

Workshop Synthesis Report

Digital content for Arabic-speaking learners:

Understanding where we are today, where we need to go, and how collaboration can get us there



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Introduction

[Education Above All](#) and [Google.org](#) co-hosted a workshop during the [2017 WISE Summit](#) in Doha in November 2017 to discuss and explore the current status of digital learning content specifically targeting native Arabic-speaking K-12 learners.¹ Joined by approximately 50 participants, including content providers, teacher trainers, nonprofit education programming implementers, and funders, the co-hosts brought together key participants during WISE to help validate and test some assumptions about the availability of Arabic content, what's missing in the Arabic content landscape, and priorities around the need for new content. (see [Appendix A](#) for session objectives)

While the co-hosts kicked off these efforts because it's relevant to their own work, the aim was to create a public good to inform the work of the broader education community -- whether it be for educational programming, to demonstrate need to potential funders to fund the creation of openly available content, or to demonstrate gaps for content creators to fill. In an effort to share learnings and minimize parallel systems, the idea is to create something that is dynamic, open and available for future contribution, and to spark potential collaboration. Throughout the process, we've received feedback from a variety of players in the space showing excitement for the work and validating its potential value.

This document serves to provide a record of the meeting and related conversations to inform next steps and drive impact across the broader education community. It provides an [overview of the pre-work](#) that took place in advance of the workshop, shares a [brief synopsis](#) of the session at the WISE Summit, and [synthesizes the discussion](#) that took place during the workshop and subsequent webinar. It concludes with [implications for relevant stakeholders](#) and some [action-oriented next steps](#) to take this work forward and for the broader community to engage.

Pre-work: Arabic Content Survey

Three weeks in advance of the workshop, the event organizers distributed a [survey](#) to participants and a broader network of organizations to begin developing an inventory of existing Arabic digital or digitizable content and planned content in production, and to start identifying key gaps. The organizers built on the work of both Qatar Foundation International (as part of the Build Back Better program) in early 2015 and UNICEF Innovation in 2017 as a starting point - both of which identified key gaps in the Arabic content space. As a result, the initial list was a bit skewed, as the content lists previously compiled were intended for specific purposes, and

¹ This session was also organized by [Qatar Foundation](#), [Qatar Foundation International](#), [UNHCR](#) and [Learning Equality](#). These groups also organized a webinar using a modified format two weeks later to convene a smaller relevant group of participants who were unable to join the meeting in Doha. This document summarizes both the workshop and subsequent webinar.

included a few content aggregators that have collections of Arabic content, programming with its own content, and content outside of the traditional K-12 space.

The survey encouraged thinking outside the box in terms of what can be considered content with an educational purpose, as well as the potential characteristics to track in a mapping of Arabic content (see [Appendix B](#) for a glossary of terms accompanying the survey). The goal was to be as inclusive as possible—the survey did not ask for evaluation of effectiveness/impact if that data wasn't available, for example.

In this short time period, the organizers received a few dozen survey responses - including new content sources as well as additional information about known content sources (see [current list](#)). Four high level insights, which emerged from the survey, helped to frame the discussion during the workshop:

1. **Delivery platforms:** There is an emergence of non-traditional, non-curricular content sources such as games and standalone apps. These sources show particular promise for non-formal educational settings.
2. **Existing content:** Over-indexed on literacy; limited secondary STEM content. Currently there is a strong focus on developing engaging literacy content, but there is a limited availability of content at the secondary level, especially with a focus on STEM.
3. **Need for curation:** There are many existing content sources which require minor additional modifications but are difficult to discover and/or need to be digitized. There is a need to ensure quality for existing and new content.
4. **Need for information:** There is interest in the outputs of this session being leveraged to demonstrate content gaps and inform educational programming. Data can be used to help galvanize content creators and potential funders.

The Workshop

The two hour session was moderated by Eliane Metni, President and Director at International Education Association, and Shireen Yacoub, Chief Executive Officer at Edraak. Given the diversity of participants and time constraints, the workshop utilized a modified version of the [World Cafe methodology](#), where participants self-arranged into small groups at one of four tables and rotated after 13 minutes. Each table had a set of guiding questions based on the key insights that emerged from the survey to inform discussion, and after the final rotation, the moderators facilitated a report back (see [Appendix C](#) for a complete set of questions). In a short period of time, not only were participants able to provide input, but informal discussions ensued past the completion of the workshop, and business cards were shared - another demonstration of the need for improved understanding about the availability of and planning for quality Arabic content.

Synthesis of Four Tables

Workshop attendees were active participants in an engaging discussion that was intended to inform (1) which aspects of content to track, (2) how to identify and discover content, (3) how to disseminate the information we gather and enable active input from others in our process, and (4) how to ensure sustainability of the content pipeline. Below are each of the four tables, each listed with a leading guiding question. For each table, key ideas and areas for further exploration are shared.

Table 1: Understanding Critical Content Characteristics

What are key content characteristics for digitized/digitizable Arabic content?

Key Ideas:

1. **Set of characteristics.** Participants mentioned at least 50 content characteristics (see Table I below). Broadly categorized, these characteristics were discussed in context of six main actions pertaining to content usage: inventory/storage, discoverability, matching, distribution, quality assessment, and enhancement.

Table I: Mentioned Critical Characteristics of Content

	Inventory & storage stage	Discoverability stage	Matching stage	Distribution stage	Quality assessment stage	Enhancement stage
Inherent attributes	<ul style="list-style-type: none"> • File type • File size • Length • Language • Dialect • Translation • Creator • Source • Creation date and versioning • Licensing • Cost • Access model 	<ul style="list-style-type: none"> • Platform and device compatibility • Subject • Topic 	<ul style="list-style-type: none"> • Target user • Intended audience • Inter-dependencies & modularity 	<ul style="list-style-type: none"> • Required materials • Prerequisites • Sequencing • Course structure and bundling 	<ul style="list-style-type: none"> • Digitization 	<ul style="list-style-type: none"> • Gamification • Assessments • Teacher scaffolding • Usage guides • Interactive elements
Externally evaluated qualities	<ul style="list-style-type: none"> • Tags and keywords • Associated metadata 	<ul style="list-style-type: none"> • Curriculum alignment • Bibliographic categorization 	<ul style="list-style-type: none"> • Accessibility attributes (visual, auditory, etc.) 	<ul style="list-style-type: none"> • Modality • Facilitation needs • Device configuration • Proficiency • Competency • Alignment to standards • Flexibility • Localization • Distribution mechanism 	<ul style="list-style-type: none"> • Digitization quality • Outcomes measurement • Demographic fit • Expert review • Ratings • Testimonials • Learning styles • Engagement 	<ul style="list-style-type: none"> • Usage data

2. **Content flexibility.** Participants characterized the utility of content as a flexible attribute, and believed that any piece of content can constitute educational material in a given situation.
3. **Inherent vs. externally applied characteristics.** There is a meaningful distinction to be made between those content characteristics that are objective and *inherently static to a piece of content* (such as format type, language, and topic) and those which are subjective and must be *externally evaluated depending on context* (such as age or grade level, standards alignment, and modality).
4. **Subjectivity of characteristics.** Participants did not consider all commonly discussed characteristics of content useful. Some, such as appropriate age level, were considered so subjective as to be virtually meaningless universally.
5. **Meta-designations.** Participants were very interested in composite meta-designations based on an interaction between objective content characteristics, stakeholders, and learning environments, such as the learning modality of a piece of content (how it is best utilized in a learning trajectory).
6. **Caveats to common characteristics.** Many of the characteristics mentioned involved secondary caveats to existing categories on the survey or within common content repositories and taxonomical systems. For instance, rather than a simple binary characteristic like “digitization,” participants expressed a wish for distinctions like “quality of digitization.”
7. **Enhancement layers.** Participants were very interested in gamification, assessment, and other “enhancement layers” for content pieces, as well as categorization schemes which enable such blocks to be combined in a modular fashion.

Areas for Further Exploration:

1. **Conundrum of quality metrics.** Although participants expressed a wish for metrics on quality as an important characteristic of content, they were also cognizant of the extreme lack of generalizability such metrics would have, and how context-specific they may be.
2. **Interdependency of characteristics.** Certain characteristics discussed, such as usability for an educator, were reliant on the interplay between other more binary characteristics, such as the existence of scaffolding materials and peer ratings.
3. **Decision making to incorporate and evaluate characteristics.** Discussion was often curtailed by questions about the parties responsible for incorporating these characteristics as metadata or other categorizations. Various suggestions, such as

crowdsourcing and stakeholder catalogue maintenance, were mentioned with their limitations.

4. **Ease and usefulness.** Participants expressed a frustration with the mismatch between ease of categorization and usefulness to educators. They expressed the reality that general characteristics of content pieces (e.g., format, length, etc.) are not as useful as those which are more specific (e.g., proficiency), but the latter are much more difficult to evaluate and signal, which curtails the usefulness of many large global repositories and poses a challenge to interoperability between small boutique ones.

Table 2: Discoverability

How do implementers (e.g., organizations with educational programming, curricular specialists, etc.) currently discover and identify educational Arabic resources that are relevant for programming?

Key Ideas:

1. **Search engines and functionalities.** Most participants reported the use of basic search engines, such as Google, or tools with basic search functionalities, such as App stores.
2. **Networks and recommendations.** Educators and content providers often learned about other peers and sources when pitching in schools or to one another. These informal networks constituted a reliable but highly localized source of content discoverability.
3. **Librarians.** Since librarians often spend time organizing, curating, and assessing educational material, they were also mentioned as a source for discoverability.
4. **MoE and other official endorsement.** Some participants mentioned using the MoE website as a source for materials, with the advantage of being able to choose materials that have been approved and aligned, but may sometimes be pedagogically dry.

Areas for Further Exploration:

1. **Quality of search engine results.** Some limitations included lack of effectiveness due to meaningful results not rising to the top and high degree of user involvement to sift through materials.
2. **Lack of comparative curriculum experts.** Although there were several bodies mentioned who could facilitate discoverability and vetting, such as librarians, MoE curriculum designers, and others, it is unknown how many learning environments have access to such expertise.

3. **Peer NGO recommendations.** Participants suggested asking NGOs for further content recommendations, as content is often “sliced” and delivered within the framework of particular organizations or programs.
4. **Content quality.** The lack of vetting inherent in this enterprise makes discoverability difficult, but more rigid vetting standards sometimes results in a rejection of content that is too “imaginative.” Rating systems exist, but need to be contextualized to use cases and needs.
5. **Social issues.** Many political, religious, and other social issues to be sensitive to, so much so that one organization simply decided to remove topics like history, geography, philosophy, and religion.
6. **Accessibility.** While accessibility was included in the Arabic mapping survey, there is a need for further exploration to ensure that both the content itself and the mapping meet accessibility standards.

Table 3: Advocacy

How do we increase awareness about this “mapping” so that it becomes a useful public good?

Key Ideas:

1. **Discoverability of the mapping.** “Google it” was the response by almost every group when asked about how they would discover the mapping, as this is often how educators and educational programming specialists typically identify content (either by Internet searches or word of mouth).
2. **Leveraging existing networks/channels of communication.** Using existing networks is a clear way to increase awareness, but could be limiting if it does not reach those with Arabic content needs that are currently disconnected from these networks.
3. **Achieving organic adoption.** Having links to external sites where one can access the content itself will incentivize users not only to share the inventory, but to use the platform to access content. Some participants thought word of mouth and the buildup of trust could help increase awareness about the mapping naturally. Supporting the relationship between users and content providers will contribute to quality control of the mapping. Some participants advocated for having a “seal of quality.”
4. **Maintaining engagement from the community.** To support advocacy efforts, it’s important to develop a resource that keeps the community involved and incentivizes them to update content information, so that the mapping continues to be useful. Content creators, especially, will find that such a resource helps expand their reach.
5. **Advocacy for the mapping and quality.** When discussing building awareness about the mapping, participants had difficulty in distinguishing between the content within the

mapping and the mapping itself, which shifted some of the conversation more towards advocating for quality of the content.

6. **Validation of the resource is necessary for advocacy efforts.** Having a reputable organization host and other key relevant organizations endorse the mapping will help to communicate this work. Having this backing will help to support transparency in the process, which will support buy-in to promote efforts and allow for inclusivity.
7. **Attaching with other needed resources.** One exciting idea to increase discoverability, buy-in and advocacy for the mapping was to pair it with other related high-need resources (e.g., Arabic translation services) to support continued engagement.

Areas for Further Exploration:

1. **Endorsement of this inventory/need for the right backing.** Reactions on the need to have a singular authority endorse this mapping ranged. One camp recommended we follow the wisdom of the crowd to generate bottom-up awareness. The other camp recommended having one or two key leading organizations connected with Ministries of Education in a top-down approach. A coalition was also recommended as a solution, but the types of organizations that would comprise such a coalition is unclear. There was focus on having the right backing to push the development of the mapping as well as incentivize educators to contribute. Lastly, there was also consistent agreement that it should be a peer-to-peer consortium and not government-led.
2. **Awareness for non-formal education programmers.** Engagement through formal systems with state and local governments has clearer lines of communication than for non-formal educators. One proposed way to stir up interest is to develop a competition or gamify the process.
3. **Limitations when there is not a culture of sharing.** Especially in the Arab region where there is not traditionally not a culture of sharing and collaboration, relevant Arabic content is often difficult to identify, and the fact that there is only limited relevant content can be demotivating.
4. **Defining and reaching the key audience.** Recognition that there are multiple audiences for this mapping, there was a lack of consensus of the primary audience for this mapping, which would impact how the mapping is shared. Audiences could include educators, education programming organizations, parents, curricular specialists, ministries of education, private sector, and funders. Also, there is still a lack of clarity around the the best mechanisms to reach grassroots organizations which would greatly benefit from knowledge of this type of resource.

Table 4: Sustainability

What are your experiences in creating and using content that is freely available and meets educational programming needs without further modification?

Key Ideas:

1. **Quality is paramount.** The quality assurance conversation was consistent through the discussions. The sustainability pipeline needs to balance the continued need for quality of the content against the cost and efficiency. There similarly needs to be a balance between collaboration for sustainability and competition to help push the quality.
2. **Limited market demand.** There's a lack of market demand for sustainable content. Either the market demand is not being created or it is not obvious and visible.
3. **Being prepared.** Being future ready allows content creators and content consumers not to have to continually update and redevelop content. This is especially important now as we are changing teaching towards 2030. Content cannot be limited by the present and how things are moving in the world of education.
4. **Leveraging OER.** Given the remixable nature of open educational resources, encouraging content creators to identify unique arrangements for making some content openly licensed will contribute to the sustainability of content sources.

Areas for Further Exploration:

1. **Translation and localization.** There may be other openly licensed content that is applicable and relevant for Arabic-speaking learners, but the translation and localization process for adoption needs to be considered.
2. **Development of communities of practice.** These can drive efforts around sustainability especially between educators, content creators and other educationalists. But, is that effort developed from the top-down or bottom-up? How do they develop? Does it happen organically?

Implications for Stakeholders

Some clear implications for stakeholders emerged from the conversation in terms of taking forward the outputs from the discussion. These implications center around a few key themes:

- **Quality of content and the mapping.** One major theme that emerged from these discussions was that *fit* is a more meaningful metric of content suitability than an elusive benchmark of quality, given quality cannot be easily defined without understanding its relevance in a particular context, and usability for creating a certain learning pathway under certain conditions. For instance, quality may be defined differently depending on whether a source is for use in a non-formal learning environment, or supplemental, or in support of approved curriculum in formal learning. There are also costs associated with quality for sustainable use of content.
- **Support for educators/curricular alignment.** Knowledge of content is helpful, but users of the mapping will have a continued need for resources to support facilitators on content use.
- **Informing data-driven decision making.** Leveraging available data will help to address the need for further alignment and help to respond to the markets and existing content needs.
- **Driving collaboration while incentivizing competition to improve quality.** How do we best continue the conversation with attention to collaboration, competitiveness, and freedom to share? If we recognize the value in working together, it's important to leverage existing resources, partnerships, and initiatives in order to avoid duplicating efforts across the space.

We've identified a set of stakeholders for which this convening and output of work have special implications:

Content creators: A mapping of this nature helps demonstrate market demand, especially as gaps emerge, and can incentivize content creators to develop much-needed quality engaging content, particularly in certain subject areas. Content creators can also develop resources to support facilitators, and work with ministries of education to ensure alignment of content with relevant curricular standards to enhance usability in learning environments, especially in formal classrooms. In focusing on sustainability, the conversations revealed some unique examples of creating new content that is openly licensed or having some particular content behind a paywall (such as facilitator guides) while making other educational materials openly available.

Educators and curricular designers: These stakeholders have a strong symbiotic role to play in evaluating fit, quality, and suitability. Many of the content characteristics mentioned, such as pedagogical facilitation skills needed to use a piece of content, cannot be evaluated by

repository maintainers or technical content creators alone; educators are needed to evaluate these. However, a curriculum designer is also needed in order to provide a comparative perspective on aggregated characterizations by educators. Separately, there's opportunities to leverage communities of practice to inform, utilize and benefit from these efforts.

Designers and educational technologists: Digitizing content in Arabic can be a complicated process, so we encourage collaboration between designers and technologists to digitize content in ways that enhance usability and engagement. Since participants sought standardization among characteristics as much as they sought application of the characteristics themselves, they can help implement these characteristics so that educators can compare pieces of information across country and learning contexts (i.e. many types of content come with effect characteristics--such as annotations on learning outcomes--applied or appended, but there is no way for educators to compare these characteristics).

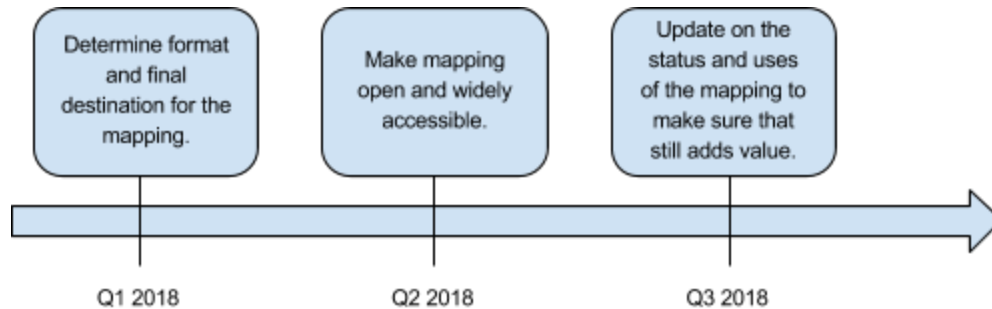
Learners: The mapping will help to inform resources to self-guide or supplement existing learning. By aggregating content sources, learners have the ability to discovery potentially more relevant content. Learner ratings and feedback on their learning environments and context of use could also be potentially helpful in collecting more data that could aid in matching.

Policy makers: Policy makers work with relevant education stakeholders to define curricular standards. Their role in communicating this mapping can have profound impact given their positionality - so while the mapping may not be driven by policy makers, their endorsement will help to improve sustainability efforts around the content and of this mapping. Also, since most of the conversation at the workshop was focused on educators and formal learning (perhaps driven by who was in the room), there was more limited dialogue around non-formal learning, and policy makers can help to bridge this gap.

Funders: There are gaps in content to be filled and this mapping will help to illustrate those gaps. Funders can also help to address sustainability issues by eliminating the barriers to accessing content in production by funding the production of content that is conditional on open licensing.

Next Steps

We have outlined a high-level timeline to move this work forward.



The survey and workshop validated the assumption that there's interest and a need for an inventory of this kind. Taking this work forward cannot be done alone, and there are many ways to get involved and support this work:

- Share the survey and add in resources: The survey is what will help to inform the inventory of information and mapping of production timeline. Please share it widely.
- Contribute to our knowledge base: As we continue to learn, share resources that may be relevant, such as effective tools to create or digitize content, or examples of other similar efforts or inventories that have been successful. There are also some key stakeholder groups that have not yet been able to fully engage in the discussions, especially grassroots implementers and educators. We encourage you to please share this work and welcome them to get in touch.
- Engage in future convenings: We'll be continuing to engage the community and it's critical that this process continues to be inclusive, with plans to continue the conversation around key convenings such as the No Lost Generation Tech Summit and Mobile Learning Week. Hosting an event or know of other events to continue this conversation? Let us know so those conversations can feed into the process.
- Stay involved and be in touch: The organizers are looking forward to hearing your feedback on this session and input on the work plan going forward. We'll also be starting to add additional capacity to support this work, so be on the lookout for postings on our respective job boards. Feedback or questions? Email us at content@learningequality.org.

Appendix A: Session Objectives

1. Inform the development of public goods—reports, databases, websites, tech tools, etc—that can be used as inputs into existing and future efforts to create and deploy more Arabic digital learning content.
2. Gather feedback from participants on which content characteristics—such as topic, licensing and accessibility—would be most helpful to track when creating a public good that identifies Arabic content in existence or in production.
3. Identify key gaps in the Arabic digital content landscape to help funders and content creators prioritize future investment in content creation, and where possible, spark potential partnerships between session participants.
4. Explore synergies and open conversations to contribute to the goal of accelerating impact across the broader education community.

Appendix B: Glossary

The following glossary was used to frame the inputs for the survey and workshop.

- [Educational] content: Materials, whether bundled together or standalone, designed for or in common use within educational settings or demonstrated in some other way to have educational value.
- Curriculum: A set of learning objectives and mandatory content formally organized by some entity into a course, program of study, or learning progression. In addition to provided materials, curriculum typically scaffolds these with goals, methods of instruction, and a means of assessment. (Adapted from the [Glossary of Education Reform](#) and the [Universal Design for Learning Reference](#))
- Learning pathway: The designated association between content pieces within a curriculum, generally set by either the educator or a content provider. A learning pathway can denote order, prerequisites, or other linkages between content.
- Curriculum alignment: Situation of disparate educational content pieces within a pre-existing curriculum framework on various axes, such as subject area, topic relevance, grade level, and learner proficiency.
- Open educational resources: “Open educational resources ([OER](#)) are teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others”
- Creative Commons licensing: Internationally standardized manner of allowing creators to grant access and use permissions to their works (From [Creative Commons](#))

Appendix C: Table Group Questions

The following questions were shared for table to help facilitate and drive conversation.

<p>Table 1: Understanding Critical Content Characteristics</p> <p><i>What are key content characteristics for digitized/digitizable Arabic content?</i></p> <ul style="list-style-type: none"> • How and where is digital Arabic content used (e.g., in what learning settings, types of pedagogical practice, etc.)? • Are we tracking the right content characteristics in survey? Do other existing categorization systems contain other characteristics that would be useful to consider? • How do you think about assessing effectiveness or quality of content? • Are there any content characteristics that are distinct depending on whether they are digital or have an educational purpose? • What implications do those uses have for the design of technology supported learning? Consider: <ul style="list-style-type: none"> ○ How the content can be used in different learning pathways (e.g., assessment features)? ○ How can technology support the alignment of the content (e.g., consider issues on metadata)? ○ What dimensions beyond traditional subject and grade alignment would be useful for discoverability (e.g. some common dimensions may include subject, grade, and learning objective, while others may include proficiency level, previous equivalent competencies, and literacy level)?
<p>Table 2: Discoverability</p> <p><i>How do implementers (e.g., organizations with educational programming, curricular specialists, etc.) currently discover and identify educational Arabic resources that are relevant for programming?</i></p> <ul style="list-style-type: none"> • What are current methods and channels that organizations use to discover and assess Arabic content sources? • Where / how does the current discovery process break down? • How do the processes of identifying or finding content interact with the process of evaluating the quality of that content? • Are there any types of content that should be explicitly excluded from this mapping, and if so, why?
<p>Table 3: Advocacy</p> <p><i>How do we increase awareness about this “mapping” so that it becomes a useful public good?</i></p> <ul style="list-style-type: none"> • Which channels (websites, events, etc) are best for the organizers to use to share the output of this and subsequent sessions to the relevant organizations in the space? What existing lines of work should this mapping feed into, if any? How do we reach and get input from content creators? • How can we best assist content creators who already have supportive/supplemental products in development (e.g., visual curriculum maps or capacity-building on converting to digital content)? • What is the feedback loop to continually improve upon and add to this mapping? • Are there additional needs that this mapping could address but isn't currently considering?
<p>Table 4: Sustainability</p> <p><i>What are your experiences in creating and using content that is freely available and meets educational programming needs without further modification?</i></p> <ul style="list-style-type: none"> • How do we make the content pipeline sustainable? What processes do you see in the content creation pipeline that are specific to the development of Arabic content? • What challenges have participants faced in sourcing or creating openly licensed content? • What barriers exist to filling those content creation gaps?