ADAPTING TRAINING MATERIALS FOR BLENDED LEARNING

A Landscape Analysis of Best Practices

BACKGROUND

MOMENTUM is a USAID-funded project that works in partnership with countries to scale up health interventions and improve the overall health and well-being of mothers, children, families, and communities. The Measurement, Adaptive Learning, and Knowledge Management Lab (MAKLab), supports MOMENTUM projects by addressing persistent, shared, or complex challenges that MOMENTUM teams face in their work. One challenge that a team brought to MAKLab was how existing training curricula could be adapted to a blended learning format. Blended learning is the process of combining two different educational methods into one course or program. To address this challenge, MAKLab conducted a landscape analysis of best practices in converting trainings to a blended online/in-person format with a specific focus on the digital component of a blended learning training. The findings from this landscape analysis, summarized here, are broadly applicable across global health programs as more programs adapt existing trainings to blended formats with digital components. This landscape analysis is a supplement to the [MOMENTUM Distance and Blended Learning Guides](). To utilize this report to its fullest potential, we recommended you start by reviewing Part 1 and 2 of these guides. This landscape analysis provides concrete steps, considerations, tools, and resources for projects and organizations that are adapting existing training materials to a blended learning format.

LANDSCAPE ANALYSIS METHODS

To identify best practices for adaptation, we first scanned existing literature and key resources, many of which were previously cited in the MOMENTUM Distance and Blended Learning Guides. We also asked experts who were involved in the development of the Distance and Blended Learning Guides to identify additional relevant resources related to best practices for adaptation to a digital format. Through multiple, iterative rounds of review and synthesis, we distilled a summary of best practices that were organized into three overarching categories: 1) clarifying training goals and process, 2) maximizing access, and 3) maximizing learning and engagement. These categories align with categories in the MOMENTUM Distance and Blended Learning Guides. We included Illustrative examples of best practices where appropriate. Lastly, we shared findings with key informants to ensure the list of best practices was corroborated by experts in the field. Best practices were presented in a bulleted list format to enhance readability and ease of use.

BEST PRACTICES FOR ADAPTING TRAINING MATERIALS FOR BLENDED LEARNING

Best practices have been organized into three priority areas: (1) clarify training goals and process, (2) maximize access, and (3) maximize learning and engagement. More information and examples related to each priority area are included after this list. This list concentrates primarily on the online aspects of blended learning.

Overview of Best Practices

CLARIFY TRAINING GOALS AND PROCESS: Consider where, how, and why the training content will be adapted to a blended format.

- Articulate why the training is being adapted to a blended format.
- Outline training content including activities and learning objectives for each segment of the training.
- Develop a map of training content, using techniques like storyboarding, to clarify how content will be presented and to identify where content will need adaptation.

MAXIMIZE ACCESS: Define key user groups, understand what users need, and address those needs.

- Identify different users who will engage with the training material (e.g., learners, instructors, and/or administrators).
- Assess characteristics of the users including (1) prior learning (e.g., baseline knowledge of training content), (2) digital literacy (e.g., skills and comfort with technology), and (3) other characteristics (e.g., language preference and attitudes about online learning).
- Assess the technology access of the different users (e.g., access to the internet, available devices).
- Select technology that meets the users' needs and capacity.
  - Ensure presence of technical support for users.
  - Ensure a user-friendly interface (e.g., clear and simple typography of text on screen, easy to register/enroll, and navigate the learning platform, use of basic language/terminology).
- Align with *Universal Design for Learning* principles to ensure content and format is designed to be accessible by all learners.

MAXIMIZE LEARNING AND ENGAGEMENT: Maintain and enhance learning and engagement of the user.

- Ensure content is appropriate for the audience including literacy, technical content, and accessibility.
- Ensure content is relevant to the users' needs.
- Promote interactivity (e.g., gamify activities, quizzes).
- Build opportunities for users to reflect on and apply the training material learned (e.g., open-ended questions that connect training to practice, interactive downloadable job aids such as checklists).
- Break down information into small, manageable sizes to reduce cognitive load (e.g., use short modules, clickable objects, or expandable sections). Distinct training segments also allow users to break up the training to fit with their schedule and priorities.
- Provide opportunities for users to engage with various types of media (e.g., text, video, animations, photos).
- Apply principles of Adult Learning Theory.

The following sections describe each best practice priority area in more detail.

Clarify Training Goals and Process

Before designing and implementing your blended learning program, clearly articulate the purpose of adapting a training to a blended format and map where and how the content will be adapted. This can be done by first creating or refining an outline of the training components through a syllabus or "scope and sequence." The outline should include training content and objectives for each segment of the training. Training implementers should describe how training content will be presented, considering which components of the training are best delivered face-to-face and which are best delivered through a digital format. This process is typically referred to as "content mapping" and will result in a storyboard of the training (Box 1).

Maximize Access

Once you decide which material will be presented in a digital format, ensure that you select technology that is accessible to the users. The MOMENTUM Distance and Blended Learning Guide Part 1 (Appendix A & D) includes assessments for gathering information related to user access to technology. It also may be important to assess user's baseline knowledge of the content, language preferences, or attitudes about online learning. Once access to technology and capacity of the user are identified, choose technology and an interface that aligns with the abilities and needs of the user. The MOMENTUM Distance and Blended Learning Guide Part 2 includes a section on considerations for selecting technology as well as how to match technology with your users' needs.

It is also important to consider whether a learning management system (LMS) is needed. LMSs are robust platforms for the development, administration, tracking, reporting, and delivery of educational courses or programs (examples include Blackboard or Canvas). Because of their functionality, LMSs are the preferred technology for delivering blended learning. They support course creation as well as collating or adapting existing curricula. LMSs differ greatly in cost, user interface and experience, mobile optimization, features available for instruction, student support, and reporting. LMSs can also offer systems to track learner registration and demographics, monitor changes in learner knowledge, build reports on course usage, and to evaluate training content. Table 1 includes key considerations when evaluating different LMS options.

Box 1. What Is Storyboarding?

Storyboarding is a process of outlining how content is transformed, sequenced, and presented. It:

- Provides a clear picture of what the training and learner experience will look like

- Helps make decisions about technology needs and training delivery

- Invites other stakeholders to collaborate and provide input on learning

There are many resources that use different templates and formats for developing a storyboard such as: Boords, Storyboard that, or Canva.

TABLE 1: KEY CONSIDERATIONS FOR LMS SOFTWARE SELECTION

Consideration	Implications for Blended Learning Programs
Open Source or Proprietary LMS	There are two main types of LMS software: open source and proprietary. **Open source LMS** platforms permit free use and adaptation of the software code. Organizations can either host instances of the LMS on their own server or pay for hosting services. Open source LMSs enable programs to customize and configure their instances, which in some cases, may require more effort to design and maintain than a proprietary LMS. • Examples include: Moodle and Open EdX **Proprietary LMSs** are not openly distributed and require programs to pay a licensing fee to use the software (typically determined by the number of users). Proprietary LMSs are fully managed and maintained by the provider. • Examples include: Blackboard, Cornerstone, Google Classroom, Canvas. Primary trade-offs: Generally, proprietary LMSs are easier to set up and maintain but are typically more expensive depending on the size and scale of your program.
User Interface & Navigation	Check that the LMS interface and navigation match your instructor and learner needs. For example, many LMSs require an email address to register and may require higher levels of digital literacy to navigate the site. If your program serves multilingual learners, it's important to check which languages are supported and whether the LMS has an interface localized in the required language. Reach out to other education providers in the region and look to align with the local ecosystem when possible as learners and/or instructors may already be familiar with a specific platform.
Administration	Make a list of your "must-have" LMS features. Be sure to check that the LMS course authoring, reporting, and general management features suit your needs. For example: • Can administrators add all content types, including documents, video, audio files, and interactive digital learning files? • What media can be directly embedded in the site (as opposed via to external links)? • Is it easy to create and/or import online lessons on the platform? • Can administrators configure notifications? Some LMSs allow you to control what gets shared to learners and how frequently. Notifications sent through email and/or pushed to a mobile device can encourage desired behavior through nudging and reminders.

Consideration	Implications for Blended Learning Programs
	• What are the reporting capabilities? LMSs vary in what user interactions can be tracked as well as whether key information is available for users to view and if reports can be customized.
Access	Some LMSs may be browser-based and require internet access to utilize course content while others may provide a downloadable app that permits course content to be viewed off-line anytime, anywhere. It is also important to consider whether the LMS permits the courses to be viewed on mobile devices. • Key considerations: browser-based LMSs may not be fully optimizable for mobile users • Users still need to be online to initially download the materials and to submit answers to quiz questions and other interactions.
Customer Support	Consider the different customer support models and associated costs of various LMSs. • Consider how the LMS customer support model aligns with your existing technology or human resource systems. • Confirm with the LMS provider they have an up-to-date resource library for users with product documentation, how-to-videos, etc.
Adapted from: Workforce EdTech	

Additionally, the design of the digital learning aspects of the blended training program should align with Universal Design for Learning (UDL) principles that promote more inclusive and engaging learning environments.[1] UDL is a framework for developing flexible learning environments and activities that meet the needs of a wide range of learners.

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[1] Rao, K. (2021). Inclusive Instructional Design: Applying UDL to Online Learning. *The Journal of Applied Instructional Design*, *10*(1). https://edtechbooks.org/jaid_10_1/preparing_teachers_f

Maximize Learning and Engagement

For users to achieve the learning objectives of the blended training program, the digital portions of the training must be formatted to maximize the learning and engagement of the user. Training implementers should ensure the content of the digital portions of the program are relevant to the users and the objectives of the training. The digital content should be appropriate for the user's literacy level, educational and professional experience, and technology access.

The digital content should maximize and promote interactivity, such as through gamification of training material or opportunities for users to reflect upon and apply learning.[2] (Box 2).

Another strategy to maximize learning and engagement of the user is to break up training content into smaller, manageable pieces (Box 3). This approach allows for quick consumption of information to target a specific learning objective or need. Breaking up and presenting new or complex information in manageable pieces can avoid information overload and results in greater retention among participants.[3] One strategy to break up content is to use clickable buttons or objects where users can expand a topic and learn more. This maintains instructional flow while also managing cognitive load.

Mixing up the format of presentation material is another evidence-based strategy to increase the engagement of the user. The digital content of the training can employ a wide-range of media-rich learning formats such as short videos, audio, photos, and other instructive graphics to convey meaning more quickly than text, especially for users with limited literacy proficiency.

Box 2. Gamify Activities

Gamification is the process of applying typical elements of game playing (e.g., point scoring, competition with others) to a training to encourage engagement or participation.

For example, YAHealth, a mobile and browser-based software that provides family planning and adolescent sexual and reproductive health content for healthcare providers in Rwanda, uses gamified quizzes to increase interactivity of participants.

Box 3. Break Training Content Into Smaller, Manageable Sizes

One strategy to increase uptake of information by participants is to break training content into smaller, more manageable parts. This is sometimes referred to as "chunking."

The DMPA-SC training videos, produced by PATH, provide a good example of how content can be segmented into smaller chunks. This training teaches healthcare providers how to administer the injectable contraceptive DMPA-SC. The training uses short 5-7 minutes videos to maintain participant attention.

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[2] Vlachopoulos, D., & Makri, A. (2017). The effect of games and simulations on higher education: A systematic literature review. *International Journal of Educational Technology in Higher Education*, *14*(1), 22. https://doi.org/10.1186/s41239-017-0062-1

[3] Skulmowski, A., Xu, K.M, (2021). Understanding Cognitive Load in Digital and Online Learning: a New Perspective on Extraneous Cognitive Load. *Educational Psychology Review*, *34*:171-196.

Lastly, it is important to be familiar with the principles of adult learning theory to increase user learning and engagement (Box 4). When participants can easily view and download training content that is captivating and relevant to their life, they can absorb information more readily and are more likely to complete the training.

> **Box 4. Principles Of Adult Learning**
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> 1. Adults are internally motivated and able to learn independently.
> 2. Adults prefer learning that builds on their prior experience.
> 3. Adults prefer learning that can immediately apply in their daily lives.
> 4. Adults prefer problem-centered skills-based learning.
> 5. Adult learners like to be treated as adults.
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> Source: Sparell, M. (2021). Five Adult Learning Principles and Increase Engagement Forbes Communications Council

CONCLUSION

This landscape analysis provides global health professionals with the necessary tools and resources to adapt their training content to a blended learning format with a digital component. By optimizing the three strategies above—clarifying training goals and processes, maximizing access to digital materials, and maximizing the learning and engagement of the user—readers of this brief can strengthen blended learning training adaptation and achieve more effective training results. This list of best practices focused primarily on the digital or online component of a blended learning training and doesn't fully address other components such as face-to-face training or the process of blended two training components. If you are looking for additional information on blended learning, you can access the MOMENTUM Distance and Blended Learning Guides.