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LET'S PLAY VET

<enhancing
the learning experience
through playlists/>

O1: Literature review on playlists and badge related learning

BY BADGECRAFT AND UNISER



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1. Introduction

This literature review gathers relevant references, researches and practices focused on learning playlists and badge related learning.

The purpose of this document is to provide the partners of KA2 strategic partnership 'Let's play VET' with necessary resources to understand the concept of learning playlist and methodology of designing and implementing learning playlists.

This document covers the following topics:

1. Inspiring latest developments
2. Learning playlists in education
3. Research and approaches
4. Practices and methods
5. Recommendations for design of learning playlists
6. Questions for reflection and discussion

2. Inspiring latest developments

Recent years saw several inspiring developments that combine innovative approach of using learning playlists and badge related learning opportunities. The selected examples of developments were chosen following these selection criteria:

- promising and appealing to young people
- offer accessible resources to learn from them
- implements learning playlists, badge based learning and wide learning partnerships
- Utilise up-to-date and youth friendly technology to create learning opportunities

Learning playlists with LRNG

LRNG Partner handbook, 2016

In this first version, the Partner Handbook lays out the elements of the LRNG framework and provides with the fundamental knowledge that is necessary for organisations to populate the LRNG platform with own playlists, badges, XPs, and resources.

It helps organisations to construct a pathways for your to find new learning experiences within and organization and across the city.



Digital Badges in Education: Trends, Issues, and Cases

Edited by Lin Y. Muilenburg, Zane L. Berge, 2016, Routledge

In recent years, digital badging systems have become a credible means through which learners can establish portfolios and articulate knowledge and skills for both academic and professional settings. *Digital Badges in Education* provides the first comprehensive overview of this emerging tool.



A digital badge is an online-based visual representation that uses detailed metadata to signify learners' specific achievements and credentials in a variety of subjects across K-12 classrooms, higher education, and workplace learning. Focusing on learning design, assessment, and concrete cases in various contexts, this book explores the necessary components of badging systems, their functions and value, and the possible problems they face.

These twenty-five chapters illustrate a range of successful applications of digital badges to address a broad spectrum of learning challenges and to help readers formulate solutions during the development of their digital badges learning projects.

What Counts as Learning

By Sheryl Grant, 2017, The MacArthur Foundation

Open digital badges are simple tools that have the potential to change our current system of credentialing, creating ways to recognize more diverse learning pathways and opportunities for both learners and institutions for generations to come. How, then, do we go about building on this potential? How do we design relevant, innovative, and transformative badge systems that connect people's multiple spheres of learning and link them to new opportunities?



This research is an early response to designing badge systems grounded in actual practice. It provides a building block for anyone interested in designing open digital badge systems, and also for educators, policymakers, technologists, humanists, scholars, and administrators who have a stake in how badge systems might impact learning, assessment, and opportunities for lifelong learners.



Remake Learning

Playbook by the Sprout Fund

A field guide of ideas and resources for building innovation networks for teaching and learning. The *Playbook* documents the process and outcomes of both the Pittsburgh region's efforts to create a community-wide learning innovation network, and specific projects the network has catalyzed.

The *Playbook* captures the spirit and substance of the Remake Learning Network in action. It covers the theory and practice of building learning innovation networks, the resources and strategies required to put networks into action, and the impact of the network in schools, museums, libraries, communities, and more.



2. Learning playlists in education

Although learning playlists may seem as a very innovative approach and practice in education, they have developed on a solid body of other educational theories, practices and research outcomes. The practice of learning playlists is informed by the personalised learning and self-directed learning approaches. When combined with badge based learning, learning playlists borrow ideas and techniques used in gamification.

Essential elements of learning playlists

By LRNG

On LRNG, they use experiences (XPs) and resources to fill up the map with digital and local learning. LRNG tools help building XPs that bring together a learner's passion, people, and paths. Badges are used for wayfinding and archiving to keep track of the journey. Badges are not another gold star, they are digital learning credentials that signify achievement and populate a lifelong portfolio. Playlists forge thematic connections across learning and unlock future opportunities. These playlists can be simple, but they really shine when they bridge spaces, mediums, and subjects.

- **Resources.** A resource is a tool, a person, or piece of media content that is useful to the learner.
- **Experiences (XPs).** An XP is an activity that invites the learner to participate and explains how to engage. XPs are supported by resources, which are tools or pieces of media consumed by the learner.



- **Playlists.** A playlist is a curated group of resources and XPs stitched together into a narrative around a common theme that results in a badge. Playlists connect learning to interests and communities while unlocking real-world opportunities.
- **Badges.** A badge is a publicly shareable digital credential that unlocks opportunities and provides evidence of a substantive learning outcome.

Personalised Learning: A Working Definition

Learning playlists are seen as a solution to implement personalised learning. A group of philanthropies and school and technology advocacy groups, with contributions from educators, compiled a four-part "working definition" of the attributes of personalized learning.

Competency-Based Progression	Flexible Learning Environments	Personal Learning Paths	Learner Profiles
Each student's progress toward clearly-defined goals is continually assessed. A student advances and earns credit as soon as he/she demonstrates mastery.	Student needs drive the design of the learning environment. All operational elements—staffing plans, space utilization and time allocation—respond and adapt to support students in achieving their goals.	All students are held to clear, high expectations, but each student follows a customized path that responds and adapts based on his/her individual learning progress, motivations, and goals.	Each student has an up-to-date record of his/her individual strengths, needs, motivations, and goals.

Self-directed learning and playlists

By Susan Hennessey

The shifting roles of educators is the challenge to become co-creators or co-designers of learning experiences.

Self-directed learning does not mean teachers are absent from the equation. Instead, they become learning designers and facilitators tapping into their expertise of finding quality resources and co-structuring a learning path to support students. Teachers now have ready access to free, high-quality learning resources searchable by discipline, topic, or even standard.



These Open Educational Resources equip us with the ability find “just-in-time” resources to differentiate or respond to needs revealed during formative assessments. More importantly, teachers can search multiple OERs to create a learning sequence, or “playlist” to support a student’s interests.

Gamification in education

David L, Learning Theories, January 26, 2016

Gamification in education, or gamification in learning, is sometimes described using other terms: gameful thinking, game principles for education, motivation design, engagement design, etc. It is different from game-based learning in that it does not involve students making their own games or playing commercially-made video games. It operates under the assumption that the kind of engagement that gamers experience with games can be translated to an educational context towards the goals of facilitating learning and influencing student behavior. Since gamers voluntarily spend countless hours playing games and problem-solving, researchers and educators have been exploring ways to harness videogames’ power for motivation and apply it to the classroom.

Gamification in education offers many possible benefits, including the following:

- Students feel ownership over their learning
- More relaxed atmosphere in regard to failure, since learners can simply try again
- More fun
- Learning becomes visible through progress indicators
- Students may uncover intrinsic motivation for learning
- Students can explore different identities through different avatars/characters
- Students often are more comfortable in gaming environments

Some gamification *examples* for learning:



- Find the future:
http://exhibitions.nypl.org/100/digital_fun/play_the_game
<http://www.nypl.org/audiovideo/find-future-nypl-game>
- [Quest to Learn \(Q2L\)](#)
- Serious European games with Open Badges by Badgecraft
<http://www.slideshare.net/badgecraft/league-of-youth-work-agents>
<http://www.slideshare.net/badgecraft/the-youth-exchangers-game?related=1>
- Duolingo <https://www.duolingo.com/>

Tools for learning, that have game elements:

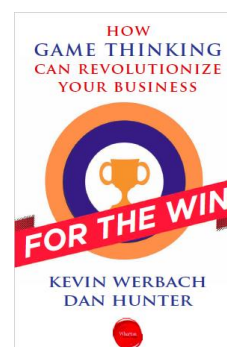
- Goosechase <https://www.goosechase.com/>
- Class Dojo <https://www.classdojo.com/>
- Actionbound www.actionbound.de

For the win

By Dan Hunter and Kevin Werbach

Gamification - the use of game design elements in non-game contexts. Authors give theoretical input followed by a practical examples on using gamification. While designing a gamified learning experience, ensure some of the dynamics, mechanics and components that most games have are included (this is why it is so fun to play them!).

Does your playlist and the learning environment trigger emotions? Does it follow an interesting narrative? Do learners feel progression? These questions might be answered by incorporating challenges, stimulating competition, suggesting rewards, ensuring constant feedback, providing badges, etc.

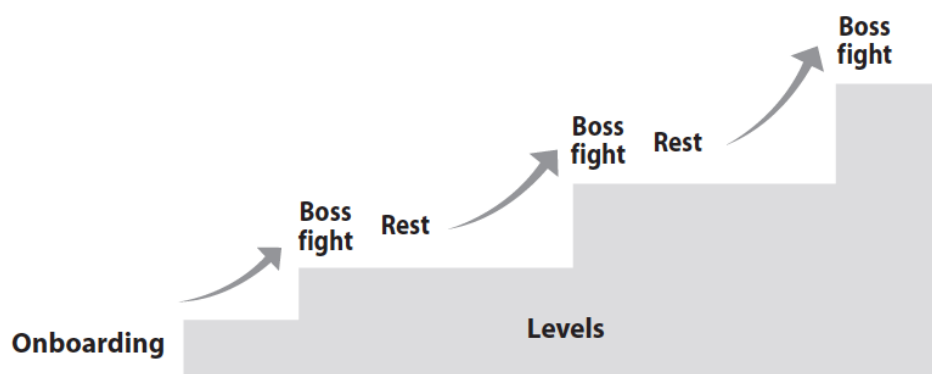


<div> <div>Most abstract elements</div> <div>-----></div> <div>Least abstract elements</div> </div>		
Dynamics	Mechanics	Components
<i>Constraints</i> <i>Emotions</i> <i>Narrative</i> <i>Progression</i> <i>Relationships</i>	<i>Challenges</i> <i>Competition</i> <i>Cooperation</i> <i>Feedback</i> <i>Rewards</i> <i>Win States, etc.</i>	<i>Achievements</i> <i>Avatars</i> <i>Badges</i> <i>Boss Fights</i> <i>Collections</i> <i>Content Unlocking</i> <i>Leaderboards</i> <i>Levels</i> <i>Points</i> <i>Quests</i> <i>Teams, etc.</i>

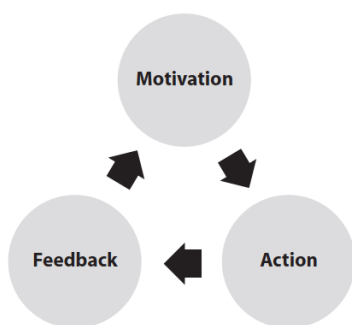
Progression stairs

While designing your playlist learning experience have in mind the progression stairs. They point out, that the game experience changes as learners move through it. Map out the learners journey as a collection of short-term missions (XPs) and long-term goals (playlists as a whole and learning outcomes) which play out a rolling series of progression. The whole process should not be linear. Step 1 - onboarding, should be simple and draws learners in the learning process. Once learners is over that step, difficulty should ideally increase at variable rates, followed by a relative release, followed by a major challenge at the end of each challenge (XPs). The rest period lest learners to experience the satisfaction of mastery - the feeling that they became experts at some point of the playlist.





Progression stairs



Player (learner) understands the progression by getting **feedback** after their actions are taken (confirmation of the assignment, feedback from mentors, issued badge, etc.)

Activity cycle

A Player (= Learner) Type Framework for Gamification Design

By Andrzej Marczewski

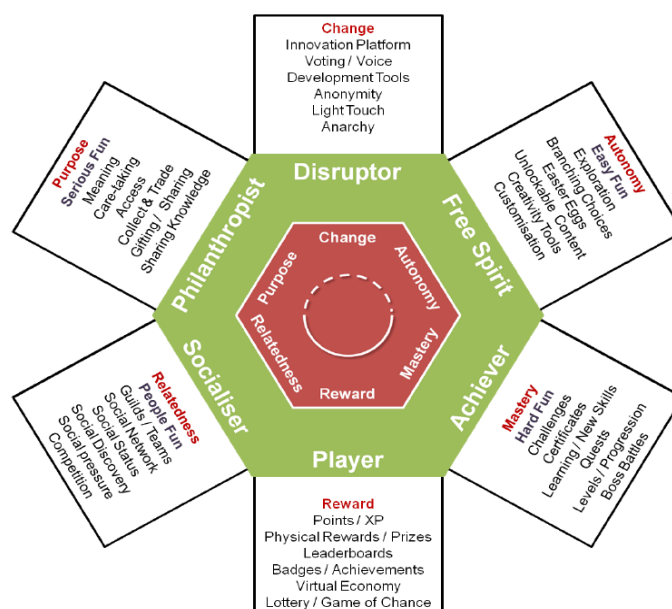
The point of these types is to give gamification designers a simple framework to think about the types of people they may have using their system. It is essential to keep in mind that people can not be broken down into simple categories like this, they will likely display most if not all of these traits in varying degrees. You need to design to encourage the behaviours that will give your system the best outcome, whilst engaging users. These types can help with that.

- **Socialisers** are motivated by Relatedness. They want to interact with others and create social Connections.
- **Free Spirits** are motivated by Autonomy and self expression. They want to create and explore.



- **Achievers** are motivated by Mastery. They are looking to learn new things and improve themselves. They want challenges to overcome.
- **Philanthropists** are motivated by Purpose and Meaning. This group are altruistic, wanting to give to other people and enrich the lives of others in some way with no expectation of reward.
- **Players** are motivated by Rewards. They will do what is needed of them to collect rewards from a system. They are in it for themselves.
- **Disruptors** are motivated by Change. In general they want to disrupt your system, either directly or through other users to force positive or negative impact.

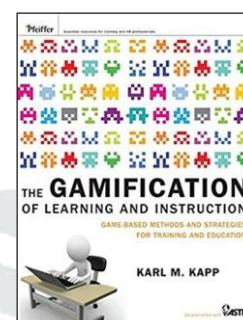
Here are some suggestions, what kind of game elements trigger which player type.



The Gamification of Learning and Instruction

By Karl Kapp

Author defines and elucidates the concept of gamification and introduces various examples of gamification at work in education. This book is an excellent nuts-and-bolts guide that is grounded in solid research and would serve educators interested in this topic well.



3. Research and approaches

Learning playlists are build on the practices and research outcomes of the Connected Learning approach.

Connected Learning

By The Connected Learning Alliance

Connected learning is when someone is pursuing a personal interest with the support of peers, mentors and caring adults, and in ways that open up opportunities for them. It is a fundamentally different mode of learning than education centered on fixed subjects, one-to-many instruction, and standardized testing.

The research is clear. Young people learn best when actively engaged, creating, and solving problems they care about, and supported by peers who appreciate and recognize their accomplishments.

Connected learning applies the best of the learning sciences to cutting-edge technologies in a networked world. While connected learning is not new, and does not require technology, new digital and networked technologies expand opportunities to make connected learning accessible to all young people.

The “connected” in connected learning is about human connection as well as tapping the power of connected technologies. Rather than see technology as a means toward more efficient and automated forms of education, connected learning puts progressive, experiential, and learner-centered approaches at the center of technology-enhanced learning.

Watch this [video to learn how Connected Learning makes learning relevant](#)

Connected Learning is based on 6 principles.





Connected Learning: An Agenda for Research and Design

By The Digital Media and Learning Research Hub

This report is a synthesis of ongoing research, design, and implementation of an approach to education called “connected learning.” It advocates for broadened access to learning that is socially embedded, interest-driven, and oriented toward educational, economic, or political opportunity.

Connected learning is realized when a young person is able to pursue a personal interest or passion with the support of friends and caring adults, and is in turn able to link this learning and interest to academic achievement, career success or civic engagement. This model is based on evidence that the most resilient, adaptive, and effective learning involves individual interest as well as social support to overcome adversity and provide recognition.

The report investigates how we can use new media to foster the growth and sustenance of environments that support connected learning in a broad-based and equitable way. This report also offers a design and reform agenda, grounded in a rich understanding of child development and learning, to promote and test connected learning theories.



3.1 Badge based learning

Badge based learning is build a lot on the practice and research of gamification in education.

[Digital Badges: An Annotated Research Bibliography](#)

by Sheryl Grant and Kristan E. Shawgo, 2013, HASTAC

Following the flood of response to the HASTAC/MacArthur Foundation's Badges for Lifelong Learning initiative in 2011, and the release of Mozilla's Open Badges Infrastructure, HASTAC decided to assemble this Badges Bibliography v.1 as a humble attempt to organize the universe of knowledge about digital badges. More importantly, we hope this bibliography will come to represent a cr4oss-disciplinary approach that inspires questions, perspectives, and approaches to badges that reflect the inherently collaborative nature of badge systems.

[Where badges work better](#)

By Daniel T. Hickey, James E. Willis III and Joshua D. Quick, Indiana University

This explosion of interest in badges was catalyzed by the 2012 [Badges for Lifelong Learning competition](#) organized by the Digital Media and Learning (DML) initiative at the John D. and Catherine T. MacArthur Foundation, with additional funding from the Bill & Melinda Gates Foundation.

This paper presents the lessons learned from an extended study of the 29 winning Badge Content and Programs proposals that made it to Stage 3 and were awarded to develop their badge system. The insights come from the [Design Principles Documentation Project](#) carried out at the Center for Research on Learning and Technology at Indiana University.

[Design Principles Documentation Project](#)

By Center for Research on Learning and Technology at Indiana University

The Design Principles Documentation Project is tracking how the badge systems developed across ~30 winners of the 2012 MacArthur/HASTAC Digital Media & Learning (DML) grant competition. We followed each project's intended practices to see how they were enacted and formalized for continued operation after the grant period. We are focusing on four types of badge system functions: recognizing, assessing, motivating, and studying learning. We've described general design principles in each category that can be remixed into new contexts.



[Badge pathways: part 1, the paraquel](#)

By Carla Casilli

Badge pathways provide people with opportunities to make decisions based in personal agency, to define steps that may seem more like hops, and to think about ways to do things that aren't sequential or even seemingly rational. They allow earners to link unexpected badges (read concepts, learning, achievements, etc.) together in exciting and unanticipated ways.

They allow earners to link unexpected badges (read concepts, learning, achievements, etc.) together in exciting and unanticipated ways. They allow folks to connect the outlying dots that constitute lifelong learning.

And while predefined badge pathways can provide easy and simple directions and pointers along a certain direction, the self-defined or peer-defined or team-defined pathway can resonate in ways that may prove far more meaningful to an individual than those that are suggested by experts.

[Badge pathways: part 2, the “quel”](#)

By Carla Casilli

The three-fold path

Several potential uses of these two approaches exist. For example, people may choose to (or be compelled to) move through a badge system in these three ways:

- **Command path:** suggested or recommended badge arcs. The command approach is the most prescriptive: it relies on a formal, structured and recommended path. Most likely, this badge pathway will be linear—a straight line from one learning experience to another. This is not unlike what occurs in many school courses.
- **Contract path:** desired or pledged badge groupings. The contract path encourages the earner to think about and select a potential learning arc. In the strictest sense, it, too, is prescriptive. But because its prescriptiveness is set forth by the earner herself, the potentially dictatorial nature does not carry the same paternalistic qualities.
- **Badge desire path:** independently followed or pursued badge passages. The badge desire path carries with it the greatest capacity for knowledge and system emergence. When there is no prescribed pathway, people can find the way that makes sense



to them; can choose to follow other people's paths or can strike out in very different directions.

4. Practices and methods

We collected several examples of use cases to illustrate various practices and methods of implementing learning playlists and badge based learning.

Use case #1: [LRNG](#)



LRNG is closing the equity gap by transforming how young people access and experience learning, and the paths they take to success.

LRNG works with cities and organizations to connect learning experiences to career opportunities, ensuring that all young people, especially those from underserved communities, have inspiration and guidance to prepare them for life and work in the modern economy.

Watch this [video how LRNG sees the evolution of learning](#)

[How it works?](#)

Passion is the catalyst; developing skills, mindsets, and habits that youth can take to college and jobs is the purpose. "Playlists" equip youth with tangible skills and understandings that they can apply in academic and career settings.

The LRNG platform enables young people to access both local and national opportunities from their computer, smartphone, or tablet. Youth pursue their interests with mentors and peers, building new skills and habits wherever they are, whenever they want.

LRNG and its partners begin with a set of thematic experiences, "Playlists." Every time Youth complete a Playlist, they receive a digital badge that marks their skill and



knowledge. These badges can unlock real world opportunities that include academic credit, internships, and jobs.



Access [LRNG partner handbook to learn how to create a playlist](#)

Explore [examples of learning playlists focused on design](#)

Explore [examples of digital badges focused on design](#)

Watch [webinar on how LRNG enables creating learning playlists](#)

Use case #2: [Open learning pathways by Badgr](#)



Badgr is a free and open source achievement recognition and tracking system used to issue, organize, and share Open Badges.

Badgr Pathways feature allows Open Badges issuers to define Pathways. A learning pathway is an organized set of educational goals shared in a community. It is the connection between specific digital credentials and a community's understanding of what people have accomplished, in terms of requirements, competencies, or other "real-world" objectives.

The goal of Open Pathways is to create a lightweight conceptual model that can link various specialized competency frameworks, degree maps, job skill profiles and more.

Watch this [video how Badgr imagines the future of digital credentials with Open Pathways](#)



[How it works?](#)

Pathway publishers define Pathways in order to organize a set of objectives into a comprehensible structure and to link to badge definitions that are a known fit for specific objectives, whether or not the Pathway publisher is the Issuer of those badges.

Pathway Design Considerations

When integrating a badge system, it is important to think about your badges as a whole.

Purpose (elements):

- Guide decisions. Are you recognizing competencies or tracking progress through curriculum? Is the pathway meant to be completed in full or to show specialization across a range of options?
- Use community definitions. What are the values you want to recognize that are already accepted in your community?

Structure (shape):

- Movement. How do you expect people to move through the pathway, leveling up or getting from point A to point B?
- Customizable or prescribed. Is the learner allowed to pick and choose specializations or do they follow a path of prescribed objectives?

Achievement (endpoint):

- Acceptance of external badges. Does the pathway recognize and/or incorporate badges earned from other or more than one issuer(s)?
- Assessment. What are the assessment practices to required to implement recognition of badges for elements in the pathway?
- Collection. Does the collection of badges clearly demonstrate the objectives of the pathway and is it understood by the community?

One of the biggest considerations when designing pathways is the distinction between (a) integrating badges into an existing curriculum and (b) creating a badge system and a curriculum at the same time.

Use case #3: [Teach to One: Math](#)





a New Classrooms® solution

Teach to One: Math is changing the way students and teachers experience middle school math by redesigning how the classroom works—from the use of technology, time, and physical space to the instruction and content that engages each student.

They imagine a world where personalized learning is just the way students learn—a world where all students attend a school that meets them where they are, adapts to the unique ways they learn, and develops habits for lifelong success.

Watch this [video how *Teach to One: Math* reimagines the classroom](#).

[How it works?](#)

[Modalities Support Student Learning:](#)

- Teacher-Delivered Modalities: live investigation, tasks, math advisory
- Student Collaboration Modalities: small group collaboration, peer to peer
- Independent Modalities: virtual instruction, virtual reinforcement, independent practice, independent learning projects

[An Adaptive Personalized Curriculum:](#)

- Skill and Concept Map
- Skill Libraries
- Student Playlists. At the heart of each student's day-to-day instructional experience is their personalized Playlist. Playlists are a collection of related mathematical skills that students experience over a two- to three-week period. They represent an individualized unit of study that guides instruction, establishes learning goals, and contextualizes related skills and concepts.
- Lesson Bank
- Assessments

[Success badges:](#)

Students can earn digital Badges, such as:

- Still Got It, for remembering previously learned skills
- Stretch, for learning a skill that may be a bit harder
- Independence, for success learning outside of class

Use case #4: [LessonPaths](#)



LessonPaths

LessonPaths' online learning platform allows anyone with a passion for what they do to curate websites, videos, blogs, and more into Learning Playlists.

With *LessonPaths* educators can create, share, and explore learning lists of web-based resources. When creating a learning playlist educators can include web-links, upload files, write an article, add quizzes. All content is organised in steps.

How it works?

Watch this [video to learn how to create a learning playlist with LessonPaths](#)

Explore [examples of learning playlists focused on design](#)

Use case #5: [Blendspace by Tes](#)



Tes Teach online platform enables educators to create digital lessons by combining digital content and files. Educators can use Tes resources, YouTube videos, links, PDFs, PowerPoint, Word documents, images, upload files from Dropbox and Google Drive.

How it works?

Watch this quick [video tour to know how Blendspace work](#)

5. Recommendations for design of learning playlists

In 2016, the [John D. and Catherine T. MacArthur Foundation](#) support the [Digital Media and Learning Competition 6](#) that provided funding for several organisation to design and implement Playlists for Learning.

We have a unique opportunity to learn from the lessons learned by other organisations which already went through the design and implementation of learning playlists and



badging. We collected recommendations from [6 winners of the competition](#) for learning playlists.

[Creative Careers learning playlist](#)

By Urban Arts Partnership, New York City, NY, USA

Leveraging experiences and resources that harness real world transformative opportunities, Creative Careers playlists guide passionate young people from under-resourced communities to develop technical skills and creative competencies necessary for success in 21st century creative careers.

Recommendations to other organisations just starting with learning playlists:

- It is important to **align your learning outcomes to current industry standards** so that the skills achieved succeed in preparing students to begin their chosen career path.
- It is important to **include industry professionals** in your design as possible mentoring partners. Youth responses have taught us that they appreciate that.
- Be intentional, and **think about the career paths** mapped in your playlist and whether they can lead to sustainable career paths far beyond students' experience with your organization.

Learn more from [experiences of Creative Careers learning playlist](#)

[Design Launch learning playlist](#)

By Chicago Architecture Foundation Chicago, IL, USA

Recommendations to other organisations just starting with learning playlists:

- **Institutional buy-in is key.**
- Don't design in a vacuum. It is important to receive ample **feedback from your intended user groups** throughout the design process.
- **Be clear about how evidence and artifacts intersect with learning goals.** If the medium is the message (McLuhan, 1964), then make sure the media you ask students to upload reflects the learning objectives for each XP.

Learn more from [experiences of DesignLaunch learning playlist](#)

[Digital Citizenship learning playlist](#)



By Berkman Klein Center for Internet & Society, Harvard University,
Cambridge, MA, USA

Co-designed with youth participation, Digital Citizenship Playlists combine learning experiences and multimedia content related to privacy, safety, creative expression, and information quality to help youth understand and apply digital literacy skills that foster responsible and informed digital citizenship.

They recommend co-design as a participatory methodology for the creation of connected learning experiences and playlists. Based on their own process, they offer five tips for co-designing playlists and learning experiences with youth.

- **Follow the five design thinking stages** (e.g. empathize, define, ideate, prototype, and test). Design thinking is an appropriate methodology because it allows one to place the learner at the center, integrate their needs, understand their interests and passions, and engage in hands-on prototyping and testing.
- **Invest in logistics and planning.** Remember, time spent with co-designers is at a premium. Set aside time for several workshops. At a minimum, we recommend engaging in at least one workshop per design thinking stage, and at least two workshops for testing and iterating the complete playlist.
- **Allot adequate time for playtesting and iteration.** Co-design is an iterative process that requires testing and refining the final products. Testing a fully functional playlist requires a considerable amount of both time and help from motivated co-designers. If possible, collaborate with teachers or facilitators at the youth-serving organizations who can set aside time for engaging with a completed playlist as part of a class activity or a workshop.
- **Establish a common language** among the co-designers, and use this type of discourse in both the workshops and the content created. That is, make sure that both the adult facilitators and the youth co-designers understand what each other means with the language that they use. This goes both ways. The adults should follow up with the youth co-designers to make sure that any adult introduced language, particularly technical terminology, can be understood by the youth co-designers. In addition, the adults should be sure to clarify any unfamiliar terms that the youth co-designers introduce. Try to keep a balance between expert terminology and youth language when addressing complex themes.



and gallery professionals to plan, design, and create their own artistic exhibit at their school or community-based organization. In completing the playlist, youth earn unique insights into the design process and potential artistic careers. They gain creativity and crucial skills in program management, budgeting, critical thinking, collaboration, and communication.

Recommendations to other organisations just starting with learning playlists:

- **Make it simple**
- **Listen to the users** (students) for what they value
- **Communicate with parents** about what the “Playlist Approach” is.

Learn more from [experiences of Pittsburgh Galleries project's learning playlist](#)

[Playground City \(fka Fleet Farming\) learning playlist](#)

By Playground City, Orlando, FL, USA



A bicycle-powered playlist that encourage youth to dig into their neighborhood food environment by replacing lawns with lush farms. Learners fine-tune talents in digital media, bike mechanics, food justice, and cooking. They unlock new opportunities to engage with community professionals and civic leaders that can lead to pathways to higher education and employment.

Recommendations to other organisations just starting with learning playlists:

- **Consistent testing and implementation designs** (defining testing vs. implementing)
- Spending time working through **human-centered design** from onset
- Jump into **making XP drafts** - the more you do, the better you get. You can delete and refine later.

Learn more from [experiences of Playground City learning playlist](#)

[Sandboxes for Learning playlist](#)

National Writing Project, Berkeley, CA, USA

This project convert the established Youth Voices connected learning curriculum, a collaboration between the National Writing Project and Educator Innovator networks, into playlists with digital badges. Leveraging design workshops and after school programming, this playlist engage youth involved in Youth Voices – an open blogging platform connecting students through their passions, questions, and



conversations – to play-test and co-develop new connected learning pathways and opportunities.

Recommendations to other organisations just starting with learning playlists:

- Spend time with teams to **understand your aims** and what you can do with design; consider systems for assessment. Keep an eye toward developing systems that are sustainable. Not every learning activity needs a playlist and a badge, but youth who apply for your badges deserve speedy replies. Plan for that.
- **Begin with XPs that can be successfully completed** in reasonable chunks of time; for example, XPs that can be done in an hour and playlists can be completed in five hours. Use the open-ended framing of playlists as an opportunity to design smaller.
- Start anywhere, but don't forget to **work together on badges** and the criteria you want to use. The process of assessing badges is a project of its own, requiring its own set of documents, workflow, and agreements.

Learn more from [experiences of Sandboxes for Learning playlist](#)

[SciGirls Code learning playlist](#)

SciGirls/Twin Cities PBS, St. Paul, MN, USA

This project develop four playlists leveraging digital badges that focus on e-textiles and wearable tech; robotics; mobile geospatial technologies; and computational thinking. These playlists increase girls' exposure to different aspects of computer science; share how the coding process is used to solve problems; provide confidence-building opportunities to design, code, and debug their own computer science projects; and connect girls with female computer science role models.

Recommendations to other organisations just starting with learning playlists:

- Take your time and give yourself the **opportunity to experiment**.
- Potentially **involve your audience** in the design process.
- **Get to know the larger community of people** doing this work. People are doing great things and we can all learn from each other.

Learn more from [experiences of SciGirls learning playlist](#)



Sky, Water, Earth learning playlist

By Sharon Hu, University of British Columbia

Sky, Water, Earth weaves together formal and informal learning experiences and resources into a sequenced pathway that evokes a sense of wonder about the planet we live on and beyond. The playlist encourages learners to explore in marine biology, earth, and space sciences. Learners engage in four broad themes: extreme environments, water, sustainability, and new discoveries. Throughout this journey, youths develop scientific knowledge; consider how scientists contribute to a multi-disciplinary understanding of our universe; develop communication, networking, self-assessment and critical thinking skills; and unlock real-life opportunities to share their growing expertise to their communities.

Recommendations to other organisations just starting with learning playlists:

- **Know your goal and who are your learners.** Throughout the development process, we have repeatedly returned to our goal of developing career-oriented competencies for our target audience. This was helpful to help us narrow down the partners and the project scope.
- **Know your asks.** When reaching out to partners, it is key to first fully understand what you're hoping both you and the other party can gain from a meeting or conversation. Even if it is simply to share your idea of the project and gain a third-party informal perspective, it's important to know what you want to achieve. Otherwise, it's easy to feel like you have taken a lot of steps but not made much progress.
- **Know the resources needed** to build the content and a community of learners (buy-in from senior management, common goals from all major project partners, personnel necessarily to review the submission and interact with the learners).

Learn more from [experiences of Sky, Water, Earth learning playlist](#)

Sound Explorations learning playlist

Arizona State University, Tempe, AZ, USA

Bringing together music educators, community youth organizations, artists, and youth to create a set of six interconnected learning playlists. These include coding and programming music; making beats; building instruments and interfaces; producing music; connecting music and culture; and jamming. Learning experiences emphasize creativity and self-expression while fostering musical inquiry, deepening musical skills and understandings, and strengthening participants' sense of selves as musical people who make a difference.



Recommendations to other organisations just starting with learning playlists:

- **Time and Desire for Play.** One thing that we knew from music education research, that was confirmed in playtesting, was that learners wanted to play with the web apps for a while and were less interested in reflecting on their engagement or completing related “tasks.”
- **Need for High-Quality Video Content.** Throughout the process of curating and contextualizing existing resources such as video content, we learned that there is still a need for designing and developing high quality and culturally relevant/valid resources online such as videos, that are appropriate and interesting to 13-18 year-olds.
- **Starting Smaller.** Overall, if we were to start over, we would reduce the scale of the project to focus on fewer learning playlists. Designing six playlists was extremely valuable and rewarding. The six themes surfaced varied design challenges that were helpful for developing a deeper understanding of connected learning playlists and related issues.
- **Build Relationships With Content Experts, Educators, and People who Work with Youth.** We found that it is important to take the time to build relationships with and collaborate with content experts and educators who can serve as consultants and partners throughout the project.
- **Include Young People as Much as Possible.** We attempted to include young people as much as possible throughout the process of designing the playlists.
- **Be Willing to Iterate and Embrace Ambiguity.** While we had ideas of how to design and develop our XPs at the start of the project, we were also constantly building and developing our approach based on our interactions with consultants, content experts, and youth.

Learn more from [experiences of Sound Explorations learning playlist](#)

[The Art and Science of Vision learning playlist](#)

Balboa Park Online Collaborative, San Diego, CA, USA

Spearheaded by San Diego’s renowned Balboa Park, the Art & Science of Vision playlist provided learners aged 13 and older with vision and optics-themed interactive learning experiences from the Museum of Photographic Arts, San Diego Air & Space Museum, and Reuben H. Fleet Science Center.



Recommendations to other organisations just starting with learning playlists:

- Throughout the process, think about how you might build **sustainability** into the project;
- **Get as much feedback** as you can, as early as you can, from the learners that you want to use your platform;
- **Get input from other organizations** who are doing, or have done, similar projects; they have insights about aspects of the project you may not even know about.

Learn more from [experiences of the Art and Science of Vision learning playlist](#)

6. Questions for reflection and discussion

- What opportunities do we see in learning playlists and badge based learning that can solve the current problems in VET education?
- What challenges do we see in learning playlists and badge based learning that are grounded in the current practice of VET education?
- What do we need to have in order to move forward with designing and implementing learning playlists and badge based learning in VET education practice?

