

Guidelines for K-12 Online Physical Education

Introduction

High quality physical education provides students with a planned, sequential, K-12 standards-based program of curricula and instruction designed to develop motor skills, knowledge and behaviors for active living, physical fitness, sportspersonship, self-efficacy and emotional intelligence. Regardless of the mode (face-to-face, hybrid or online), the goal of physical education is to develop physically literate individuals who have the knowledge, skills and confidence to enjoy a lifetime of healthful physical activity.

SHAPE America does not view hybrid and online physical education (OLPE) as a medium to replace face-to-face instruction or instructors, but as an alternative method of instruction to fit the needs of students. Additionally, SHAPE America believes there should always be a face-to-face option for physical education because online learning is not appropriate for all students. Considering these points, schools and districts should consult with physical educators, parents, students and other stakeholders when considering offering hybrid and/or OLPE options. Lastly, schools and school districts should consider the implications, implicit and explicit, of offering physical education online.

The purpose of this guidance document is to provide assistance to administrators and teachers who are currently utilizing hybrid and OLPE courses, but also for those who are considering including this as an academic option for their students. This document includes not only support for achieving appropriate practices, but practical suggestions and resources to help administrators and teachers ensure effectual learning is happening in their online environment.

One of the biggest criticisms of online physical education is that students are not being physically active and engaged in motor skill learning (Buschner, 2006; Buschner, 2014; Mosier, 2012; NASPE, 2007; Ransdell, et al., 2008; Rhea, 2011). SHAPE America considers the development of motor skill competence as the highest priority of physical education because of its impact on student engagement, intrinsic motivation, perceived competence, participation in physical activity, and sufficient levels of health-related fitness.

Teaching physical activity and motor skill development is what makes physical education unique and different than any other subject in the K-12 curriculum and thus must be the central component of any OLPE course.

Using This Document

This document provides many ideas and resources for administrators, such as appropriate practices, sample lesson modules and assessment ideas, and even tips on how to assess the

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quality of OLPE courses. The taskforce hopes that users of this document are easily able to utilize the sections that are most useful to their immediate needs.

Readers who are considering hybrid or OLPE courses might want to focus on the introduction, appropriate practices section, and possibly the sample modules and assessments. Those who already offer hybrid or OLPE courses might be most interested in the sections on standards-based instruction, tools and resources, and assessing the quality of an OLPE course.

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What Is Online Physical Education?

Online physical education is an alternative medium used to deliver physical education — often to secondary students — to gain physical education credit and satisfy graduation requirements outside of the brick-and-mortar context (Buschner, 2006; Daum & Buschner, 2014; Mosier, 2012).

Instruction can occur in a hybrid context (Mohnsen, 2012a; 2012b; Mosier, 2012; NASPE, 2007), where students complete most coursework outside of class individually and meet periodically in person for instruction and assessment, allowing for flexibility in learning to accommodate students' interest, activity and developmental level.

Instruction can also occur exclusively online, where students and teachers interact through a course/learning management system asynchronously or synchronously. Much like the hybrid model, online courses are designed with the intention to deliver instruction that is flexible to meet the needs of students.

Prevalence of OLPE

According to the [Shape of the Nation™ 2016](#) report, there are 31 states in the U.S. that allow required physical education credits to be earned through online physical education courses. However, there is evidence of online education in all 50 states, and OLPE is likely more widespread than the 31 states identified in the *Shape of the Nation* report.

It is increasingly difficult to quantify the prevalence of online and hybrid education because of the multitude of options including school, district, state, private, public, charter, hybrid and online course offerings. [Keeping Pace With K-12 Digital Learning](#) is an annual report produced by the Evergreen Education Group that analyzes K-12 online learning environments including enrollment types and numbers (Gemin & Pape, 2016).

In their 2016 report, Gemin and Pape (2016) indicated that millions of students take supplemental courses online, hundreds of thousands are attending full-time online schools, and many students are enrolled in hybrid courses. During the 2015-16 school year, it was estimated that more than two million K-12 students took online courses. More than four million courses were completed, and approximately 10% of those courses were health and fitness.

It is important to note, that at the time of writing this guidance document, there was no clear picture of the prevalence of hybrid and/or OLPE due to the complexity of hybrid and online course options ranging from state-run virtual schools to courses offered at the local level.

Research in OLPE

A small, but growing research base has investigated physical activity levels, course characteristics, student perceptions and characteristics, teacher perceptions and characteristics, and teacher educator perceptions related to OLPE. Not surprisingly, research has indicated that OLPE programs are fitness-focused, but the primary focus of OLPE courses is cognitive outcomes rather than psychomotor outcomes (Daum & Buschner, 2012).

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This is likely due to the constraints and strengths of the online platform. It is easy to disseminate cognitive information but difficult to provide real-time psychomotor feedback, which is invaluable for the improvement of motor skills. Verification of learning is perhaps one of teachers' biggest concerns with OLPE (Daum & Buscher, 2012; Trent 2016), while students struggle with the meaningfulness and challenge of assignments. Creators of online courses need to pay special attention to meaningful assessments that challenge students in real-world contexts.

OLPE teachers are split on the value of OLPE; teachers who support it enjoyed the one-on-one interactions with their students, while the detractors had concerns about accuracy and accountability (Daum & Buscher, 2012; Williams 2013). While there are certainly concerns about OLPE, it is encouraging that OLPE courses are being taught by teachers with physical education teaching licenses and experience teaching in a face-to-face environment (Daum & Buscher, 2012, Mosier & Lynn, 2012; Williams, 2013).

Teacher educators — much like the K-12 teachers — were split on their perceptions and evaluation of OLPE. Teacher educators tended to be supportive OLPE at the secondary level because students theoretically have learned foundational skills and are ready for independent learning. However, they tended to question the ability of OLPE courses to address all the content standards, especially when discussing motor skill competency and the ability of the OLPE teacher to provide specific, timely feedback when the student is being physically active (Daum & Woods, 2015).

For a detailed literature review, including implications for policy and practice related to K-12 OLPE, read Daum and Buschner's (2018) chapter titled "Research on Teaching K-12 Online Physical Education" in the second edition of [*Handbook of Research on K-12 Online and Blended Learning*](#).

Appropriate Practices & Recommendations

This section provides guidelines and recommendations related to appropriate practices in online physical education. These recommendations are divided into the following categories:

- Curriculum
- Learning Environment and Instructional Strategies
- Student Prerequisites
- Assessment

These practices and recommendations are based on research and best practices related to teaching OLPE. The practices are not meant to be an exhaustive list, but a guide to help teachers and administrators consider the multitude of decisions that go into designing a high-quality, standards-based curriculum.

For a list of appropriate practices related to face-to-face physical education, be sure to read SHAPE America's [Appropriate Instructional Practice Guidelines](#).

OLPE for Individuals Receiving Special Education Services

All students must be afforded the same opportunities to participate in public school programs. The students must be provided accommodations and modifications as necessary, based on the individualized education program (IEP) team decisions.

OLPE teachers must be proactive and consult with the IEP team if they have a student in their course with an IEP. It is not likely that the IEP will have accommodations needed for an online course; as such, OLPE teachers should reach out to discuss appropriate accommodations and modifications. If a parent, student or educational team member is considering the online learning program for physical education, the IEP team should meet to discuss:

- If the student is at the secondary level and demonstrating competency in prior grade-level outcomes, especially in the psychomotor domain.
- If the student can address all the state and/or national physical education content standards through the online learning program.
- Tailoring the program to suit the student's specific needs as indicated in the IEP.
- If the online learning program is the student's least restrictive environment as required by the Individuals with Disabilities Education Act [IDEA §300.114(a)(2)].

The decisions made by the IEP team will be based on the student's performance data and the current supports and services indicated in the student's IEP. Students participating in the online learning program and receiving special education services should be monitored by an adapted physical education teacher/physical education teacher (as specified by the local education agency).

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<u>Appropriate Practices</u>	<u>Inappropriate Practices</u>	<u>Practical Recommendations</u>
Curriculum		
Continually assess and revise online course to keep up with trends, technology and content.	Reuse the same course indefinitely with minimal to no changes or updates to content or technology.	Review courses regularly, at least every two to three years, to keep pace with current trends and issues in online education. Collect data on course satisfaction from course completers and non-completers using a formal process, such as a survey.
Address all state and/or national physical education content standards, including any other required standards (Common Core, ELA, Technology, etc.).	Course is only fitness-focused (i.e. does not meet all state and/or national content standards).	Review your state and/or National Standards for K-12 Physical Education and ensure you have elements of each in your course.
Learning Environment and Instructional Strategies		
Get parents involved with their child's learning.	No communication or involvement with parents in the student's learning.	Give assignments that include parents, such as interviewing the parents about their activity preferences or a physical activity assignment to be active as a family.
Allow for student choice so students can choose where, when and how to be physically active.	Does not provide choice for physical activities; for example, prescribing specific activities (e.g., running) as opposed to categories of activity (e.g., cardiovascular).	Allow students to choose activities they enjoy within categories of fitness. This could also include having them explore local physical activity options and/or investigate what meetup groups are active in their neighborhood.
Promote independent learning.	Does not promote independent learning. Course is heavily dependent on lectures.	Provide opportunities for students to design, monitor and evaluate their own physical activity including reflecting on their successes and setbacks.
Balance screen time and physical activity time.	Does not promote or include activities that don't involve screen time.	Include activities and assignments away from the computer, tablet or mobile device, such as evaluating local play spaces and being physically active outside.

<i>Learning Environment and Instructional Strategies (cont.)</i>		
Have policies related to communication type and frequency.	No communication policies/expectations are present or transparent to parents and students.	Teachers should have one-on-one communication with students on a weekly basis and parents on a monthly basis. This communication should include the occasional contact via synchronous methods (e.g., video, phone call, and/or text messaging).
The physical education teacher is credentialed and has participated in training and professional development related to online learning.	The teacher is non-credentialed teacher and/or has never had any professional development related to online learning.	Require annual professional development related to online learning for all teachers who will be teaching online courses.
<i>Student Prerequisites</i>		
Allow OLPE only at the secondary level to students who have demonstrated competency in prior grade-level outcomes, especially in the psychomotor domain.	Allowing OLPE at the elementary level or to students lacking competency in basic movement patterns. These groups are still working on fundamental movement skills and are dependent learners.	Only allow OLPE courses for students for whom it is developmentally appropriate; ensure student success is at the forefront of all curricular decisions.
Have prerequisites to better ensure student success in OLPE.	No prerequisites or criteria for enrollment.	Set criteria for GPA, skills tests, and consider the use of online readiness tools (Example 1 , Example 2 , and Example 3).
<i>Assessment</i>		
Utilize technology to verify participation and support learning gains in physical activity with the goal of meeting the CDC physical activity recommendations of 60 minutes of moderate- to-vigorous physical activity per day.	Only using self-report activity data.	Use heart rate monitors, pedometers, and other activity trackers, including GPS features on smartphones.
Assess all state and/or national physical education standards including both formative and summative assessments	Does not assess all state and/or national physical education standards.	Have a range of assessments that target all state and/or national physical education standards.

Standards-Based Instruction in OLPE:**Sample Learning Activities and Assessment Strategies**

While teaching physical education online presents unique challenges, these obstacles can be hurdled with the correct planning and implementation of the online course. There are [multiple professional organizations](#) and institutions that provide resources to assist in the development and deployment of online courses.

Selecting faculty to design and teach online physical education courses is critical to the success of both students and teachers. Training staff about the key components of online teaching will also be important to student success. These components include, but are not limited to:

- Use and comfort with a variety of technology tools;
- Ability to troubleshoot technology issues and guide parents and students to resources such as the IT help desk;
- Communication through multiple channels including social media;
- Up-to-date working knowledge of the relevant learning management system.

One of the four [essential components of physical education](#) is assessment — the gathering of evidence about student achievement in all areas of instruction to make inferences about student progress. Assessment in all physical education contexts should be aligned with national and/or state physical education standards to provide accountability for standards-based learning.

The way in which teachers incorporate and assess the content standards within an OLPE course will be influenced to some degree by how they interpret and/or define the competencies related to the standard.

For example, “demonstrates” does not necessarily mean physically; depending on the specific learning objectives, students can demonstrate the performance of a skill, comprehension of a topic on a written assessment, or enjoyment of physical activity through a discussion with peers.

Thus, varying instructional and assessment strategies may be employed to address the psychomotor, cognitive and affective domains depending on the intended outcomes, specifically in the online environment.

Below is a list of SHAPE America’s National Standards for K-12 Physical Education with a brief narrative, suggestions, and examples of OLPE lesson modules and assessments that align with each standard.

Additional online learning activity ideas for students adapted from Juniu, Hofer and Harris’s (2012) [Physical Education Learning Activity Types taxonomy](#) are also included, along with a glossary of [online tools](#). The lesson module and assessment samples highlight key components of effective OLPE lessons and serve as a guide to delivering instruction and completing assessments in the online environment.

Standard 1	Standard 2	Standard 3	Standard 4	Standard 5
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Standard 1

“The physically literate individual demonstrates competency in a variety of motor skills and movement patterns.”

Of the five National Standards, Standard 1 is typically one of the most difficult to teach and assess in an online physical education course. While fitness activities are widely acknowledged as achievable online, developing and practicing sport-based motor skills and movement patterns is a major shortfall. Considering this, the use of video to demonstrate competency is highly recommended, as it can provide instructors with evidence of student performance and provide students with a view of their own performance (Casey & Jones, 2011). Students can also receive feedback on what they have done (Silverman, 1997).

Effective student evaluation of this standard will also incorporate the use and submission of individual and group videos. While the use of video can be integral in accomplishing the scope of this standard, a teacher or student may sometimes be limited by the technology they have access to and/or the capabilities of the learning management system (LMS) utilized by the school or district. It is important to investigate the features of the entire course and LMS before deciding on how to proceed with planning the delivery of content related to Standard 1.

[View a Sample OLPE Lesson Module](#) that addresses Standard 1

Sample Online Student Learning Activities	Possible Online Tools
Students digitally record and submit: <ul style="list-style-type: none"> ● Execution or demonstration of specific skill mechanics to address a particular motor skill (e.g., stance, follow-through, etc.) or fitness/game concept ● Refined performance of each part of a motor skill (e.g., run up, step, jump and strike for a volleyball strike) ● Execution of motor skill (e.g., volleyball spike) ● Correction in response to teacher or peer feedback ● Creation of movements to address a skill/concept 	<ul style="list-style-type: none"> ● Digital video or mobile camera ● Videoconferencing ● Video sharing ● Presentation software
Students create reports or discuss research on specific skills, concepts or principles using print and digital sources.	<ul style="list-style-type: none"> ● Discussion board ● Presentation software ● Word processor ● Concept mapping software
Students complete online quiz or test.	Online quiz software

Standard 2

“The physically literate individual applies knowledge of concepts, principles, strategies, and tactics related to movement and performance.”

As with Standard 1, it is easy to conceptualize how to assess knowledge in an online course with the use of quizzes and exams. However, Standard 2 learning outcomes also incorporate higher- order thinking skills to demonstrate mastery in applying that knowledge in physical activity and sport settings.

Designing and assessing tasks that have students apply knowledge of tactics and strategies is achievable within the online learning environment by using a variety of drawing and video software. As with Standard 1, the use of video can be an integral piece in the delivery of instruction and student assessment in an online physical education course (Silverman, 1997). For example, a video can be submitted by a student with a self-analysis of concepts and principles (Koekoek, van der Mars, van der Kamp, Walinga, & van Hilvoorde, 2018).

Similarly, a teacher can post a video of a social dance form for students to examine as an assessment. It is important that if teachers use video — especially if they allow students to view and comment on other student videos — that they have expectations related to appropriate communication. This relates to Standard 4, below.

[View a Sample OLPE Lesson Module](#) that addresses Standard 2

Sample Online Student Learning Activities	<u>Possible Online Tools</u>
Students digitally record and submit: <ul style="list-style-type: none"> ● Execution/demonstration of principle, strategy or tactic ● Refined performance of principle, strategy or tactic ● Correction to performance of principle, strategy or tactic in response to teacher or peer feedback ● Combination of rules, strategies and motor skills to form a new way to play a game 	<ul style="list-style-type: none"> ● Digital video or mobile camera ● Videoconferencing ● Video sharing ● Presentation software
Students observe their own performance or a peer performance and analyze the performance against predetermined criteria (form and/or product)	<ul style="list-style-type: none"> ● Activity tracker
Students compare and contrast data collected (e.g., heart rate, video of performance) against criteria and/or previous analyses	<ul style="list-style-type: none"> ● Digital video or mobile recording ● Spreadsheet ● Online account dashboard (ex. Strava, Polar Flow, and Garmin Connect)
Students develop: <ul style="list-style-type: none"> ● Representation of a physical fitness or game concept or process ● Strategy or game plan to address specific goals 	<ul style="list-style-type: none"> ● Word processor ● Drawing software ● Concept mapping software ● Presentation software ● Digital video or mobile camera

Standard 3

“The physically literate individual demonstrates the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness.”

With an emphasis on physical activity and fitness knowledge, many aspects of Standard 3 are easily incorporated into online physical education courses. Students can create portfolios related to physical activity and fitness, develop and implement a fitness plan by incorporating goal-setting activities, and utilize readily available technology such as activity trackers. The advent of fitness and exercise trackers has facilitated the ease of monitoring a student’s engagement in physical activity. Fitness trackers may help motivate students (Martin, Melnyk & Zimmerman, 2015) to achieve specific intensity levels and enable teachers to objectively assess students’ progress reaching those levels using real-time data (Nichols, Davis, McCord, Schmidt, & Slezak, 2009).

It is important to note that using activity trackers properly is imperative, not only for accurate data but for motivational purposes. Without using personalized goals, peer comparison, and/or comparison to predetermined goals (ex. 10,000 steps), then only short-term motivational effects might be seen (Kerner & Goodyear, 2017). Accuracy, features, teacher monitoring capabilities, and cost are all important factors to weigh when choosing a system for tracking physical activity.

[View a Sample OLPE Lesson Module](#) that addresses Standard 3

Sample Online Student Learning Activities	<u>Possible Online Tools</u>
Students choose, present and/or discuss relevant assessments to measure a physical fitness component (e.g., muscular strength, agility, coordination)	<ul style="list-style-type: none"> ● Digital video or mobile camera ● Videoconferencing ● Video sharing ● Presentation software
Students design individualized fitness plan or training program to address specific goals (e.g., to improve flexibility, endurance)	<ul style="list-style-type: none"> ● Word processor ● Web authoring software ● Online account dashboard (ex. Strava, or Garmin Connect)
Students generate data (e.g. heart rate, number of sit-ups, etc.) by performing health-related physical fitness assessments	<ul style="list-style-type: none"> ● Activity tracker ● Spreadsheet ● Digital video or mobile camera
Students observe their own performance or a peer performance and compare and contrast data collected, then analyze performance against predetermined criteria (form and/or product) and/or previous analyses	<ul style="list-style-type: none"> ● Videoconferencing ● Video sharing ● Presentation software ● Spreadsheet
Students digitally record and submit: <ul style="list-style-type: none"> ● Performance of appropriate exercise to develop and/or improve a specific component of physical fitness ● Development/improvement of a component of physical fitness over time ● Revised exercise performance based on feedback from teachers, peers and/or fitness assessments 	<ul style="list-style-type: none"> ● Digital video or mobile camera ● Virtual demonstration ● Videoconferencing ● Video sharing ● Presentation software

Standard 4

“The physically literate individual exhibits responsible personal and social behavior that respects self and others.”

The delivery and evaluation of Standard 4 in the online environment presents similar challenges to Standard 1 in that the learning outcomes are not easily observed or demonstrated virtually. Therefore, assignments and assessments will need to be carefully designed to ensure student mastery of outcomes.

For example, students could submit photos or videos collected that exhibit an aspect of personal and social interactions, for instance displaying a student’s activity participation including assisting and supporting teammates, implementing safety precautions, treating and handling equipment properly, and responding to referees respectfully (R. Driesen, personal communication, April 2018).

Furthermore, video submission can be used to exhibit the behaviors of others. With an infinite availability of video on the web, students can use professional and amateur competitions to assess various game situations (Koekoek, et al. (2018). Students can address and compare inadvertent vs. intentional contact, interpret and assess excessive contact and other situational game events. Some examples that can be used are offering to help an opponent up from the ground, helping a competitor cross a finish line, addressing a late hit, and countless other possible scenarios (R. Driesen, personal communication, April 2018).

Additionally, a problem related to activity requiring critical thinking could be presented to a student via narrative, photo, or video for a response in order to evaluate their knowledge of working with others. Video or chat message boards built into the course or other web-based collaborative tools approved by the school or district can also be used to encourage interaction amongst students to build a classroom community (Nicholas & Ng, 2009). By setting expectations and evaluating students on how they interact with each other a teacher can address and assess this standard.

[View a Sample OLPE Lesson Module](#) that addresses Standard 4

Sample Online Student Learning Activities	<u>Possible Online Tools</u>
Students demonstrate, practice or discuss how to use equipment safely and appropriately, how to measure and collect data, etc.	<ul style="list-style-type: none"> ● Digital video or mobile camera ● Videoconferencing ● Video sharing ● Presentation software ● Discussion board
Students choose, discuss and/or demonstrate relevant assessments to measure a physical fitness component (e.g., muscular strength, agility, coordination)	<ul style="list-style-type: none"> ● Digital video or mobile camera ● Videoconferencing ● Video sharing ● Presentation software ● Discussion board

Standard 5

“The physically literate individual recognizes the value of physical activity for health, enjoyment, challenge, self-expression and/or social interaction.”

To address individual literacy recognition for the value of physical activity, assessment can occur in many ways. Test items can be used to measure understanding health outcomes, positive experiences resulting from participation and/or competition, the effect of fitness gains from personal challenge and self-expression, and the benefits of social interaction.

Similarly, these same concepts can be assessed through a variety of student responses, including verbal, written, video, and other creative formats interpreted by students with instructor approval. Reflecting on actions or steps that can be taken to continue personal growth are all possible in verbal, written, video, and other creative formats (R. Driesen, personal communication, April 2018).

Personalized learning is a key component to online courses, and Standard 5 delivers a valuable opportunity for students to exercise choice and voice. Face-to-face physical education classes that provide choice to their students have been shown to significantly increase physical activity levels (How, Whipp, Dimmock, & Jackson, 2013). Since the online environment presents a unique opportunity for students to choose the activities in which they participate, they will be able to describe their feelings of enjoyment from participation, as they will typically select activities they like. An activity that sparks the interest of a student increases the likelihood of student participation, while an activity that is not perceived as interesting or meaningful increases the possibility of withdrawal from the activity (Cothran & Ennis, 1997).

Any accompanying description of health benefits resulting from this self-selected activity should be easily assessed online. Reinforcement of enjoyment can be accomplished through discussion, including teacher-to-student feedback that supports healthy student activity choices. Connections can be made to a student’s favorite activity and sport participation that address positive outcomes for physical, social and emotional wellness (R. Driesen, personal communication, April 2018).

The virtual setting is the opportune environment for students to give and receive social support through the use of various social media channels that are available. It is important to check with district and school policies related to social media use as well as ensuring students are taught and assessed on how to properly communicate digitally.

[View a Sample OLPE Lesson Module](#) that addresses Standard 5

Sample Online Student Learning Activities	Possible Online Tools
Students engage in discussion with one or more peers	<ul style="list-style-type: none"> ● Discussion board ● Videoconferencing
Students record a log of activities, perceptions, reflections on feelings	<ul style="list-style-type: none"> ● Word processor ● Discussion board ● Web authoring software ● Presentation software

<p align="center">Sample Online Student Learning Activities (cont.)</p>	<p align="center"><u>Possible Online Tools (cont.)</u></p>
<p>Students design a training program, fitness plan or game for skill development and/or improvement based on a set goal (e.g., improve endurance) or interests</p>	<ul style="list-style-type: none"> ● Digital video or mobile camera ● Videoconferencing ● Video sharing ● Presentation software ● Web authoring software ● Wiki
<p>Students create and share a portfolio of physical education accomplishments, including but not limited to video files/images, assessments and feedback</p>	<ul style="list-style-type: none"> ● Digital video or mobile camera ● Presentation software ● Web authoring software ● Wiki

Sample OLPE Lesson Modules and Assessments

In [this sample muscular fitness lesson module from Florida Virtual School \(FLVS\)](#), students are required to view a module on muscular fitness that discusses the importance of muscular strength and endurance and introduces a variety of resistance exercises to incorporate into fitness routines.

One assessment includes recording and submitting a one-minute video showing form while completing one lower-body resistance exercise and one upper-body resistance exercise. Another assessment includes completing a muscular strength and endurance quiz to assess knowledge of concepts related to muscular fitness.

Additionally, students are required to create a wellness plan incorporating goals along with muscular fitness exercises (and more) to complete on a weekly basis to improve or maintain this area of fitness, similar to the wellness plan [here](#). In this lesson module, Standards 1, 2 and 3 are addressed through an online quiz to assess muscular fitness concepts accompanied by the submission of video of performance of two resistance exercises, one that focuses on a lower-body muscle group and another that focuses on an upper-body muscle group. Standard 4 is addressed through the submission of the wellness plan throughout the semester.

In the OLPE setting, wellness plans can also be used to assess Standard 4. For example, in this sample [first wellness plan](#) developed by FLVS and also implemented by Cobb Virtual Academy (CVA) in Georgia, students create and reflect upon physical, social, emotional and academic goals. Throughout the semester, students make [adjustments to their plan](#) and reflect on progress. In the [final wellness plan](#), students are required to explain the value of completing and monitoring personal progress, discuss activities that can help continue toward reaching their goals, and more.

Though not directly assessed in the above muscular fitness lesson module, FLVS addresses personal behavior and respect for self and others regarding the use of supplements and performance-enhancing drugs. In this particular lesson module, the emphasis is on the personal health of the drug user, the unethical means of competing, and the unfair advantage gained over competitors. Students can research supplements and performance-enhancing drugs, and assessment submissions can be accomplished in verbal, written and video format. For instance, video and photo formats can potentially include physical changes in athletes previously accused or indicated in a professional sport (R. Driesen, personal communication, April 2018).

Regarding Standard 5, students address muscular fitness exercises and techniques as well as improvements in muscular fitness. Addressing specific muscles/muscle groups and adjustment is supported by the aforementioned video demonstration and through the submission of the wellness plan where students track performance and reflect on improvement over the course of the semester.

Though not obvious in viewing the sample lesson module in its current format, students also have the opportunity to demonstrate knowledge about challenging oneself by addressing workout routine adjustments to increase activity levels and maximize fitness achievements. This

can be assessed in a variety of ways including verbally by live class discussion, in a discussion group/chat, in a video, or in a written assignment such as their wellness plans.

At FLVS, Standard 5 is also specifically addressed through the requirement of students to explain the effects of regular exercise on fitness levels and compare random/intermittent physical activity versus regular exercise. At FLVS and CVA, students are also required to [calculate their target heart rate](#) and track it multiple times per week during activities and, as part of their [final wellness plan](#), provide a written reflection on the associated challenge of achieving and maintaining 135 beats-per-minute for their weekly cardiovascular workouts.

Online Course Tools and Resources to Enhance Learning

This section highlights common pedagogical tools and resources useful for teaching and assessment of learning in an OLPE course. The tools and resources listed are not meant to be an exhaustive list, but rather suggestions and recommendations. Be sure to check with your school or district IT department to ensure you are in compliance with any regulations related to technology adoption for teachers and students.

Online Tool	Definition	Examples
Activity tracker	Activity trackers are wearable devices or computer applications that record daily physical activity along with other data relating to fitness or health, such as heart rate, the number of steps taken, or even calories burned.	Popular activity tracker brands include Fitbit , Polar and Garmin .
Concept mapping software	Concept mapping software is used to create a variety of graphic organizers, flow charts and diagrams to represent concepts and ideas, and then share them in word processing documents, presentations or websites.	Popular concept mapping software includes Inspiration , Mindmeister , Xmind , KidsInspiration , and The Virtual Understanding Environment (VUE) .
Digital video or mobile camera	Digital video or mobile cameras capture and store images and video files in digital format. Many also offer specialized settings for particular effects (e.g., action shots, black and white, etc.). It is simple to capture, view, edit, share and store digital files.	Helpful video tips Additional tips and resources 10 tips for creating instructional videos
Discussion board	Discussion boards or discussion forums are online bulletin boards that allow users to post messages under threads or topics. They can be public or private, moderated or unmoderated, and threaded or flat.	Most learning or course management systems (i.e. Blackboard or Moodle) automatically

	Discussion boards provide an online space for students and teachers to communicate, share, learn and collaborate. Many discussion boards even allow users to attach documents, images and video clips to posts.	offer discussion boards as an option for users.
Drawing software	Drawing software is used to create digital images and graphics in 2D and 3D formats. This software provides students the opportunity to be creative and use visual arts to represent ideas and thoughts.	Two common drawing applications include Sketchup and KidPix .
Online quiz software	Online quizzes are easy-to-use tools that enable users to create quizzes or tests in different forms to be shared online. Typically, a variety of question type options are enabled (e.g., multiple choice, open response, fill in the blank, etc.). More sophisticated sites can be configured to automatically score quizzes and report results to the teacher.	Most learning or course management systems (i.e. Blackboard) automatically offer online quizzes as an assessment option for users. Some other online quiz software sites include Classmarker and Quiz-School .
Presentation software	Presentation software enables the creation of interactive, virtual presentations that consist of text, pictures, movies, links and more.	Popular presentation software includes Microsoft PowerPoint , Apple's Keynote , Prezi , and Google Slides .
Spreadsheet	A spreadsheet is an electronic document where data is arranged in the rows and columns of a grid and can be used in calculations. Spreadsheets enable data to be organized, calculated, graphed and analyzed easily.	Microsoft Excel and Google Sheets are popular spreadsheet programs.

Videoconferencing	Videoconferencing technology allows two or more users, in two or more locations, to interact via two-way video and audio transmissions simultaneously. These applications allow virtual students and teachers to connect to one another. Videoconferencing can support a range of online learning activities including interpersonal exchanges, information collection and analysis, and collaborative problem solving.	Skype and Google Hangouts are popular, free audio and videoconferencing applications. Commonly used paid services include Zoom and GoToMeeting .
Video sharing	Video sharing sites are websites where users can upload and share video clips, including but not limited to instructional videos or demonstrations. Most services are free and have options for public or private sharing.	Popular video sharing sites include YouTube and Vimeo .
Web authoring software	Web authoring software enables users to create web pages to host online. Many web authoring tools use an interface similar to word processing software, making them user friendly. Simple web editors allow for quick and efficient web page creation, utilizing some combination of text and images.	The simplest web editors include Google Pages , Wix , Weebly , Google Sites , Yola and iWeb .
Wiki	A wiki is a website that allows users to easily create and edit web pages using simple text directly in the web browser. A wiki can be public or private and is ideal for quickly creating websites, promoting collaboration, and tracking contributions from multiple authors on a single site. A range of free wiki sites offer advanced features including the ability to embed images, video clips and other interactive elements (e.g., polls) on a wiki page.	Some popular wiki sites include Wikispaces and PB Works .

Word processing program	A word processing program is a computer application used for composing, editing, formatting and printing documents. They allow teachers and students to create documents and collaborate efficiently. Most word processing programs offer a variety of reviewing, collaboration, desktop publishing options, and writing supports in addition to basic word processing.	Microsoft Word , Apple's Pages and Google Docs are popular full-featured word processing programs.
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Assessing the Quality of OLPE Courses

While there are currently no specific resources to assess quality OLPE, there are a plethora of tools that can be used to evaluate the design of online courses. The Online Learning Consortium (OLC), International Association for K-12 Learning (iNACOL), and Quality Matters are among the leaders in providing evaluations of online course design. While each group offers some free resources, a cost is typically associated with a formal evaluation. However, free resources are available to evaluate online courses, including but not limited to the Illinois Online Network (ION) and Michigan Colleges Online.

Course Evaluation Resources

- The [Online Learning Consortium \(OLC\)](#) provides research resources into online learning. The resources supplement [six main areas](#): annual reports, digital learning, instructional design/learning design, leadership, quality, and teaching and learning.
- The [International Association for K-12 Learning \(iNACOL\)](#) publishes [National Quality Standards](#) for online courses. Additionally, they contribute guidance to educators, policy makers, and researchers to develop and enhance online courses. This membership organization provides some free resources online. However, some of their resources are only available to members.
- [Quality Matters](#) is a membership organization with the purpose of promoting and improving the quality of online education. While there are some [free webinar resources](#), most benefits come with a paid membership. [Course and program reviews](#) are also available for a fee to gain feedback on the features of your online courses.
- The [Illinois Online Network \(ION\)](#) has developed a plethora of [free online education and environment resources](#). Topics include Online Education Overview, Assessment/Evaluation Topics, Instructional Design, Pedagogy and Learning, Communication, Online Education Information, Software and Technology, Web Design, and Intellectual Property. Additionally, ION developed the [Quality Online Course Initiative](#) that includes a free tool to assist in the design, redesign or evaluation of online courses.
- A free online course development guideline and rubric is available from [Michigan Colleges Online](#). Their rubric was designed based on reviews from The American Council on Education and other professional organizations.
- Michigan State University's Instructional Design & Development Department in Teaching & Learning has created an open source with course best practices and guidelines for [Learning Objectives and Course Components](#), [Blended and Online Courses](#), [Online Course Structure](#), [Setting Expectations](#), and [Running a Course](#). Each section offers links to assisting documents and a comprehensive list of links to external open websites with additional resources.

Summary

As stated in the introduction, SHAPE America does not view hybrid and OLPE as a medium to replace face-to-face instruction or instructors, but as an alternative method of instruction to fit the needs of students.

“Online physical education courses, if designed and implemented appropriately, may serve as an appropriate method of instruction for students who are unable to be in school-based settings, such as students located in remote geographical areas, students with special needs, or working students. Online physical education courses may be particularly advantageous for schools that lack certified teachers or have inadequate facilities and equipment” (SHAPE America, 2016, p. 18).

Furthermore, it is SHAPE America’s stance that hybrid and OLPE can be a viable alternative to face-to-face instruction if the course: a) is standards-based; b) follows appropriate practices; and c) is taught by a state-licensed physical educator.

Hybrid and OLPE should not be used as a remediation or credit recovery for those who are unsuccessful in face-to-face PE, but rather in situations where face-to-face PE is not available and for students who have proven they have the knowledge, skills, and abilities to be successful online physical education students. While teaching physical education online presents unique challenges, these obstacles can be overcome with appropriate planning and implementation, adequate resources, quality course design, and certified teachers.

With technology advances happening at a rapid pace, the ability of online courses to better meet physical education content standards has improved. While there will likely always be pitfalls in online education (access, equity, curricular choices, etc.), hybrid and OLPE can be used in a positive way to help students achieve physical literacy as defined by SHAPE America (SHAPE, 2014).

OLPE must grow beyond the fitness and wellness model that is currently prevalent (Daum & Buschner, 2012) to appease the many critics of this mode of physical education. Regardless of how you view hybrid and OLPE, distance education is embedded into the educational landscape as an option for students. As responsible professionals, it is our job to ensure our students are getting the best education possible given the context from which we teach. Administrators and teachers should use the resources in this document to design and implement high-quality, standards-based hybrid and OLPE courses in a thoughtful and systematic way.

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References

- Buschner, C. (2006). Online physical education: Wires and lights in a box. *Journal of Physical Education, Recreation & Dance*, 77(2), 1-58.
- Casey, A., & Jones, B. (2011). Using digital technology to enhance student engagement in physical education. *Asia-Pacific Journal of Health, Sport and Physical Education*, 2, 51–66.
- Cothran, D., & Ennis, C. (1997). Alone in a crowd: Meeting students' needs for relevance and connection in urban high school physical education. *Journal of Teaching in Physical Education*, 18, 234–247.
- Daum, D. N., & Woods, A. M. (2015). Physical education teacher educator's perceptions toward and understanding of K-12 online physical education. *Journal of Teaching in Physical Education*, 34(4), 716-724.
- Daum, D. N., & Buschner, C. (2012). The status of secondary online physical education in the United States. *Journal of Teaching in Physical Education*, 31, 86-100.
- Daum, D. N., & Buschner, C. (2018). Research on teaching blended and online physical education. In R. E. Ferdig & K. Kennedy (Eds.), *Handbook of research on K-12 online and blended learning* (2nd ed., pp.321-334). Pittsburgh, PA: ETC Press. Retrieved from https://figshare.com/articles/Handbook_of_Research_on_K-12_Online_and_Blended_Learning_Second_Edition_/6686813.
- Gemin, B., & Pape, L. (2016). Keeping pace with K-12 online learning. Retrieved from <https://www.evergreenedgroup.com/keeping-pace-reports/>.
- How, Y. M., Whipp, P. R., Dimmock, J. A., & Jackson, B. (2013). The effects of choice on autonomous motivation, perceived autonomy support, and physical activity levels in high school physical education. *Journal of Teaching in Physical Education*, 32, 131-148.
- Juniu, S., Hofer, M., & Harris, J. (2012, February). *Physical education learning activity types*. Retrieved from College of William and Mary, School of Education, Learning Activity Types Wiki: <http://activitytypes.wm.edu/PhysicalEducationLearningATs-Feb2012.pdf>.
- Kerner, C., & Goodyear, V.A. (2017). The motivational impact of wearable 607 healthy lifestyle technologies: A self-determination perspective on Fitbits with adolescents, *American Journal of Health Education*, 48, 287-297.
- Koekoek, J., van der Mars, H., van der Kamp, J., Walinga, W., & van Hilvoorde, I. (2018). Aligning digital video technology with game pedagogy in physical education. *The Journal of Physical Education, Recreation, and Dance*, 89(1), 12-22.
- Martin, M., Melnyk, J., & Zimmerman, R. (2015). Fitness apps: Motivating students to move. *Journal of Physical Education, Recreation & Dance*, 86, 50-54.

- Mohnsen, B. (2012a). Implementing online physical education. *Journal of Physical Education, Recreation, & Dance*, 83(2), 42-27.
- Mohsen, B. (2012b). *Using technology in physical education* (8th ed.). Big Bear Lake, CA: Bonnie's Fitware, Inc.
- Mosier, B. (2012). Virtual physical education: A call for action. *Journal of Physical Education, Recreation, & Dance*, 83(3). 6-10.
- Mosier, B. & Lynn, S. (2012). An initial exploration of a virtual personal fitness course. *The Online Journal of Distance Learning Administration*, 15(3). Retrieved from http://www.westga.edu/~distance/ojdl/fall153/mosier_lynn153.html.
- National Association for Sport and Physical Education (NASPE). (2007). Initial guidelines for online physical education: A position paper from the National Association for Sport and Physical Education. Reston, VA: Author.
- National Association for Sport and Physical Education (NASPE) (2009). Appropriate use of instructional technology in physical education [position statement]. Reston, VA: Author.
- Nicholas, H., & Ng, W. Engaging secondary school students in extended and open learning supported by online technologies. *Journal of Research on Technology in Education*, 41(3), 305-328.
- Nichols, R., Davis, K. L., McCord, T., Schmidt, D., & Slezak, A. M. (2009). The use of heart rate monitors in physical education. *Strategies*, 22(6), 19-23.
- Ransdell, L. B., Rice, K., Snelson, C., & Decola, J. (2008). Online health-related fitness courses: A wolf in sheep's clothing or a solution to some common problems? *Journal of Physical Education, Recreation & Dance*, 79(1), 45-52.
- Rhea, D. J. (2011). Virtual physical education in the k-12 setting. *Journal of Physical Education, Recreation & Dance*, 82(1), 5-7.
- Silverman, S. (1997). Technology and physical education: present, possibilities, and potential problems. *American Academy of Kinesiology Physical Education*, 49, 306–314.
- SHAPE America – Society of Health and Physical Educators. (2014). SHAPE America's National Standards for K-12 Physical Education. Reston, VA: Author. Retrieved from <https://www.shapeamerica.org/standards/pe/>.
- SHAPE America – Society of Health and Physical Educators (SHAPE) America. (2015a). The essential components of physical education. Reston, VA: Author. Retrieved from <http://www.shapeamerica.org/upload/The-Essential-Components-of-Physical-Education.pdf>.

SHAPE America – Society of Health and Physical Educators. (2015b). Appropriate instructional practice guidelines, K-12: A side-by-side comparison. Reston, VA: Author. Retrieved from <https://www.shapeamerica.org/upload/Appropriate-Instructional-Practice-Guidelines-K-12.pdf>.

SHAPE America – Society of Health and Physical Educators, American Heart Association (AHA), & Voices for Healthy Kids. (2016). 2016 Shape of the Nation Report: Status of Physical Education in the USA. Reston, VA: Authors. Retrieved from https://www.shapeamerica.org/uploads/pdfs/son/Shape-of-the-Nation-2016_web.pdf.

Trent, M. (2016). *Investigating Virtual Personal Fitness Course Alignment with National Guidelines for Online Physical Education*. (Unpublished doctoral dissertation). Georgia State University, Atlanta, Georgia. Retrieved from https://scholarworks.gsu.edu/kin_health_diss/16.

Williams, L. M. (2013). A case study of virtual physical education teachers' experiences and perspectives of online teaching (Unpublished doctoral dissertation). University of South Florida, Tampa, FL.