

# Toward More Flexible Education Programs in the Middle East

## Terminology & Shortcuts

- entity = educational entity: school, university, institute, etc.
- participants: students, pupils, children, etc..
- R&D: Research & Development
- NOP: Non Profit Organization
- users: All stakeholders



## Introduction

With a focus on Arabic content created through education programs in the Middle East, we present an improvement proposal motivated by the following key considerations:

- The substantial, yet mostly untapped potential within educational entities.
- A pronounced lack of, and a pressing need for, high-quality digital content in Arabic across various fields and age groups.
- Restrictions of local programs stemming from a limited focus, primarily on Wikipedia editing, and the consequent need for flexible, sustainable, and collaborative programs.

In light of the above factors, and building upon our experience with hundreds of volunteers since 2015, we have developed a draft concept for an online education platform specifically designed for the Arabic community. While Wikipedia remains a central hub for education programs, we discern the necessity for a more adaptable platform. Such a platform would ensure richer diversity in content, thereby catering to a wider range of users and audiences.

Motivated by the vast but fragmented education-related content, as well as by research and tools available in the Wikimedia education space, and driven by recent advances in AI and ML, particularly in the field of "Generative AI," we see an opportunity for a platform that facilitates education programs and helps strengthen them in the Middle East, share experiences among program leaders, and enhance the experience for all parties involved. The goal therein would be to add sustainable value in areas such as:

- Empowering students both technically and conceptually.
- Strengthening the culture of volunteering, knowledge-sharing, and collaboration in the education sector across all stakeholders.
- Opening new doors for R&D in the open-source content within educational entities.
- Improving the reading and writing skills of participants.

In this draft, we introduce the methodology applied and highlight some key results before demonstrating and describing an abstract model and concluding the results.

## Methodology

Our proposal is grounded in several conversations and consultations with fellow members of Wikimedia Levant, discussions with education program leaders in Palestine (one of the most active programs in recent years), and data analysis of the outcomes from selected education programs in Palestine. This approach also draws on our experience with volunteers and participants within Wikipedia contests run by our NOP, DADD-INITIATIVE e.V., since 2015. Furthermore, we have reviewed state-of-the-art research and publications in the education field, including the Wikimedia & Education report [1] and the pilot program "Reading Wikipedia in the Classroom" [2].

Based on our findings, we present a general conceptual model of the platform. In the analysis, we first examine the contributions of 48 and 55 participants in two education programs in Palestine that took place in 2020 and 2022, respectively. We measure the percentage of participants who contributed in the following year and examine the percentages by contribution level. We consider that the results might be influenced by some bias if the number of contributions is low but significant; however, this is not the standard case to our knowledge.

In the second part, we analyze the long-term activity of participants in Wikipedia contests run by DADD-INITIATIVE from 2016 to 2019, resulting in over 7000 Wikipedia articles. Visually, we seek to answer the question: How is the distribution of user activity in the subsequent years? From this, we aim to glean insights into the sustainability of the contributions.

## Results and Discussions

Looking at the participants of the 2020 education program and their contributions in 2021, we notice that around 70% had 0-10 edits, which indicates inactivity, while around 9% has continued to contribute with more than 100 edits in 2021 (left part in Fig. 1). Less positive are the results for the 2022 program, after which 94% of the participants show inactivity in 2023 (until 31.07). Note that the category 51-100 edits was neglected as we observed no users in that range.

The Analysis of further 127 Wikipedia\_users has shown that indeed their contributions was significant during and shortly after the end of the competitions but had drastically fallen after the end of the contests and the gap cannot be unseen [3].

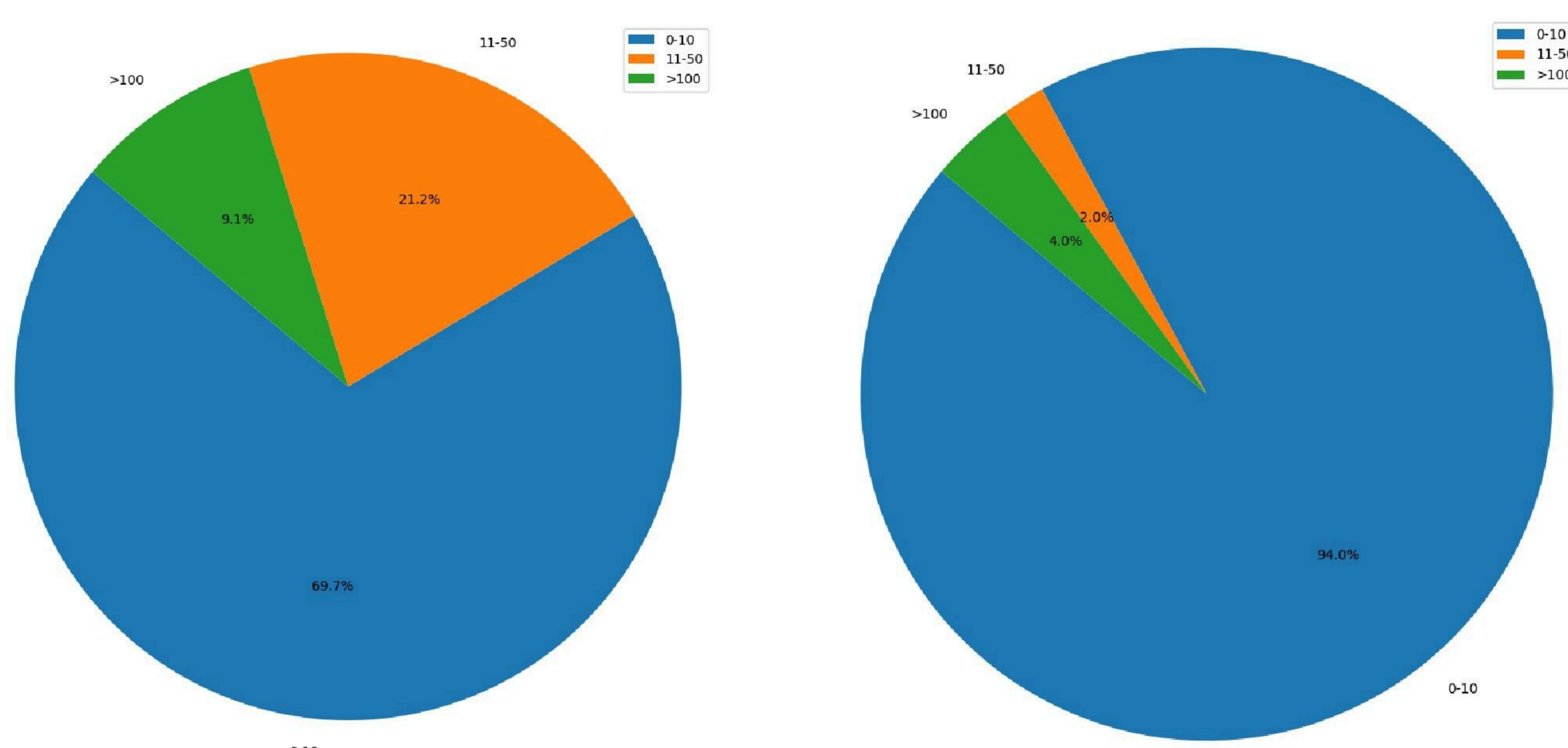


Figure 1: Comparison of user contributions in two education programs in Palestine.

In the following, we discuss a draft abstract of the platform's concept and the possible interactions between its elements. For simplicity, only two entities are presented.

### Platform & Database

The platform acts as a linkage between all elements. Connections with potential outcomes are highlighted in a different color. The platform would rely on as much available content as possible (from the sources/databases), which is strongly preferred to be in visual format. A lot of translation work would be necessary as well in order to have the content in Arabic. The platform would require also a feedback loop and participation/input of education program leaders and Wikimedia stakeholders to remain up-to-date.

### Educational Entities

The concept is to provide a visual comparison via the platform to encourage participation and diminish ungrounded fear.

### Program Leaders

Not only through their feedback loop do the program leaders actively contribute to keep the platform updated, but also via joint programs. Findings in [1] showed that many leaders face the challenge of being responsible for all the program phases, even for tasks which are not fitting them. Based on our observations, we estimate that a joint program between program leaders is in itself a success, which depicts a required experience in the educational domain in the Middle East as well.

### Participants

As a first benefit for participants is a structured and flexible content, created to cover a numerous program forms and needs. However we highlight another relevant point which can be part or future releases, that is to connect participants from different entities. We believe herewith to increase the interest, diversity and transparency among the users.

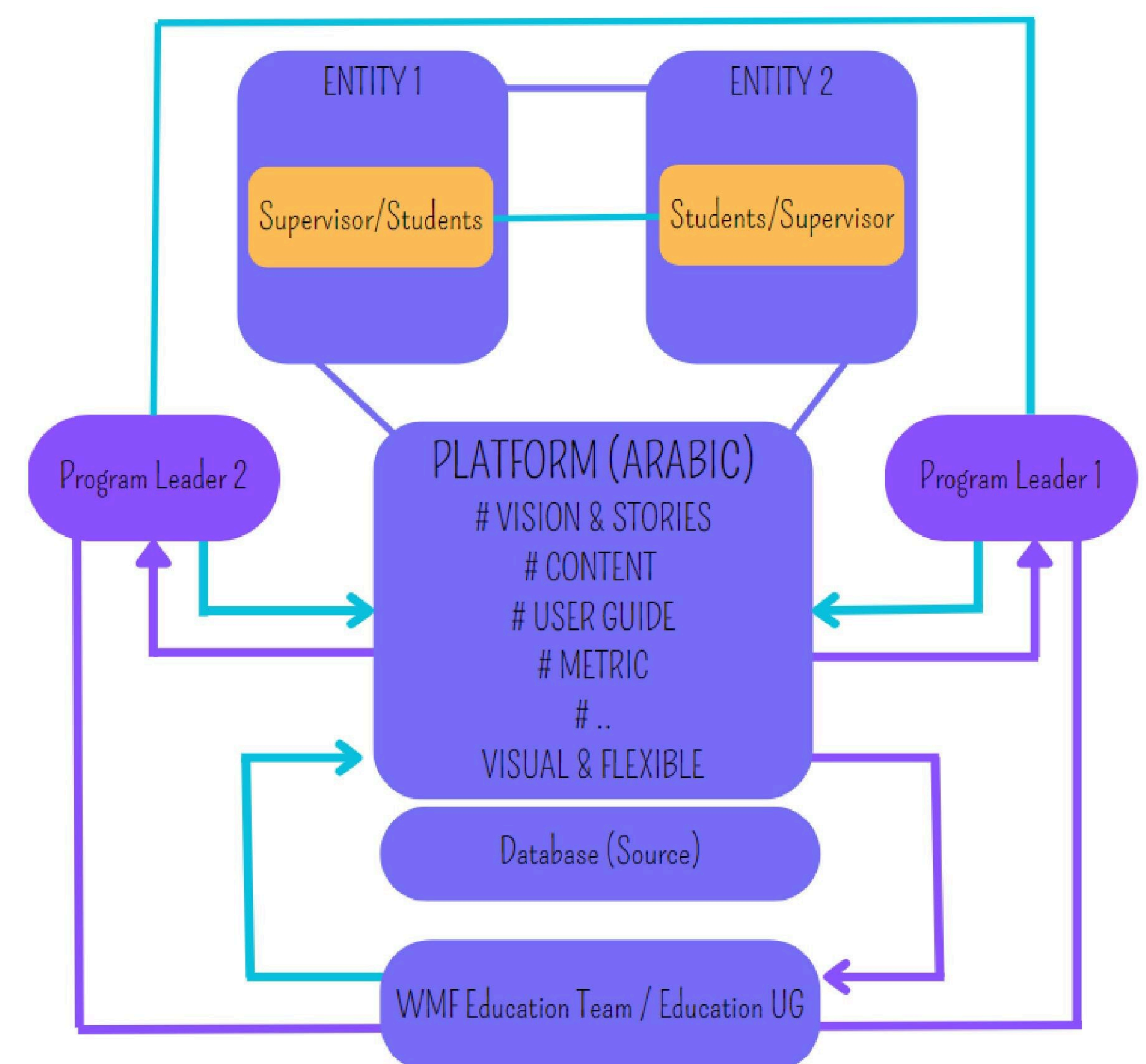


Figure 2: Abstract concept of the proposed education platform.

We conclude some possible advantages the platform:

- It supports joint efforts of education program leaders, which can unfold great potentials with benefits for the leaders themselves, for the movement and for the community.
- For the sake of attraction, highlighting the additional values obtained by applying educational programs is a key factor for accepting the program. This can include technical, conceptual, leadership skills and collaboration, beside regular attractions such as certificates or awards.
- Motivational comparisons between entities and the contributions of their participants and can be helpful to facilitate the process. Successful stories and their presentation in a convincing way are also strongly recommended.
- We do not need to re-invent the wheel; a lot of materials, techniques and methodologies (see [1] and [2]) can be inherited when building the platform.
- The platform would provide flexible and adaptable structure, making customized programs possible, taking into account the background of the participants and their differences and needs.
- Due to difficulties in arranging on-site events, and also by taking advantage of the online flexibility, we see investment to be focused in making most of the work online.
- Metrics to measure progress & success needs to be defined, and recent technologies bring numerous possibilities. AI advances can also be used for progressing. To mention only two examples: it makes Wiki tools translations way easier and it allow smoother programming of defined metrics.

## Conclusion

With the goal of making education programs in the Middle East more flexible, more accepted and more sustainable, we analyzed the contributions of editors among the years and discussed the challenges of education programs in the region. We came to the conclusion that there is a need for an online platform, that can help to facilitate education programs, provide flexibility for program leaders, teachers and students. One platform for all kind of projects might be not feasible or even possible. However, we believe that even by gathering available resources and experiences and make it available in Arabic in a central and flexible manner, it can make running education programs easier and more sustainable.

Adding a sustainable value requires a lot of efforts, involvement of previous and current education program leaders and well defined metrics are essential to assess both process & progress. Therefore starting small, but focused can unfold massive potentials in a regions that is waiting for change. **Finally, this document represents only a draft of the concept. Feedback and discussion are both very welcome and appreciated.**



[1]

[2]

[3]