sent through email
- Through an LMS

Presently, xAPI offers e-learning designers comprehensive reporting such as statements about the learner and their actions that do not require the use of an LMS. xAPI also allows for the recording of team learning and course completion without a web browser.

In addition, xAPI gives analytical insights into diverse data on several metrics. We have outlined those metrics below:

Course enrollment data – Enrollment numbers give insights into the number of employees currently engaged in training. It is also possible to see how many learners left the course before completion.

Pass/ Fail – Quiz and assessment scores demonstrate how much employees are retaining what they learned. xAPI's record multiple scores for a learner in a single test, unlike SCORM, which can only store the most recent single score. This provides L&D leadership with a much clearer and detailed picture of learner performance.

User activity – This gives deeper insights into employee engagement levels and their reactions to different pieces of training content as they engage with it.

Most viewed course materials – This will help to identify which segments of content learners favor and what is working most effectively.

Performance data – This insight analyzes whether employees are retaining information well enough for them to apply it on the job.

Time spent on training - The period spent training will help identify segments that employees find complex, thus pointing to areas of the course that may require revision.

Tracking group activities - Team-based education tasks, collaborative problem solving, and communities of practice can be tracked in detail with xAPI.

Highest and lowest performers – Grouping high and low performers can better determine why training is more effective for some learners and not for others.

Patterns in learner behavior – Analyzing clusters and patterns will help to find ways to enhance learning experiences for different types of learners.

Number of attempts – This metric helps in highlighting problem areas. If learners are repeatedly retaking tests with little improvement, this area can be investigated.

Mobile learning-friendly – Mobile learning that incorporates tools of performance support systems, brief tutorials, checklists, and more can be easily tracked with xAPI.

Cmi5

Like SCORM, xAPI is a learning protocol that allows you to track learning-related activity. Unlike its predecessor, it can track learning in pretty much any context. xAPI's ability to follow informal learning and capture activities outside the LMS made it particularly popular with L&D teams. It provided them with a detailed picture of a learner's experience. But although xAPI allows you to collect an enormous amount of data, it is not structured enough to decide what type of content should go inside an LMS. This is precisely where cmi5 now takes the stage. Cmi5 is a set of rules that adds more structure to xAPI and for LMS.

Cmi5 combines the capabilities of SCORM and xAPI to offer a more complete specification. Acting as the bridge between LRS and LMS, cmi5 has several major advantages.

Next-generation framework – Cmi5 was designed on the back of xAPI with the latest generation of e-learning in mind. This makes it more lightweight, efficient and scalable. Using superior technology, cmi5 can be used across different platforms, browsers, and devices.

Simplified specification – In so many ways, cmi5 picks up where SCORM and xAPI left off with a simpler model for data tracking. Thanks to cmi5's inter-operability, content creators no longer have to worry about compatibility between different learning units and LMS. True to its name, cmi5 creates a truly seamless, computer-managed experience.

Global access to content – SCORM specifies that all content must be hosted along with the LMS on the same domain. This makes it less than ideal for sharing content across different geographic locations. Cmi5 provides a more global solution. It allows you to import course structures onto the LMS while the material may be hosted elsewhere. Once you have a content delivery network in place, learners have easy access to content wherever they are.

Chapter 4 SCORM or xAPI

In this new era of e-learning, there are only two standards that are worth consideration. While both standards communicate between different systems, the way they achieve it and the reporting that each is capable of is what sets them apart. With an increased demand for analytical data and a greater focus on learner experience to justify the investment in e-learning material, SCORM has slowly faded into the background. SCORM has several limitations that will not work for organizations that are trying to keep up with the changes of tomorrow. With basic learner data and the required usage of an LMS, new-age organizations should look to leave behind SCORM to become future-ready.

xAPI standard, the future, allows L&D teams to work in ways that put the learner, not the software limitations, at the center of the training content. With freedom and analytical data that can be gathered from both offline and online activities, xAPI is arising as the best option to give learners and L&D teams the best experience. Furthermore, integrating xAPI is a faster and cheaper option in comparison to SCORM. It works seamlessly with independent social platforms, LRS, mobile apps, and more, which is only possible with such a standard.

With xAPI, L&D has the option of liaising with multiple vendors with creative ideas rather than being limited to a single LMS service provider. With this flexibility, L&D teams can have the confidence that they are building the best e-learning content with a robust and advanced learning ecosystem. To be agile and ready to respond quickly to change, multiple integrated systems with xAPI may be the best option.

Keeping pace with technology and evolving with the changing world of corporate training is the key to survival. In this world, xAPI is the obvious choice when compared to SCORM.

Employee-generated Learning powering informal learning with xAPI

As 90% of learning in the corporate world has become informal, there is a strong business case to strengthen the modes of informal learning. One of the most effective ways to do this is with an Employee-generated Learning (EGL) strategy with an easy to use and xAPI compliant software, such as Easygenerator. Within this strategy, peer learning and collaborative development of domain-specific knowledge by the employees is the hallmark.

EGL is a new age methodology where the creation of learning and training shifts from L&D to employees, the subject-matter experts. Easygenerator enables and facilitates employee-generated content, social learning, and performance support resources, all integral elements of informal learning.

Without training or expertise, employees can use Easygenerator to create online training content to improve performance and provide support in the moment of need. These modules can be as interactive or as simple as desired. With the concepts authored in their own words and style, it often

resonates well with co-workers, better than content generated by someone who is not an expert in the topic.

EGL's most significant advantage of informal learning is to share knowledge internally. It also becomes a win-win situation as the creator of content gains a deeper understanding of the topic in the content creation process through research and reviews, while the learner gains new knowledge. Additionally, there is no divide in the teacher-student relationship hierarchy. Ultimately, the goal is that the knowledge is engaged with and retained.

Nugget-sized microlearning modules, how-to videos, checklists, and more can be quickly created with Easygenerator, then shared through xAPI to various platforms. The "freeform" sharing and learning structure of xAPI through Easygenerator allows employees to express their ideas, questions, and insights without any limitations of time, place, and space. The xAPI generated data from these informal learning activities helps the L&D teams develop a sound business case for further investment in such training mediums. Easygenerator powers EGL like no other, and xAPI enhances this experience even further by providing valuable insights and results. Best of all, L&D teams can save money while doing it.

Conclusion

L&D teams across the globe are making the shift in the way learning is conceptualized, designed, and delivered. Existing roles are evolving, and new ones have been adopted. L&D, the gatekeepers of learning, have begun to realize that they now have the opportunity and means to enable and facilitate learning in new and more impactful ways for today's workforce. New technologies are available for "mobile-first" training, specifically xAPI, that can collect and report richer learning data.

Now is the time to replace the old standards of e-learning with the new technologies that have proven to be far more advantageous and reduce inefficiencies. With the high costs of maintaining legacy systems that are quickly becoming outdated, organizations should take a close look at their existing learning ecosystem. Perhaps it will come to light that SCORM is not cutting it anymore, and xAPI should be adopted.

With the latest technologies, each dollar spent can be justified through the advanced metrics that are provided. XAPI specifically will give L&D teams a sound case in demonstrating the return on investment of their training. So, the time has come to leap away from the sinking boat. Make that jump!

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