JRC SCIENCE FOR POLICY REPORT

Free Digital Learning Opportunities for Migrants and Refugees

An Analysis of Current Initiatives and Recommendations for their Further Use

Elizabeth Colucci, Hanne Smidt,
Axelle Devaux, Charalambos Vrasidas,
Malaz Safarjalani and
Jonatan Castaño Muñoz

Editors: Jonatan Castaño Muñoz,
Stephanie Carretero and
Yves Punie

2017

This publication is a Science for Policy report by the Joint Research Centre (JRC), the European Commission's science and knowledge service. It aims to provide evidence-based scientific support to the European policymaking process. The scientific output expressed does not imply a policy position of the European Commission. Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use that might be made of this publication.

How to cite this report: Elizabeth Colucci, Hanne Smidt, Axelle Devaux, Charalambos Vrasidas, Malaz Safarjalani and Jonatan Castaño Muñoz; Free Digital Learning Opportunities for Migrants and Refugees. An Analysis of Current Initiatives and Recommendations for their Further Use; EUR 28559 EN; doi:10.2760/684414

All images © European Union 2017, except: Cover image, f/sco – Fotolia.com

Title: Free Digital Learning Opportunities for Migrants and Refugees. An Analysis of Current Initiatives and Recommendations for their Further Use

Abstract
This is the final report of MOOCs4inclusion project, which was designed and financed by the Joint Research Centre of the European Commission. The report summarises the research conducted between July-December 2016 on the efficiency and efficacy of free digital learning (FDL) for the integration, inclusion and further learning of migrants and refugees in Europe and in neighbouring regions in conflict. Drawing from a literature review, focus groups with migrants/refugees (third country nationals in Europe) and interviews with representatives of selected FDL initiatives, the report assesses the success factors and limitations of FDL and draws conclusions about how FDL's efficiency and efficacy could be improved. The report also proposes a categorisation of FDL offers according to their design and purposes. Emphasis is placed on initiatives that take a 'blended' (online and face-to-face) and 'facilitated' (support services and mentoring) approach, as this was found to be optimal by both users of FDL and providers. General recommendations are provided about how the European Union and other interested actors can invest in this field, enhance synergies and design effective and efficient FDL offers for migrants/refugees in the future.

Table of Contents

Foreword

JRC research on [Learning and Skills for the Digital Era](#) started in 2005. It aimed to provide evidence-based policy support to the European Commission and the Member States on harnessing the potential of digital technologies to innovate education and training practices; improve access to lifelong learning; and deal with the rise of new (digital) skills and competences needed for employment, personal development and social inclusion. More than 20 major studies have been undertaken on these issues with more than 100 different publications.

Recent work on capacity building for the digital transformation of education and learning, and for changing requirements on skills and competences has focussed on the development of digital competence frameworks for citizens ([DigComp](#)), educators ([DigCompEdu](#)), educational organisations ([DigCompOrg](#)) and consumers ([DigCompConsumers](#)). A framework for opening-up Higher Education Institutions ([OpenEdu](#)) was also published in 2016, and also a competence framework for entrepreneurship ([EntreComp](#)). Some of these frameworks are accompanied by (self)assessment instruments. Additional research has been undertaken on computational thinking ([CompuThink](#)), [Learning Analytics](#) and MOOCs ([MOOCKnowledge)](#).

This final report on MOOCs and free digital learning opportunities for migrants and refugees is a modest and explorative contribution to better understanding the challenges and opportunities for developing digitally-enabled solutions to tackle educational access and learning possibilities for the recent influx of refugees and migrants in Europe. [MOOCs4inclusion](#) was a challenging and timely study, conducted between July and December 2016, which provided insights and a number of recommendations for enhancing the efficiency and efficacy of free digital learning offerings. We are grateful for the work and dedication of the external research team that conducted the study on behalf of JRC and DG EAC, and for all the actors who collaborated with them.

More information from all our studies can be found on the JRC Science Hub: [https://ec.europa.eu/jrc/en/research-topic/learning-and-skills.](https://ec.europa.eu/jrc/en/research-topic/learning-and-skills)

Yves Punie
Project Leader
DG JRC Unit Human Capital and Employment
European Commission

Acknowledgements

Executive summary and key messages

1) Context

The MOOCs4inclusion study was conducted between July and October 2016. Its objective was to assess the extent to which **MOOCs** and other **free digital learning (FDL)** offers (including free mobile learning) are effective and efficient ways of developing the skills needed by migrants and refugees (mainly third-country nationals in Europe) for inclusion, civic integration, re-engagement in formal or non-formal education and employment. The study was timely, given the fast-evolving landscape of MOOC provision, the doubts about their effectiveness for enabling educational access for disadvantaged learners, and the current emphasis on educational and digital solutions for the recent influx of refugees in Europe.

The methodology for the study included a literature review, a mapping of relevant initiatives featured in a [searchable website](#) ('Catalogue'), and a SWOT analysis based on **twenty-five semi-structured interviews with key informants from ten different FDL initiatives and four focus groups with thirty-nine migrants/refugees in different situations and with different profiles**. Emphasis was placed on Europe and current migrants/refugees in Europe, though initiatives and examples were also taken from the Middle East and the Southern Mediterranean.

This note summarises the main findings, citing general trends in FDL initiatives for migrants/refugees. It includes:

- An analysis of **key issues** that most FDL offers and initiatives are taking into account in order to enhance *efficiency* (ability to accomplish something with the least waste of time and effort/competency in performance) and *efficacy* (ability to produce a desired or intended result).

- A characterisation of current FDL initiatives by type of **design** and **purpose.**

The perspectives of both learners and initiative developers have been integrated into this characterisation and assessment.

2) The demand: Lack of awareness and need for adaptation to diverse migrant/refugee profiles

In general, awareness of FDL was very low in the target population. Though most migrants/refugees use social media and have mobile phones, they do not necessarily use them for structured learning purposes. Usage of language Apps was found to be most common. Generally, potential migrant/refugee learners **perceive that they cannot wait until they have asylum, a resident's permit, housing or employment to seek FDL. They see FDL as a means of acquiring such provisions.** Most migrants/refugees also believed that FDL, irrespective of purpose, should be a **complement to face-to-face formal and informal/non-formal learning** and stressed the importance of physical networking for their integration. Those migrants/refugees who were specifically interested in higher education saw **recognition of credits and degrees** as important and were generally interested in blended learning that incorporates social interaction.

In terms of the effectiveness of FDL for migrant and refugee inclusion, it was found that those developing FDL initiatives should consider the fragility and **diversity of migrant/refugee target groups**. Where they are in their journey, their digital literacy, education background, location (inside or outside a refugee camp) and access to technology and connectivity are all factors that may influence their learning experiences and ultimately the effectiveness of the intervention for inclusion. Though MOOCs4inclusion examined this diversity, more in-depth studies which differentiate target groups should be done.

3) The offer: The efficacy of blended, targeted and facilitated approaches

MOOCs4inclusion demonstrated that there is a plethora of new FDL initiatives for migrants and refugees that vary in nature, design and purpose. This landscape is changing almost daily, which makes it difficult to pinpoint how effective they are. It must also be remembered that most initiatives have yet to produce data which assesses their impact. The figure below presents the axes along which FDL initiatives can be compared according to their design: the extent that they are fully online versus 'blended' (a mix of online and face-to-face learning), targeted at migrants/refugees versus general (for any public or user) and 'facilitated' versus non-facilitated (providing support services and guidance to the learner). The FDL initiatives covered in this study mostly fall into the following quadrants:

- Targeted, online only and non-facilitated (one example would be platforms that aggregate digital learning resources for migrants, like 'Information Sweden').

- Targeted, blended and facilitated (such as Kiron Open Higher Education).

- The Catalogue of initiatives lists some FDL, in particular language courses and MOOCs, that fall into the category of general, online, non-facilitated, but these are not highlighted in this report as they were not perceived (neither by beneficiaries nor by providers) to be the most effective means of reaching migrant/refugees for inclusion purposes.
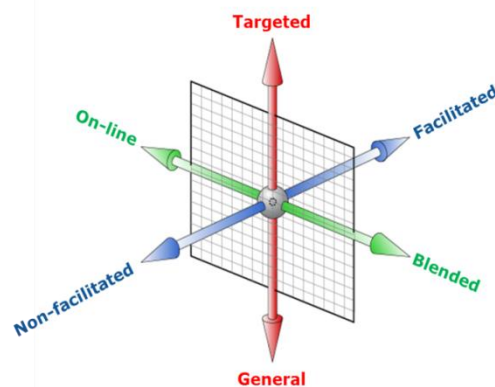
The research found that donors, funders and researchers, and also the refugees/migrants themselves, concede that **targeted**, **blended approaches** are the most effective way to engage migrant/refugee learners, at least in formal education, but also to some extent in language learning and civic integration-related FDL. This is true both inside and outside refugee camps, though initiatives that deliver FDL inside camps have additional considerations such as quality of the learning environment, connectivity and security.

In terms of **purpose,** the majority of the initiatives identified for the study are **online or digital language courses** (of which there are many) and **civic integration**-related online courses and digital projects (on topics ranging from democratic participation to understanding the local social security system). A number of **higher education** initiatives were also identified, which were experimenting with approaches that involved partnering with European universities to develop FDL content, re-appropriating existing MOOCs. Some of these initiatives employed displaced scholars to help develop online course content and teach/mentor and assist refugee students with their entry into higher education, even though their documentation was not yet in order.

It was found that **language learning is a first-priority intervention for the general migrant and refugee community**. Language learning and civic integration-related initiatives are commonly linked and the concept of 'Content and Language Integrated

Learning' (CLIL) is gaining momentum. Furthermore, the largest growth area identified was **mobile Apps for language learning and integration purposes.**

The FDL landscape is developing fast. A number of **competitions** ('hackathons' and 'innovation labs') and open funding calls are generating, and will continue to generate, innovation in this field. The Tech sector has taken a keen interest and, in some cases, refugees themselves are being empowered to develop their own solutions.

The study provides a series of recommendations for the EU and other interested investors and actors regarding both the design of FDL initiatives for migrants and refugees and future research that is needed (see points 4 and 5 in the executive summary).

4) Recommendations for FDL design: enhancing efficiency and efficacy

I. **Fit-for-purpose design**

- **Differentiating formal versus non-formal FDL**, and stand-alone FDL offers versus structured FDL initiatives with student intake, is essential. This can strongly influence the type of intervention, its design and subsequent assessment. Structured formal learning initiatives may consider instating entry requirements and pre-screening, which take into account the unique features of the migrant/refugee learning population (basic language level and ability to learn online). This helps to ensure that those who follow these programmes can be successful.

- **'Targeted', 'blended' and 'facilitated' approaches are optimal;** they are unanimously seen as a means of enhancing the success rate of any FDL initiative, particularly for formal learning. The importance of mentorship and support should not be underestimated, nor should the need for socialisation and face-to-face networking for the migrant/refugee community.

II. **Adapting the initiative to the learners' characteristics and environment**

- **Stable learning environments with adequate connectivity**, 'offline' and mobile learning possibilities, low-tech designs for the FDL, security and responsible data practices for an at-risk population must all be considered. This is specifically relevant in refugee camps.

- **Including the target group in the development** ('co-development') of the FDL may ensure its relevance and usability.

- **Multilingual approaches** for the FDL provision may increase access for those who do not speak a second language and be a first step to learning a new host country language. Current FDL provision in Arabic should be leveraged and increased.

- **Embedding language learning into targeted interventions** may not only support civic integration and employability, but also be of added value to formal education initiatives.

III. **The importance of recognition**

- **Recognition of learning and certification** is particularly important for formal learning. It is promising that FDL higher education initiatives are partnering with European higher education institutions to deliver the FDL and striving to use Bologna tools (ECTS). This practice should be further emulated. It is important that the European quality assurance (QA) agencies should be able, where needed, to accredit FDL. This would heighten the awareness of FDL among recognition authorities and employers.

- **Social badges for mobile learning employability courses** could make FDL more effective. The cost for learners must be considered.

- **Communication with employers and (higher) education institution**s to ensure

acceptance/recognition of FDL certification should be built into FDL initiative strategies.

IV. **Ensuring sustainability**

- **Diversifying funding.** Start-up, crowd-funding, grant and foundational funding are all entry points to developing FDL. However, diverse and dynamic partnerships for funding (public, private, NGO, education provider, tech sector) may lead to greater sustainability.

- **Co-development**. FDL initiatives can benefit from engaging the migrant and refugee learners in development. Bottom-up solutions, funded through open calls to the learners and the tech sector itself, can also be a means of driving creativity and relevance in FDL.

- **Reaching target groups** may be very difficult. As more students complete FDL programmes, creative means of using them as ambassadors for FDL should be conceived, promoting a concept that has still to gain traction in many countries and amongst various learning groups. Social networks are also crucial in this endeavour. Models that capitalise on the dispersed network of willing refugee scholars and volunteers should be favoured.

- **Cooperation with other initiatives** and sharing of good practice should be an integral part of FDL design.

- **Transparency and communication around the different FDL initiatives should be enhanced.** More must be understood about target groups that do not necessarily embrace FDL or are not aware of the possibilities it provides. The EU has a potential role to play here, both in funding collaborative European initiatives and collaborative research.

5) Future research

The **majority of the literature on FDL for migrants and refugees pertains to the Higher Education sector**. This is also where a higher number of initiatives are concentrated. Little has been written about other migrant/refugee learning groups and their digital learning needs and barriers as regards the use of FDL: i.e. those with vocational education, those with interrupted secondary education, children and adult learners.

In addition, more **specific data on participation** and completion is needed if we are to better understand refugee and migrant usage of FDL and its effects. This is particularly true for initiatives in the non-formal education sector that are stand-alone apps and platforms. As this is a **fast-changing landscape**, a follow up study to MOOCs4inclusion would be needed in a year's time, when many initiatives have finished their pilot processes and should have more data available on uptake and effects.

1 Introduction

The European Commission Joint Research Centre (JRC) has conducted numerous studies regarding the potential impact of ICT, e-learning and Open Educational Resources (OER) to widen opportunities for educational access and foster inclusion. To this effect, the JRC has demonstrated a specific interest assessing the extent to which MOOCs (Massive Open Online Courses) are utilised by certain disadvantaged/unemployed and/or digitally illiterate parts of the European population (see Castaño Muñoz et al. 2016b). The specific dimension of ICT, MOOCs and refugee/migrant inclusion has generated renewed interest since the start of what is referred to as the refugee crisis in Europe, notably when the number of asylum applications hit 1.3 million in 2015[1], three times what it was in 2013 and twice what it was in 2014. Many countries are scrambling to put in place rapid response solutions and educational access is indeed a large piece of the puzzle[2]. The UNHCR report 'Missing Out' (UNHCR 2016) highlights the fact that education is of the utmost importance for refugees who on average spend 20 years in exile. Only fifty percent have access to primary education, compared with a global level of more than ninety percent. Eighty-four percent of non-refugee adolescents attend lower secondary school, but only twenty-two percent of refugee adolescents have that same opportunity. At the higher education level, just one percent of refugees attend university compared to thirty-four percent globally[3].

Given that many international donors concur that digital learning offers great promise for migrants and refugees (UNHCR 2016), the JRC commissioned the present study to map and analyse the potential of MOOCs and free digital learning (FDL) specifically for the inclusion of migrants and refugees in Europe. This has been contracted to a team of researchers led by Elizabeth Colucci, higher education consultant and International Cooperation Advisor for the European University Association, and involving RAND Europe (Axelle Devaux), CARDET (Charalambos Vrasidas), Hanne Smidt, Senior Advisor European University Association and Hanne Smidt Consulting, and Malaz Safarjalani. **The objective of the study was to assess the extent to which MOOCs and other FDL offers (including free mobile learning) are effective and efficient**[4] **ways of developing the skills needed by migrants and refugees for inclusion, civic integration, re-engagement in formal or non-formal education and employment.**

The methodology for the study was of a qualitative nature and included a literature review, a mapping of relevant initiatives featured in a searchable website ('Catalogue') and a SWOT analysis based on focus groups with migrants/refugees of different profiles as well as semi-structured interviews with key informants from ten different FDL initiatives. Emphasis was placed on Europe, and current migrants and refugees in Europe, though initiatives and examples were also taken from the Middle East/ the Southern Mediterranean[5].

While the term 'migrant' can include many categories of individuals, the research has generally placed more emphasis on newer arrivals to Europe or to the immediate

---

[1] According to EUROSTAT, the number of first-time asylum applicants in the 28 EU countries decreased by 15% in the third quarter of 2016 compared with the same quarter in 2015. The highest number of first time asylum applicants in the third quarter of 2016 was registered in Germany (with over 237 400 first time applicants, or 66% of total applicants in the EU Member States), followed by Italy (34 600, or 10%), France (20 000, or 6%), Greece (12 400, or 3%) and the United Kingdom (9 200, or 3%). These 5 Member States together account for nearly 90% of all first-time applicants in the EU-28: http://ec.europa.eu/eurostat/statistics-explained/index.php/Asylum_quarterly_report

[2] See, for example, predictions on German spending on migrants in 2016: Source: Zeit Online, 2016 (http://www.zeit.de/wirtschaft/2016-04/fluechtlinge-arbeitsmarkt-integration-kosten-studie-zew)

[3] Source: Eurostat Asylum statistics, 2016 (http://ec.europa.eu/eurostat/statistics-explained/index.php/Asylum_statistics)

[4] *Efficiency* - ability to accomplish something with the least waste of time and effort/competency in performance); *Efficacy* - ability to produce a desired or intended result.

[5] According to the European Union Neighborhood Policy, the Southern Mediterranean encompasses Israel, Jordan, Lebanon, Morocco, Palestine, Tunisia, Algeria, Libya and Syria: https://eeas.europa.eu/headquarters/headquarters-homepage/330/european-neighbourhood-policy-enp_en

Southern Mediterranean neighbourhood countries, who are third country nationals (non-EU) and come from current conflict areas. 'Migrant' can refer to those both fleeing such conflict as well as economic migrants, though the general interest has been in those who arrived to Europe or a neighbouring country in a disadvantaged situation (as opposed to high skilled economic migrants with entry permits, for example, or EU nationals migrating within the EU in accordance with the principle of free circulation of labour). The term 'refugee' can cover those with both official refugee status and those waiting for/applying for refugee status, either in detention centres or in transit. Refugees currently in refugee camps were of specific interest to the research team given that there are a number of recent initiatives that have been launched to address these target groups.

This final project report begins with a brief summary of the methodology taken for the different deliverables. It proceeds to summarise the main findings, citing general trends in the landscape of FDL initiatives for migrants/refugees. This includes citing and describing **key features of FDL initiatives that were noted particularly for their role in determining the efficiency and/or effectiveness for migrant/refugee inclusion and integration**. These features ranged from specific business models of FDL initiatives to the extent to which they focus on recognition of learning and on communication and outreach to target groups. In line with the SWOT analysis that had been conducted in an earlier research stage, the main success factors and limitations of FDL of different types and purposes are mentioned throughout. The report also **characterizes current FDL initiatives by their approaches**, including **type of design** (an FDL resource applied in a 'blended' context or a purely online resource, for example) and **purpose**, ranging from higher education to civic integration, employment and language learning. The report concludes with recommendations for the European Commission, policy makers more generally and for other donors/investors interested in effective and efficient FDL solutions for migrants/refugees. Areas and themes for future research are also identified.

2 Approach

MOOCs4inclusion was carried out between July and December 2016. One primary observation of the research team was that, **even in this short period of time, the field of FDL for migrant/refugee learning and inclusion was developing rapidly**. This made the study challenging, but also very rich. The three deliverables – the literature review, the Catalogue of initiatives and the SWOT report of focus groups and interviews, were intended to give a snapshot of this volatile yet vibrant field at a fixed point of time. The value of the study and its conclusions is in the diverse landscape of initiatives and trends to which it points, and not in its ability to be comprehensive (which would be a difficult feat given the fast moving field). Ultimately, the study is a modest contribution to the pressing European but also global need to respond to contemporary migration patterns and crises, generating timely insight on how to capitalise on digitalisation and connectivity in the education sector.

> MOOCs4Inclusion is a contribution to the pressing European and global need to respond to contemporary migration patterns and crises, generating insight on how to capitalise on digitalisation and connectivity in the education sector

2.1 What is FDL?

For the literature review and for the general purposes of this study, **FDL for migrants and refugees was agreed to include**:

> *"all learning activities (formal – leading to a degree or certification, informal and non-formal) at all education levels, undertaken with the support of ICT tools (e.g. computers, tablets, mobile phones, Apps, used online or offline) at no (or very low) cost to the learner, barring potential additional costs for validating or certifying the learning or other extra services.*

This would include online courses such as MOOCs, offered in a stand-alone manner or in the context of a targeted migrant/refugee learning initiative, online or downloaded language courses, Apps that provide learning opportunities, digital games with an explicit learning purposes and other online learning content directed at migrant/refugee inclusion and integration in their host societies and future job markets."

In relationship to OER, which, for the purpose of this study, is agreed to be any (digitalised) material offered freely and openly which could be used for learning purposes, FDL is somewhat different: it refers to a learning activity via a digital channel, which may or may not be openly licensed, yet always remains free to the learner.

2.2 Methods

2.2.1 Literature Review

The objective of the **literature review -** the first phase of the study carried out between July and September 2016 - was to synthesise recent research on (1) the offer of FDL specifically (or potentially) aimed at migrants or refugees in the EU and Southern neighbourhood countries, and (2) the use of these or other FDL offers for continued education and/or integration purposes. The review looked for effects and impact of FDL for inclusion of refugees and migrants as well as potential opportunities and challenges in the FDL field. To the extent possible, the review disaggregated FDL for different levels of education (primary, secondary, vocational and higher education), targeting different migrant and refugee groups and different potential learning populations. In general, academic literature was found on digital learning for inclusion of disadvantaged groups (and not distinctly targeting migrants and refugees), though there were a number of reports addressing ICT and refugees that have been published in 2016. Relevant

academic literature about this topic (FDL in a migrant/refugee education context) is both recent and somewhat scarce, particularly outside the higher education sector. Grey literature, in particular news articles and conference reports referring to newly launched FDL initiatives, was found to be more abundant. However, many initiatives were just starting and/or piloting when the report was prepared, thus evidence of effects and impact was largely absent.

> Many initiatives were just starting and/or piloting when the report was prepared, thus evidence of effects and impact was largely absent

The literature review allowed the research team to identify a number of concepts and emerging initiatives that were then further explored in the research conducted to compile the Catalogue and as a basis for interviews and focus groups. A list of sources and cited projects can be found in Annex 1.

2.2.2 Catalogue of FDL initiatives

In the Catalogue, thirty-five initiatives (national, European and international) were identified and selected according to the FDL definition and classified according to their purpose, the type of technology or FDL resources utilised, whether they are stand-alone FDL offers or employed in a blended (virtual and face-to-face) approach, their objectives, target group and the methods for monitoring they have in place. Ten initiatives had the purpose of social inclusion (civic integration), twenty-one were aimed at language learning, eleven were for formal learning (nine of which were in higher education) and eight were targeted at employment. Some initiatives were tagged as having a double purpose (such as language learning and social inclusion). This information is now available in a searchable website, www.moocs4inclusion.org[6]. References to additional relevant initiatives have been made available in a section of the website called 'Resources'; For example, a number of information portals for migrants/refugees (regarding how to integrate into society) have been listed. It is slightly ambiguous as to whether they should be classified as FDL, given that FDL should have an 'explicit learning purpose'. That said, the definition agreed for this study also refers to 'non-formal' and 'informal' education, under which these informative portals would categorically fall. This is why they have been generally included on the Catalogue website.

The Catalogue displays very different types of FDL offers and initiatives and attempts to classify them. However, it is only a sample from a fast-changing field. It is hoped that it may be updated continually and serve as a learning source in itself for organisations and individuals developing FDL for migrants and refugees.

2.2.3 Focus groups and interviews with FDL initiatives

Both the literature review and the research conducted for the Catalogue showed the lack of evidence available regarding the objective of the MOOCs4inclusion study. Thus, two additional research methods were employed with the explicit purpose of gaining more qualitative insight on how FDL offers can (or cannot) be efficient and effective for migrant/refugee inclusion and integration: **focus groups (four, involving thirty-nine participants) and interviews (twenty-five), targeting both beneficiaries and providers of ten initiatives**. These two methods allowed the research team to then conduct a SWOT exercise to assess the success factors and limitations of different types of FDL for migrant/refugee inclusion.

In September and October 2016, four **focus groups** were organised to obtain a more intimate perspective on current and potential 'users' or 'beneficiaries' of FDL, notably migrant/refugee learners of different ages, genders, nationalities, educational background and needs, who are presently in Europe, and specifically in countries/cities which have received a considerable number of refugees recently. In total, the four focus

---

[6] First published in November 2016.

groups (in **Trollhättan (SE), Nicosia (CY), Brussels (BE) and Berlin (DE)**) were attended by thirty-nine refugees and migrants from the age group 19 – 55, the majority in their twenties. Eighteen out of the thirty-nine were female. The refugees and migrants came from nine different countries: Afghanistan, Bangladesh, Ghana, India, Iran, Morocco, Palestine, Somalia and Syria. Twenty-four of them had been enrolled in higher education in their home countries and eighteen had a three-year or longer academic degree. Six of the participants had interrupted their higher education course and fifteen had not reached higher education. None of the participants in the focus groups had been in refugee camps outside Europe. The focus group in Cyprus included some social workers and local authorities, so as to also assess the dynamics of working with migrant populations. The Berlin focused group targeted those specifically in higher education, given the high usage of FDL by this migrant/refugee group and the large number of FDL initiatives concentrated in this sector.

The focus groups also captured migrants/refugees at different points of their journey; some of them were still in European camps (Trollhättan and Berlin), whereas others had already been settled for between three and fifteen years (Nicosia and Brussels) and/or were participating in an integration course (Brussels). **Topics covered ranged from the general awareness for FDL offers and understanding of what FDL would encompass, usage, perceived relevance of FDL for different purposes (further learning, formal degree, integration…) and perceived and real obstacles to access FDL**. The focus groups merely provided an indication of migrant refugee/learner interests and needs. However, taken/assessed together with other initiatives to study this population (which many FDL initiatives are doing through social networks and via outreach into camps), they provide valuable insight.

The **interviews**, on the other hand, intended to explore in more depth a selection of FDL initiatives that specifically target migrants and refugees: **their approach, how they were conceived, the challenges they face, their business models and the advice that they would lend to others in the field.** Twenty-five telephone interviews were held with representatives from ten different initiatives, including CEOs, founders, partners, those in charge of business development, those in charge of academic development and those in charge of research.

These initiatives were selected because they have been identified as having a particularly interesting and innovative approach to providing FDL to refugees and migrants. They were also chosen to represent the diversity in the field; the initiatives varied in nature, type of FDL employed, approach and business model. Some were large-scale formal learning initiatives that select students into a concerted programme, providing targeted approaches. Some targeted refugee learners in camps. Two were completed EU-funded projects that aimed to provide language and civic integration training to migrants and one was an EU funded initiative for language learning and online education in neighbourhood countries (Jordan, Syria, Lebanon). One initiative was in a pilot phase and another was a recently piloted mMOOC[7], developed collaboratively in Germany for refugees. Three initiatives entailed partnerships with European universities in the development and delivery of the FDL. One initiative provided mobile learning to upgrade skills for employability. More extensive descriptions of the initiatives cited in this report can be found in the online Catalogue (links are included in the table below).

---

[7]   mMOOC refers to 'Mentored Open Online Learning'.

Table 1: List of initiatives targeted in the interview phase

Initiative	Description	Sector/purpose	Type
Edraak www.edraak.org http://www.moocs4inclusion.org/index.php/catalogue/30-edraak	A platform for MOOCs in Arabic, aiming to further enrich Arab education and give Arab learners free access to courses developed in cooperation with international higher education institutions.	Higher education, professional education, lifelong learning	MOOC platform
Funzi www.funzi.fi http://www.moocs4inclusion.org/index.php/catalogue/53-funzi	A Finnish based start-up that provides mobile learning to refugees in Europe and migrants in countries in the Global South in their own languages. Language learning, information on integration and employment services are all incorporated.	Language learning/mobile learning	Mobile Learning application
Information Sweden www.informationsverige.se http://www.moocs4inclusion.org/index.php/catalogue/36-information-sweden	A platform that provides migrants and refugees an easy overview of Swedish society and how to navigate it. It contains both information on Swedish society and digital learning content.	Civic integration	Portal aggregating FDL resources
InZone – (UNHCR Learn Lab) www.inzone.unige.ch http://www.moocs4inclusion.org/index.php/catalogue/56-inzone	Provides a targeted, culturally-sensitive pedagogical and mentored blended learning model to refugees in camps or neighboring countries. InZone has a number of different FDL offers. Particular focus has been placed on an initiative for the vocational training of interpreters.	Higher education, vocational training	Delivered in refugee camps + blended approach
Jamiya Project www.jamiya.org http://www.moocs4inclusion.org/index.php/catalogue/27-jamiya-project	Aims to provide relevant and accessible higher education for Syrian refugees by reconnecting them with Syrian academics, European universities and the latest education technology. The online courses are provided in Arabic, in a 'SPOC' format.	Higher education programme	SPOCs + blended approach.

KIRON Open Higher Education https://kiron.ngo http://www.moocs4inclusion.org/index.php/catalogue/26-kiron-open-higher-education	Aims at providing access for refugees to Higher Education through a modularized curriculum that employs existing MOOCs, supportive language courses and mentorship, and the opportunity to transfer to partner universities to complete one's degree on site.	Higher education programme	Utilising existing MOOCs + blended approach
LASER – Language, Academic Skills and E-learning Resources www.syria.britihcouncil.org http://www.moocs4inclusion.org/index.php/catalogue/41-laser-language-academic-skills-and-e-learning-resources	An EU funded project, the initiative aims to help refugee students in Jordan, Syria and Lebanon to reintegrate into higher education by providing them with (on-site) language training, academic readiness skills, coaching and a distance education programme for a higher education degree.	Higher education/ language learning	Distance education delivered by distance universities
MEET – Meeting the Health Literacy Needs of Immigrant Populations http://migranthealth.eu/index.php/en/ http://www.moocs4inclusion.org/index.php/catalogue/7-meet-meeting-the-health-literacy-needs-of-immigrant-populations	EU co-funded project that provides a platform and an online training course to strengthen the health literacy among migrants and refugees through an innovative community health education model	Language learning, civic integration	Online training package
Ready for Study www.digital.leuphana.com http://www.moocs4inclusion.org/index.php/catalogue/39-ready-for-study	mMOOC targeting refugees who want to study in German higher education institutions. It includes language learning, self-assessment of existing qualifications and group work on case-studies related to studying in Germany.	Language learning and integration (to enter higher education)	mMOOC
Welcomm! http://welcomm-project.com/the-project/ http://www.moocs4inclusion.org/index.php/catalogue/54-welcomm-communication-skills-for-the-integration-of-migrants	EU co-funded project that aims at raising awareness among migrant parents for the importance of education for social inclusion. It aims to develop basic communication skills of migrant parents and their children in the host country language.	Language learning, migrant children and parents	Online training package

3 Summary of the main findings

The literature review report, the Catalogue, the focus groups and the FDL initiative interviews, which formed the basis of a SWOT assessment, identified and examined different types of FDL and attempted to assess their efficiency and effectiveness for migrant and refugee inclusion in the European context. As a first and fundamental general finding, it should be stated that **data on impact of such initiatives is scarce**, thus little can be said about the proven efficiency and effectiveness of FDL for the purpose of this study at this stage. The research team found that there was (and continues to be) a wealth of grey sources announcing new FDL initiatives targeting refugees and migrants and reporting on trends in response to the migrant/refugee crisis. In further assessing these initiatives (through interviews), a fast changing landscape emerged and a tremendous amount of good will and experimentation was identified. However, most initiatives were reticent to champion their approaches as 'good practice', given how young they were. Many confessed to an 'adapting as we go' approach, while constantly assessing the fragile migrant/refugee student/learner population and their needs. For example, the need to prototype before reaching the final format/approach to the FDL offer was emphasised in several interviews.

Despite the novelty of this field, **a number of interesting trends could be identified regarding the *potential* of FDL for migrant and refugee inclusion, and the approaches that are more apt (efficient and effective) for achieving this purpose**, according to potential beneficiaries and providers. The following sections will summarise these observations.

3.1 Diverse migrant/refugee profiles and learning environments

In the focus groups, **the starting point of a potential FDL learner was perceived to be very important**. This played out differently depending on whether the refugee or migrant was in a refugee camp, a neighbouring country or in a host European country. Students/learners in a camp or a neighbouring country apparently perceive that they cannot wait until they have asylum, a residence permit, housing or employment to seek learning opportunities; they see FDL as a chance to achieve the above. However, for refugees in a host country in Europe, there seemed to be general agreement that settling in the host country and dealing with one's status was a first step (often prompted by strong pressures by the social security system to find a job), while learning, digitally or otherwise, was the next. There was also a consensus around the need to assess the technology to which migrants/refugees may or may not have access at different stages of their journey. This can help to ascertain at which point in time digital learning initiatives might be most effective.

> There is a need to assess the technology to which migrants/refugees may or may not have access at different stages of their journey

> Students/learners in a camp or a neighbouring country perceive that they cannot wait until they have asylum, a residence permit, housing or employment to seek learning opportunities; they see FDL as a chance to achieve the above

The focus groups and FDL initiative interviews, as well as supporting literature, stressed that migrants and refugees are a very diverse population that will naturally have diverse needs (Aydin 2016, Mason and Buchmann 2016, UNHCR 2016b). Focus group participants asserted that FDL offers should take into account their specific learning needs, their skills (general and digital literacy, language, formal education background) and their learning environment (infrastructure, access to digital technologies and time available for study). It was also

found in the focus groups that **those who were younger, had higher education experience and higher digital literacy were generally more open to FDL**, irrespective of gender. Younger children, youth and migrants with a lower educational level had less familiarity with digital learning, perhaps due to the novelty of many FDL offers for this target group and, in general, to the novelty of the MOOCs phenomenon. Those who had migrated at an older age also seemed to have had less digital literacy to start (as was found in the Nicosia focus group).

The interviews indicated that those designing **FDL offers are increasingly aware of the need to cater to specific learning needs and environments.** The Jamiya Project, for example, is providing European 'SPOCs' (small, private, online courses) in Arabic to refugees in camps, as a means to access higher education, notably as many do not have the English language skills to follow any number of existing MOOCs. Ready for Study is a mMOOC that targets those in transition, equipping them with the language skills and cultural knowledge to access higher education in Germany, specifically. The initiatives under the UNHCR Learn Lab umbrella also target camps, notably embedding the FDL offer in a number of support services for those that may have experienced trauma, for example.

3.2 Trends in the design of FDL initiatives for migrants and refugees

The Catalogue and the interviews identified a number of trends and transversal features that were noted as important for increasing the efficiency and effectiveness of FDL initiatives. These are described in this section. To better analyse these trends, the research team proposes a basic classification by type of design and purpose of FDL, presented in in the subsequent Section 3.3. Different types of FDL may weigh differently in terms of supporting the efficiency and effectiveness of the FDL intervention for migrant/refugee inclusion.

3.2.1 Employing 'offline' digital solutions in the context of unstable learning environments

The literature review and interviews demonstrated that the possibilities for learners to participate in FDL and MOOCs are contingent upon access to digital technologies and infrastructure (e.g. laptops, learning physical learning space and internet). For instance, 'traditional' MOOCs use videos, while the **bandwidth access** in refugee camps and conflict zones may not be adequate to view them. Although MOOCs are usually split into short learning sessions, it is often difficult to keep them shorter than ten minutes. The ICT4Refugees study cited in the Literature review reaffirms this notion (Mason and Buchmann 2016). The study endorses a very **basic/low-tech design** for digital learning, to ensure that it is not too costly to use for refugees with limited access or an older smartphone.

Various reports and interviews asserted that to circumvent bandwidth problems, flexible options for the delivery of FDL (e.g. taking MOOCs offline) should be explored. Given that many refugees, in camps and elsewhere, have mobile phones, **free mobile learning** has been seen as a good way to make FDL more accessible. Funzi, for example, has developed short mobile learning sessions that work offline and do not require a high bandwidth, thus making them particularly useful in a variety of contexts. These are usually offered in partnership with local actors and organisations. In the first cohort of the new InZone/Princeton University initiative 'Global History Lab', learners used their cell phones 75 percent of the time to engage with and

> Free mobile learning has been seen as a good way to make FDL more accessible
>
> -------------------
>
> *"Mobile learning is a platform to reach larger masses, raise awareness and make the in class or f2f education more efficient (FUNZI interview)"*

complete course work. Participants recommended that course providers use **WhatsApp Messenger** as part of their communication network since it is less costly than pay-per-text SMS. Jamiya representatives concurred; they have found Whatsapp to be the most feasible means of communication for the virtual mentoring element of the programme.

Also with regards to learning environment, some reports (Mason and Buchmann 2016) and interviewees (InZone) mentioned **security and safety, or 'responsible data practices'** as essential considerations for FDL, especially with refugees fleeing repressive regimes or migrants with ambiguous legal status. Many reported that the security issues were not only relevant for the learner engaging on-line, but for their relatives as well.

3.2.1.1 FDL for refugees in camps, provided in partnership

Four of the initiatives interviewed target refugees in refugee camps in neighbouring countries: The Jamiya project, Edraak, InZone and LASER. It is believed that these initiatives merit special attention as they provide different types of interventions that are relevant to a different target group. These initiatives address higher education students in camps, those with vocational training needs and those with language learning needs. The interviews indicated that there are common challenges when providing FDL in camps, which were often more exacerbated due to the camp setting: **lack of connectivity, fragile learning environments, lack of infrastructure, the need to provide targeted course content** to fragile students **and security concerns**. Initiatives should somehow address all of the above in order to be effective.

InZone was the only initiative among the ones interviewed that has longitudinal experience with providing FDL in a refugee camp environment. InZone very quickly dismissed the pure on-line/digital approach in favour of a blended learning approach, via small face-to face classes. **It has been developing its pedagogical models to take into account the learning environment of refugees and their prior experience with education**. For example, for the course it has developed for refugee interpreters operating in camps, InZone studied the organisation-specific context, tailoring the learning modules to the interpreters' environment and integrating case-studies regarding professional ethics. This approach has inspired some of the other of the initiatives interviewed: the UNHCR Learn Lab, the Jamiya project and to a certain extent Kiron.

Jamiya, which currently caters to bachelor level students located in the Za'atari refugee camp in Jordan, also acknowledges that **students in camps need academic, cultural and, potentially psychological support**. Students are thus paired with a Syrian academic mentor with whom they speak virtually at least once a week. On-site tutoring is also provided. Edraak has partnered with NGOs, such as the Norwegian Refugee Council and CARE, which work in refugee camps in Jordan to provide digital learning solutions. Whereas the general Edraak platform is open access to all Arabic speaking learners, Edraak believes that digital learning for refugees in camps must take targeted approaches, and consider the language of learning content (Arabic is key). Edraak thus distinguishes its general strategy, that of providing free, open, high quality educational content in Arabic, from the targeted solutions it provides to partners working in camps.

3.2.2 Facilitating the recognition of learning and certification of skills

Recognition of learning outcomes and certifications from FDL is an issue in general, but specifically in the migrant/refugee learning context. **The question of recognition of FDL and the acceptance of employers was raised particularly in the Berlin focus group where the participants had a higher education background**. There was a general perception that employers (in home and host country) did not have a high level of knowledge about FDL and in particular MOOCs, and they therefore did not or would not recognise FDL courses or credits. Most refugees and migrants come from a cultural context where learning traditionally takes place in 'brick and mortar' buildings with very clear formal education and recognition structures, and where degrees carry a high level of prestige. This may imply that **digital learning which lacks any physical, in-classroom presence is perceived as dubious**, irrespective of whether it purports to offer credits. Interviews with the initiatives reaffirmed the importance of recognising credits from FDL, especially when linked to higher education. To ensure this, several initiatives **couple their FDL offer with an accredited institutional partner** (in Europe, in the Arab world and further afield): Kiron works closely with partner universities that have committed to recognising modules from the MOOC-based study tracks that the students take online. Jamiya has worked with University of Gothenburg to adapt existing programmes, deliver them in Arabic and subsequently gain recognition in the Swedish system.

> *"Traditional education certificates are still more likely to guarantee obtaining the job" (Participant in Berlin FG)*

In higher education, there is a strong movement towards utilising **Bologna Tools** (ECTS, learning agreements) for the FDL course content and seeking accreditation in respective European education systems. InZone, Kiron and Jamiya are committed to working with ECTS, for example, and Kiron in particular employs learning agreements for the recognition of FDL as prior learning up to the amount of 60 ECTS. However, these are relatively young initiatives that continue to reassess their models, evolve and experiment. **A proper assessment of recognition-related issues can only be done once at least one cohort of students has completed these programmes**. Jamiya in particular is dealing with complicated issues like the recognition and accreditation of an online course purely in Arabic, delivered, in practice, by a European (Swedish) institution. The Swedish quality assurance system views this type of course as transnational education, and as such, special negotiations need to be made in order for it to be allocated ECTS credits. **Future assessments of FDL initiatives for higher education should also consider the particularities of recognition and accreditation in different European systems, given that there is a diversity of practice and also, to some extent, different legal and funding implications**.

> In higher education, there is a strong movement towards utilising Bologna Tools (ECTS, learning agreements) for the FDL course content and seeking accreditation in respective European education systems
>
> --------------------
>
> *"Bologna Process tools are absolutely useful in the FDL context. We need to champion this approach. ECTS has become a recognised system for accreditation and recognition globally"* (InZone interview)

Beyond Europe, most Middle Eastern countries are still grappling with recognising online learning, an issue that platforms like Edraak will need to continue to confront. Those interviewed at Edraak concurred that **changing the online degree/course recognition culture is slow, but progress is being made**; In Jordan, legislation now allows for 25% of a degree course to be delivered online. Edraak is subsequently working with

Jordanian universities to deliver blended learning solutions.

Also related to the effectiveness of higher education FDL initiatives (and the assurance of their recognition), several of those interviewed highlighted the need to employ **entry requirements** and selection for a programme or course, which may need to consider unique features of migrant/refugee learning population. Pre-screening (basic language level and ability to learn online) was deemed a necessity for Kiron, InZone, Jamiya, LASER and Ready for Study, and each has designed their own entry requirements or exams that would ensure that those who follow their programmes could be successful**.** For example, Kiron offers that **those students who do not yet have their refugee status in order nor proof of their formal credentials can be admitted while Ready for Study puts emphasis on user-friendly self-examination,** to avoid being too exclusionary and to encourage students to honestly assess their learning needs**.**

With respect to rendering FDL for employment and integration purposes more effective in terms of inclusion, there is a trend to award **certificates and badges**. The mMOOC Ready for Study provides a certificate of participation free of charge (and a set of recommendations on how to progress to apply to HE based on the results). It is not yet clear how students will utilise the certificate, though.

> *"We use badges. They are more known in emerging markets because the classical education industry doesn't play as large a role there as in the North"* (FUNZI interview)

Funzi has free certification features, available with some courses being run with local partner organisations. However, it also offers for-cost **'social' badges** for short courses on how to start a business and how to find a job offer. Funzi is experimenting with 'partnering' (between a student and a third party, like an employer, where the employer pays for the badge) to cover the costs for the student, which can be seen as an innovative business model. This would also ensure that the employer recognises the legitimacy of the badge (given they are willing to pay for it).

3.2.3 Tackling linguistic barriers

A transversal concern with regards to the effectiveness of FDL for migrants and refugees is the accessibility of the language of delivery of the FDL offers. Several of the initiatives interviewed stressed the need to develop **multilingual FDL offers**. Information Sweden and Funzi are two initiatives that are available in a number of different languages relevant to migrants and refugees, based on the notion that their target groups can better be reached through their native language. Several of the initiatives also stressed the need for **FDL HE initiatives offered in Arabic**. Jamiya and Edraak are premised on the notion that more high quality FDL is needed in Arabic. Jamiya believes that by teaching the majority of the course content in Arabic, and by using Arabic scholars to do so, the Syrian students will be able to benefit from culturally sensitive teaching, adapted to and applicable in a European context. FDL in Arabic/native languages is thus an important component of the general FDL panorama.

> *"There is a scarcity of Arabic learning content online and this is a huge challenge; Less than 3 percent of digital content globally is in Arabic and this 3 percent is debatable in terms of quality. Yet the Arabic language is the sixth widest spoken language world wide"* (Edraak interview)

Initiatives run by InZone and a number of civic integration related initiatives are employing a Content and Language Integrated Learning (CLIL) approach (see 3.3.2.2), which allows those who are potentially illiterate to engage with the learning content via language acquisition, and vice versa.

3.2.4 Designing successful business models for sustainability: Diversified funding and partnership

The sustainability of FDL initiatives and offers, and subsequently how they are funded, is indeed a concern and should factor into the assessment of efficiency**. Most identified FDL initiatives targeting migrants and refugees are either in their start-up or pilot phase** and thus their business models are largely evolving or under development. Most grass-roots initiatives targeting higher education, such as Kiron and Jamiya, have started with **donations and foundation support**, yet aim to diversify: Kiron initially started with **crowd-funding** and private donations, but is now generating more public funding from the German state. Jamiya is backed by several philanthropic foundations based in the UK, Europe and US and also has done additional fund-raising campaigns. Up-scaling with current resources is indeed a challenge, however. Jamiya, for example, finds that many other European universities are interested to partner and develop further courses. The partner universities can cover some equipment and development costs, but this is not sufficient.

Many initiatives are also depending, to some extent, on **volunteers**. For Jamiya, the Syrian scholars that mentor for them are on a voluntary basis.

Edraak, which has notable Arab/Middle East foundational support, is the one initiative that is diversifying its model towards a **'service offer'**. It is offering digital and technology solutions to other similar platforms and providers as a means of generating income. Edraak has said that it does not want to be only donor supported. For the activities that it does in refugee camps, it does not seek to generate income, but rather only cover costs through partners. Relatedly, Funzi is built on private funding from investors and the **income from the badges** that beneficiaries buy after completion. One million learners have taken a free Funzi mobile learning course, so the potential for income generation is large. **The dependency on badge income is, however, both a risk (given the financial limitations or the target group) but also a means to generate user-driven funding.**

Other initiatives are premised upon resource pooling in the context of **collaborative partnerships:** InZone is an academic center at the University of Geneva, with core support from the University itself. The Ready for Study pilot mMOOC was conceived, produced and developed by a consortium of educational institutions, Germany's Federal Employment Agency, the Goethe Institute, Deutsch-Uni Online/gast and the German Academic Exchange Service (DAAD). Funzi, as mentioned previously, is generating partnerships with employers to cover social badge costs.

This study also scanned a number of **EU funded** initiatives and projects. They generally provide important **start-up funding**, yet the sustainability of funding may be questionable: LASER is an expressed priority of the EU External Action Service and the European Neighbourhood Policy, driven by the EU Delegation in Amman. British Council admits that scholarships offered for refugee students to enrol in distance degrees depend very much on the EU investment. That said, the partnerships developed for LASER with FutureLearn and Edraak, for example, will indeed continue even without EU support. Welcomm! and MEET were EU co-funded projects. While the FDL they generated remains public, the organisations involved in the projects do not have further means to design trainings to promote the usage of that FDL content, which is a limitation. That said, the project grants provided important start-up costs and allowed a dynamic partnership of like organisations to be created.

Finally, the research team noted a number of **public, private and foundation driven funding calls** to stimulate innovation in this field, such as the Open Society Foundation, via its Higher Education Support Program (grant programme for innovative solutions for blended and online learning for refugees), StartupRefugees Finland (providing grants to refugees themselves to generate digital solutions to integration challenges), the Norwegian Agency for Development Cooperation (NORAD) (competition for smart-phone based applications for educating Syrian refugee children ("eduapp4Syria"), Techfugees,

and other diverse 'Hackethons' (The 2016 'Hackerthorn' first prize went to an App developed by a Syrian refugee called Bureaucrazy that teaches the user to fill in forms correctly in Germany).

3.2.5 Further pursuing impact assessment

Impact assessment was perceived to be an integral part of the FDL initiatives interviewed, particularly those in higher education that attract formal learners looking for accreditation and recognition, for those which select students into a study programme and for the EU funded projects interviewed. The FDL initiatives interviewed generally collect user/ learner statistics and deploy surveys in order to evaluate quality and to ensure that the FDL initiative supports and reaches its target groups. One notable development is the interest to share data and experiences between the different actors, donors and investors. This has been done, for example, through the UNHCR Learn Lab, and through workshops arranged by Al-Fanar Media (an online journal dedicated to Arab higher education), the Open Society Foundation and the Ford Foundation, which have brought together different key actors in the field with the objective to share practices. Edraak, which professed that it is very keen to share its model and collaborate with other providers, is launching a new platform call 'research.edraak' which will be open, provide data on users and generate collaborative research projects among similar initiatives. InZone commented on the importance of ongoing research and evaluation that compares different FDL designs, delivery models and also looks at their potential to be up-scaled and transferred to other environments.

> *"Being data driven will be the main priority of the future" (Edraak interview)*

Unfortunately, for stand-alone, non-'facilitated' offers (for civic integration, employment and language purposes), there is little known about their impact beyond simple user statistics (which tends to differ from blended/facilitated initiatives that select students). Other initiatives interviewed professed that it is simply too early to know the longer-term effects of their FDL initiatives on integration and inclusion. However, there was an acute awareness of the need to sharpen indicators for this assessment and instil a culture of evaluation from the start (Dahya 2016). The need to secure funding apparently also acts as a powerful motivator for impact assessment. Some initiatives have **tied potential future funding to current impact assessments**. For example, Kiron is undergoing a longitudinal evaluation of its students success lead by the University of Mainz and is currently leading a R&D project paid by the German Federal Ministry for Higher Education and Research (BMBF) to enhance quality measures. Depending on the outcomes, there is also potential to generate more public funding in the future.

3.2.6 Enhancing communication

All initiatives interviewed confessed to the difficulties of communicating the FDL initiatives to target groups. This was confirmed by the focus groups, where none of the participants were aware of the FDL offers citied in this report, with the exception of language learning Apps, which a number of them employed. Reaching those without digital literacy is also clearly a problem. Projects like MEET and Welcomm! indicated that piloting FDL in a project framework was useful in this regard; outreach to adults and children with little digital literacy through a blended learning/training format was built into the project design.

> None of the focus group participants were aware of the FDL offers citied in this report, with the exception of language learning Apps, which a number of them employed

The fact that FDL offers remain largely unknown to refugees is an issue that LASER is keen to address; Generating **'FDL ambassaders'** who could spread knowledge about the utility of FDL and online learning after having participated in it was one suggested way forward. In this respect, social media once again plays a critical role. In terms of advertising their FDL offer, Kiron, Jamiya and Edraak have worked extensively through **migrant/refugee social media networks**. In addition, a number of initiatives interviewed supported the notion of **co-development**, namely utilising and empowering students (and displaced scholars, in the case of Jamiya), to play a role in the content development of the FDL offers and their design (de Waard et al. 2014). (UNHCR 2016b; Mason and Buchmann 2016).

Several initiatives mentioned the need to diversify communication efforts towards both students and public authorities and employers, in order to ensure that if the FDL offer is a formal education offer, it is consequently recognised in the pursuit of further learning. Others, such as Information Sweden, expressed concern that if that FDL does not secure stable funding, then it may lead to a problematic chain where the FDL is promoted, but access cannot be guaranteed (the offer may not be available any more). This is a particular challenge of platforms that aggregate many FDL offers.

3.3 Types of FDL initiatives for migrants/refugees

Given the diversity in the field, and the fact that different types of FDL offers and initiatives may have different implications for the migrant/refugee target group, the research team has attempted to classify the FDL initiatives and offers according to

- their **design**, namely if they are targeted (at migrants/refugees) or non-targeted (for general usage), facilitated/supported (or not) or delivered in a 'blended' versus fully online (OL) format

- and **purpose** (for higher education, language learning, civic integration or employment).

The type of design is summarised in a three-dimensional quadrant with three axes (Figure 1) whereas the purpose is described in the text below (5.3.2). This classification, albeit imperfect, helps to assess the efficiency and effectiveness of FDL according to potentially different learning populations and target groups with different needs and expectations.

3.3.1 Type of design

3.3.1.1 Trend towards targeted FDL as opposed to non-targeted, general offers (axis: Targeted versus General)

The study found that there are two types of FDL that could be relevant in a migrant/refugee context: (1) FDL that exists as a stand-alone offer, such as the majority of MOOCs and Apps ('general' FDL) and (2) FDL that is either developed or re-purposed specifically for migrants/refugees ('targeted').

The academic literature reviewed for this study concurs that for FDL to be an optimal instrument for inclusion, it needs to rather take the latter approach (targeted**)**. Many sources listed in the literature review (de Waard et al. 2014, Mason and Buchman 2016, Moser-Mercer 2016) concurred that initiatives in this field should (1) have clear inclusion objectives and a clear target audience, (2) be defined (or re-purposed) understanding and taking into account the needs of this target audience, including its skills, learning environment, learning needs, fragility and cultural context, and (3) collect data about effectiveness of the FDL to meet its objectives and address the needs

> For FDL to be an optimal instrument for inclusion, it needs to rather take the targeted approach

of its target audience. Those interviewed (from Kiron, Jamiya, InZone, LASER, Ready for Study, Edraak and MEET) corroborated entirely with this notion; Effective FDL for migrants and refugees needs to be targeted (at their needs and context) and ideally supported/facilitated at some level (see 3.2.1.2). That the FDL is free and usually without access restrictions does not in any way ensure its take-up or usefulness for the target group.

When it comes specifically to MOOCs, a focus of this study, clearly defining and targeting vulnerable learning groups within the larger MOOCs movement is essential. **MOOCs in their original form are not ready to address issues linked to digital literacy, infrastructure (e.g. internet connectivity, physical learning environment and associated costs), language barriers and cultural specificities** that may prohibit participation of refugee and migrant populations (Carolan et al. 2014; Moser-Mercer. 2014). That being said, it is possible to "re-package" existing MOOCs (as Kiron and "Coursera for refugees"[8] do) in order to create a clear framework for the learners that aims to balance scalability and personalization. Kiron therefore complements its MOOC-based modules with synchronous live tutorials (Direct Academics) that support smaller student groups in reaching the intended learning outcomes.

3.3.1.2 Trend toward facilitated and supported approaches (axis: Non-facilitated versus Facilitated)

In line with the notion of having targeted FDL, many more structured interventions (in the form of projects like MEET and Welcomm! or formal education programmes like those provided by Jamiya, Kiron and InZone) favour the inclusion of support services. Five out of the ten FDL initiatives interviewed that pertained the higher education sector mentioned important support services such as **mentorship** (from students or academics) **psychological** support, **language** training, **career** guidance and training in the use of digital education. Mentoring and student support can take different delivery modes: student-to-student, teacher-to-student or displaced academics-to-students. The

> *"The teacher's main function is to facilitate- This is a critical role. We need students to feel like they are coming into class" (Jamiya interview)*

humanitarian element of mentoring (taking into account the needs of the displaced and traumatised) was a red thread through many of the initiatives, especially those with UN backing[9]. Cultural sensitivity was generally deemed essential for the success of FDL designed for refugee target groups, which was also stressed in the literature (Liyanagunawardena et al. 2013; Liyanagunawardena 2012).

Facilitation was also found to be essential by the two EU projects interviewed (MEET, Welcomm!) which aimed at migrant/refugee integration; both projects incorporated **language training** on specific civic integration topics, **training to use the FDL resources** and other diverse face-to-face support services.

3.3.1.3 Trend toward blended approaches (axis: Blended versus Online)

The majority of the sources identified also stressed the importance of 'blended' approaches that combine digital learning with on-site or face-to-face learning (Moser-Mercer 2014; UNHCR 2016). Focus group participants (particularly in Trollhättan, Berlin and Brussels) and those interviewed from the FDL initiatives (InZone, Kiron, Jamiya, LASER) professed that 'online only' has its drawbacks, especially for those who may be fragile, displaced and have a number of other challenges with regards to social, psychological and cultural integration. This is particularly true for those in refugee camps

---

[8] https://refugees.coursera.org
[9] This is reflected in the adoption of the UN sustainable development goals in September 2016, and in particular goal #4: Ensure inclusive and quality education for all and promote lifelong learning: http://www.un.org/sustainabledevelopment/education/

but also relevant for those with little digital literacy or formal education background. In this respect, digital learning can indeed be seen as a tool, but is only one component of an effective strategy to enhance migrant and refugee learning.

Blended approaches were also confirmed as desirable by the focus groups, both with regards to higher education and civic integration, employment and language learning. The representatives in the focus groups, both young and older, generally agreed that it is necessary to meet physically (in a class) in order exchange experiences and raise questions in case of difficulty understanding certain concepts or regulations that may affect inclusion and settlement (cited in the Nicosia and Brussels focus groups in particular). **Being in a classroom was also the chance to establish a social network.** To a certain extent, FDL offers for civic integration (as stand-alone initiatives) were perceived '**exclusionary**' rather than 'inclusionary', in that they are used in isolation. Participants found that more traditional language/integration courses encouraged people to "get out of their homes".

As has been highlighted, there are presently a number of initiatives (or announced initiatives) that attempt to take this route: They range from initially conceived blended approaches like Kiron, to those that are integrating elements of 'blending' into their model (Edraak, Jamiya). Jamiya, for example has course content developed fully online via SPOCs, but is attempting to build physical learning communities to support learners to optimise this technology and provide further instruction in person.

> Digital learning can indeed be seen as a tool, but is only one component of an effective strategy to enhance migrant and refugee learning

> *"We can learn from apps, but we need contact to real people. We can learn the grammar, but we need to learn how to string sentences together. We have to talk to real people for us to be integrated into "real life". Only learning the words isn't enough"* *(Participant in Trollhättan FG)*

Figure 1 below summarises the axis for comparing types of FDL initiatives according to the extent that they are fully online versus blended, targeted (a migrants/refugees) versus general (for any public or user) and facilitated versus non-facilitated**.** The FDL initiatives covered in this study mostly fall into the following quadrants: **Targeted, online only and non-facilitated** (ex. Information Sweden), and **targeted, blended and facilitated** (ex. Jamiya, Kiron, InZone). The Catalogue of initiatives lists some FDL, in particular language courses and MOOCs, that fall into the category of general, online, non-facilitated, but these are not highlighted in this report as they were not perceived (neither by beneficiaries nor by providers) to be the most effective means to reach migrant/refugees for inclusion purposes.

As a general point, 'facilitated' and 'blended' initiatives clearly require a higher cost investment; they entail mobilising additional human resources to support the learning process and concerted monitoring. As has been stated many times in this report, however, they are deemed by both potential users and providers of FDL to be more effective when it comes to inclusion and the general take-up of FDL in the migrant/refugee community.

Figure 1: Axis of FDL approaches
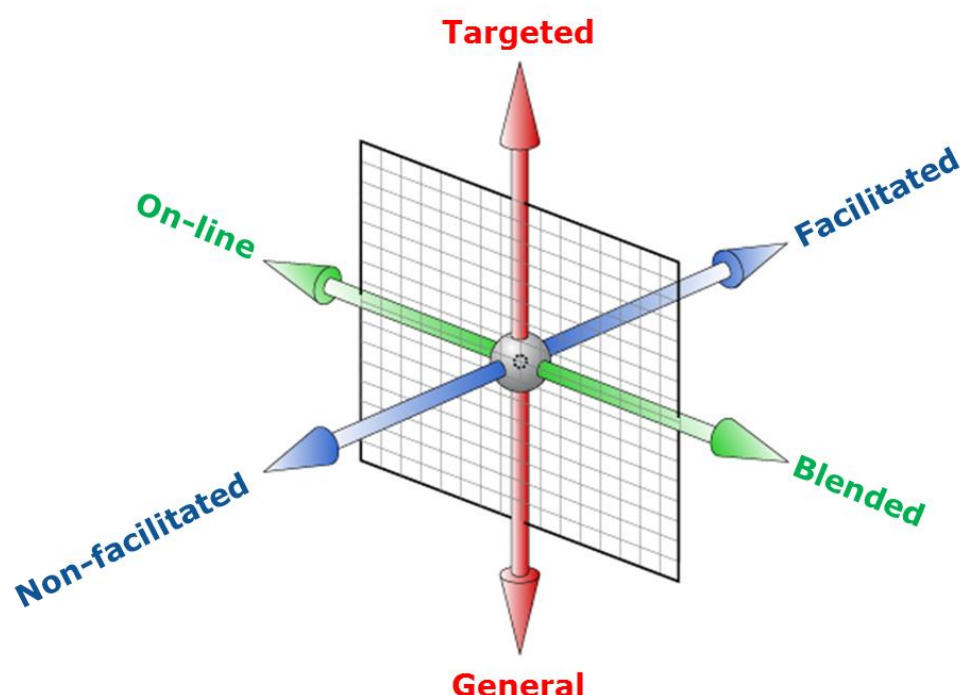
3.3.2 Type of purpose

This study also teased out a number of different purposes for FDL offers, which provides another basis for classification. While classifying them was at times difficult (there were many overlaps), some observations and distinctions could be made. A SWOT analysis was done for these types of FDL, given that each may involve different considerations when it comes to efficiency and effectiveness.

3.3.2.1 FDL for language learning

The focus groups confirmed that **language learning is a primary need** for all migrant/refugee groups. As such, there are also a plethora of FDL online language courses, Apps and MOOCs targeting specifically the migrant/refugee community. Many language initiatives also have a civic integration purpose (on democratic participation, preparing for study, navigating the social security system, etc.) and double as language courses (on specific vocabulary for employability, social and civic integration, etc.) (see 3.2.2.2). Numerous examples were provided in the literature review and the Catalogue[10] such as 'L-Pack Citizenship Language' and 'INTEGRA Migrants', for learning financial management vocabulary, to name a few.

> Language learning is a primary need for all migrant/refugee groups

Though many of the learners in the focus groups had a number of language learning Apps on their mobile phones, they confessed that face-to-face interaction was needed to truly practice. Thus once again, FDL was seen as a compliment but not a substitute to

---

face-to-face learning. Relatedly, many blended and facilitated approaches are also incorporating language learning into their offer, to accommodate the needs of migrants that cannot yet learn in the language of the host country. This practice can be considered **'Content and Language Integrated Learning' (CLIL),** an approach that facilitates language learning through the acquisition of relevant content (or vice versa). Examples from Ready for Study, Kiron and Jamiya were provided, while LASER has built a language learning track into its programme as a pre-step to accessing virtual higher education courses.

> Many blended and facilitated approaches are also incorporating language learning into their offer, to accommodate the needs of migrants that cannot yet learn in the language of the host country. This practice can be considered 'Content and Language Integrated Learning' (CLIL)

3.3.2.2 FDL for civic integration/employment

There seems to be a growing number of FDL offers for civic integration and employment. Given that there is a large overlap between these initiatives, they have been combined in the SWOT analysis that was done. Initiatives of this nature tend to be less structured and often take the form of stand-alone Apps and online open resources, as well as projects to develop FDL content and train regarding its use. There is a trend towards increased 'user-friendliness' (no frills mobile Apps) and towards aggregating resources and tools – information links, mobile language learning offers, etc. - on **platforms**. A number of platforms, like Information Sweden, were identified and listed in the online Catalogue as they are specifically targeted at newly arrived migrants and refugees. As mentioned previously, there is also a trend towards integrating language learning into civic integration-related content (CLIL). This has been the case with the MEET project, for example, on health literacy for migrants and the Ready for Study mMOOC that uses information about studying in Germany as a bridge towards learning German for academic studies.

> There is a trend towards increased 'user-friendliness' (no frills mobile Apps) and towards aggregating resources and tools – information links, mobile language learning offers, etc. - on platforms

In terms of FDL for employment, a number of digital resources/portals for job matching exist, however these are beyond the scope of FDL.

3.3.2.3 FDL for higher education

Free digital learning in higher education is growing dramatically, as evidenced by the development of OER, mobile learning and MOOCs (Zawacki-Richter and Naidu 2016). **It is in this area where the majority of FDL offers for migrants/refugees identified through the MOOCs4inclusion project have taken place**. Several of the initiatives interviewed in this field also stressed that the take up of FDL was higher with this population, due to higher digital literacy and general motivation to learn. As mentioned previously, participants with a higher education background (notably from the Berlin focus group) found that FDL could be a complimentary learning option, but that it could not replace formal HE when it came to accreditation and quality. They also considered that FDL could be an option for retraining or upgrading of existing qualifications.

Five out of ten initiatives interviewed were within the area of higher education and are all experimenting with developing models for providing higher education degrees in a digital format that could be scaled to reach refugees in camps, in neighbouring countries and in host countries. All initiatives concurred that it was essential to provide higher education opportunities to migrants/refugees, both to a) enable them to work and integrate in host societies and b) to ensure that their skills and qualifications remain relevant, should they

be able to return to their home countries. For those targeting camps, such as Edraak, Jamiya, and InZone, the fact that refugees can remain in a camp or a neighbouring country for as long as ten to fifteen years (median value) was a glaring reality[11].

The research also demonstrated a **keen interest of European universities to enrol and engage refugees**[12]. Some see the recent refugee crisis as an opportunity for internationalisation of their campuses (in the Catalogue, the University of Oslo was featured, which leads a new EU project called 'Academic Refugee' and has opened its language learning resources for internationalisation to refugees). According to representatives of Kiron and Jamiya, many are keen to collaborate with FDL initiatives for refugees, though they confess that resources for developing FDL and specifically MOOCs are still lacking and that there remain certain problems regarding recognition of studies.

---

[11] http://blogs.worldbank.org/dev4peace/how-many-years-do-refugees-stay-exile.

[12] See the European University Association's Refugee Welcome Map: http://eua.be/activities-services/eua-campaigns/refugees-welcome-map

4 Looking forward: recommendations and proposals for future research topics and projects

The MOOCs4inclusion study indicates that FDL for refugees and migrants has the potential to be a tool for integration and inclusion. That mobile phones are in the hands of 90% of the world's population, inside and outside of refugee camps and across age groups, is a clear enabler. The new Global Youth Development Index and Report (2016)[13] indicates a sharp rise in how experienced in using the internet young people from the countries from which many refugees and migrants come are. Another report[14] suggests that there is a clear rise in literacy levels of Arabs over fifteen, which is 73% as opposed to 94% in Asia.

This said, if there is one major take away from MOOCs4inclusion it is that research, impact assessment and coordination on this topic has only just begun and must be enhanced. Europe is in a transition period in many different ways (politically, geographically and demographically). Technology and digitalisation are generally transforming the way we learn and communicate; People themselves are on the move. This is a general manifestation of globalisation, but also a more acute manifestation of the recent migrant and refugee crisis, which is emboldening European political debate and social perceptions. That digitalisation, and more specifically, free digital learning and digital resources, might be leveraged as one way to address this 'problem' (or opportunity?) is the crux of MOOCs4inclusion, but also of myriad initiatives that are being developed and reports that are being released. This is not a European phenomenon; this study indicates that utilising FDL is a trend all over the world in response to the humanitarian situations.

MOOCs4inclusion has attempted to examine more closely the 'how, when and whom' of FDL for migrant and refugee inclusion. Differentiating types of FDL, by both design and purpose, is essential in order to properly address under which conditions and towards which target audience FDL might be most efficient and effective. The report has provided some insights, but many questions are still to be answered. The next section provides some recommendations for the European Union and other actors engaging or investing in this field.

4.1 Designing and investing in future FDL initiatives

4.1.1 Design

It is clear that the FDL for the migrant/refugee field is ripe with new initiatives. Based on the findings of MOOCs4inclusion, designing an efficient and effective FDL offer or initiative for the inclusion of migrant and refugee target groups should consider the following:

- Formal versus non-formal learning and stand-alone versus structured (with student intake) offers: Initiatives for formal education may require different investments than those intended for non-formal education, further education and general skill development. Notably, it must be decided to what extent the initiative intends to target a specific learning group, via a student intake in a structured learning offer, or rather provide a FDL resource that can be broadly utilised in a non-formal way. Objectives and subsequent considerations for impact assessment may vary accordingly. In addition, the type of investment required for the initiative to be efficient and effective may also vary.

- 'Targeted', 'blended' and 'facilitated': Though this can be done in different formats, targeted, blended and facilitated approaches are unanimously seen as a

---

means to enhance the success rate of any FDL initiative. The importance of mentorship and support should not be underestimated, as some learners are unfamiliar with digital learning and with the cultural learning environment in which they find themselves. This is true both for those with a higher education background and digital literacy (in formal learning) and also for those who lack such a background and are more interested in language learning and civic integration related learning.

- Co-development and communication: FDL initiatives can benefit from engaging the learners in development. Reaching out to potential learning groups via social media and in-conjunction with partners present in camps, for example, are two paths. Bottom-up solutions, funded through open calls to the learners, 'hackathons' and the tech sector itself, can also be a means to drive creativity and relevance in FDL. Students can also be used as ambassadors for FDL, promoting a concept that has still to gain traction in many countries and amongst various learning groups.

- Embedding language learning into targeted interventions: Blending language training with content acquisition (and vice versa) can not only support civic integration and employability, but may also enhance the efficacy of formal education initiatives. The importance of mobile language learning through different media such as Apps, platforms, YouTube videos, etc. should not be underestimated. These can be particularly useful to support the blended learning context.

- Cooperation with other initiatives and sharing of good practice should be an integral part of FDL design, which supports the philosophy behind OER. There is much experimentation in the FDL field at present, especially when it comes to reaching marginalised populations. This must be further studied and leveraged. Investments should not be afraid of experimenting and testing through pilot initiatives. Dynamic partnerships between donors, public private sector and between existing initiatives should be considered as a means of pooling resources and expertise and leading to greater sustainability.

4.1.2 Promoting recognition, quality assurance and accreditation

- Using Bologna tools: The Bologna architecture (recognition, quality assurance and qualification frameworks) and transparency tools (learning agreements, learning outcomes and ECTS) will be essential to facilitate the recognition of FDL initiatives and to align them to the European Higher Education Area (EHEA). FDL offers in higher education in particular should consider employing these tools from the start, and working with partner universities and national authorities to do so.

- European accreditation practices regarding FDL: The FDL HE initiatives generally have a high focus on quality assurance for quality enhancement. It would be important for the European quality assurance (QA) agencies to be able to accredit FDL, where necessary, heightening the awareness of FDL towards recognition authorities and employers.

4.1.3 Funding and sustainability

- Generating income through small fees for certification and 'badges': One should seek innovative models to help learners cover costs, such as engaging employers in the FDL offer; though the FDL should be as free as possible to the leaner, fees may be integral to the business model and sustainability.

- Promoting cross-sectorial, dynamic partnerships, engaging the public and private sector, European universities and migrant/refugee networks: Resource pooling as well as public-private endeavours will create a more solid financing structure and may be the basis for sustainability.

- **The EU role in supporting the development of initiatives**: EU project and grant funding may be a useful tool to support bottom-up solutions, conceived by dynamic partnerships of NGOs, public, private actors, educational institutions and tech developers. The Erasmus+ programme is one possibility as well as the Madad Fund, which is designed as a crisis response mechanism to the war in Syria. European projects typically have a European dimension and can favour the usage of European tools, structures and frameworks for recognition for example.

4.1.4 Avoiding fragmentation

- **The EC role in coordination, particularly in the European context**: The risk of fragmentation of information, sources and initiatives has been identified throughout MOOCs4inclusion. The EC could play a role in uniting different actors, creating and supporting practice sharing forums and, ideally, maintaining the MOOCs4Inclusion website and Catalogue of initiatives. Coordination should be sought with other 'unifying' initiatives and platforms.

- **The EC role in communication**: There is clearly a need to find collective ways to communicate the possibilities for FDL to refugees and migrants. Transparency and communication around the different initiatives is lacking and more must be understood about communication campaigns for the target groups. The EC would have a clear added-value in supporting such transparency and communication, through future research and by maintaining and updating the website generated by MOOCs4inclusion. Supporting a network of 'FDL ambassadors'- FDL alumni – from EU projects and European universities would also be a concrete and beneficial initiative.

- **Sharing data/Collaborative impact studies**: There is clear will of a number of initiatives to share data and to enhance transparency around impact assessment. The Platform of Al Fanar Media and 'research.edraak' should be noted. The EU and other actors in this field should consider joint impact assessment reports that incorporate and include/draw upon these initiatives.

4.2 Charting future research

4.2.1 Literature beyond the higher education sector

The majority of the literature on FDL for migrants and refugees pertains to the HE sector. This is also where a higher number of initiatives are concentrated. Little academic literature has examined other refugee learning groups and their digital learning needs and barriers when it comes to the use of FDL: those with vocational education, those with interrupted secondary education, children and adult learners. While there is some literature that looks specifically at refugees in camps using digital learning resources, little was found on refugees of diverse types that have settled in a host country over longer periods of time. More studies that aim to understand the current needs of refugee learners in Europe and in neighbourhood countries, like 'ICT4Refugees' (Mason and Buchmann 2016), are needed. This can be optimally done in partnership with digital learner providers, NGOs and local authorities that have direct access to these populations. Refugee learning populations themselves need to be given a voice.

4.2.2 Data on participation, impact assessment and efficiency

More specific data on participation is needed to better understand refugee and migrant participation in FDL. This is particularly true for initiatives in the non-formal education sector that exist as stand-alone Apps and platforms. Participation data could be enhanced by adding the migrant/refugee dimension to existing/ongoing research on FDL in general (e.g. MOOCKnowledge, an ongoing project of the JRC)) or by further encouraging current FDL initiatives for migrants/refugees to collect and share data on participation. In general, data collection, with the aim of impact assessment on different migrant/refugee

learning groups, could be a pre-condition for receiving (public or private) funding to support these initiatives. Little is known about the extent to which this is already done in Europe.

This report has, to the extent possible, charted ideas and current practices for rendering FDL for migrant and refugee inclusion *effective*. Less is know at this stage on *efficiency*, specifically the types of costing models that initiatives have employed, the balance between creating new FDL content as opposed to appropriating existing content and costs associated with mentorship, student support and outreach.

4.2.3 Following up the fast changing landscape of announced initiatives

Given that the research team identified a great number of new or up-and-coming initiatives, it is expected that more literature will be available in the years to come, following implementation and hopefully evaluation of these initiatives. A complementary exercise of this study should be undertaken in one years' time. In particular, the current open competitions and funding calls that have been cited in this report should be tracked, as well as grass roots initiatives in the tech area. There are a number of dynamic partnerships to meet digital learning challenges (MOOC platforms teaming up with foundations and universities, and tech companies, for example). The sustainability of their funding models should be assessed going forward.

Annex 1: Sources cited in the literature review

Aydin, C. 2016. MOOCs as a Tool for Opening Up Turkish Higher Education. *Overview of papers representing a European Policy response on MOOC opportunities as presented during the HOME policy forum in Brussels in June 2016*. As of October 2016: http://eadtu.eu/images/publicaties/European_Policy_response_on_MOOC_opportunities_June_2016.pdf

Bates, M., D. Brown, A. Burton, P. Standen & A. Breheny. 2014. Using a blended pedagogical framework to guide the applications of games in non-formal contexts. *2014 International Conference on Interactive Technologies and Games*.

British Council. 2016. LASER – Language and Academic Skills and eLearning Resources. As of October 2016: https://syria.britishcouncil.org/en/laser

Caforio, A. 2016. UNINETTUNO and the MOOCs, Origins, results and new perspectives. *Overview of papers representing a collective European response on MOOCs as presented during the HOME conference in Rome November 2015*. As of October 2016: https://oerknowledgecloud.org/sites/oerknowledgecloud.org/files/MOOCs_in_Europe_November_2015_1.pdf

Capstick, T. & M. Delaney. 2016. Language for resilience. As of October 2016: https://www.britishcouncil.org/sites/default/files/language-for-resilience-report-en.pdf

Carolan S., M. Magnin & J-M Gilliot. 2014. Engineering MOOCs for Future Engineers: Integrating MOOCs into Formal Learning Environments. As of October 2016: https://morganmagnin.files.wordpress.com/2014/02/carolan-magnin-gilliot.pdf

Carretero, S., C. Centeno, F. Lupiañez, C. Codagnone, & R. Dalet. 2015. ICT for the employability and integration of immigrants in the European Union: Results from a survey in three Member States. *JRC-IPTS Technical Report.* As of October 2016: https://ec.europa.eu/jrc/en/publication/ict-employability-and-integration-immigrants-european-union-results-survey-three-member-states

Castaño Muñoz, J., Y Punie, A. Inamorato dos Santos, M. Mitic & R. Morais. 2016a. How are Higher Education Institutions Dealing with Openness? A Survey of Practices, Beliefs, and Strategies in Five European Countries. *JRC Science for Policy Report*. As of October 2016: http://publications.jrc.ec.europa.eu/repository/bitstream/JRC99959/reqno_jrc99959.pdf

Castaño Muñoz, J., Y Punie & A. Inamorato dos Santos. 2016b. MOOCs in Europe: Evidence from pilot surveys with universities and MOOC learners. *JRC-IPTS Brief*. As of October 2016: https://ec.europa.eu/jrc/sites/jrcsh/files/JRC%20brief%20MOOCs_JRC101956.pdf

Centre for study of Democracy. 2012. Integrating Refugee and Asylum-seeking Children in the Educational Systems of EU Member States: Evaluation and Promotion of Current Best Practices. As of October 2016: http://www.csd.bg/fileadmin/user_upload/INTEGRACE_handbook.pdf

CNET 2016. Life disrupted. As of October 2016: http://www.cnet.com/news/is-tech-helping-with-the-global-refugee-crisis-greece-europe-australia/

Dahya, N. 2016. Education in Conflict and Crisis: How Can Technology Make a Difference? A Landscape Review. *Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH*. As of October 2016: http://wvi.org/sites/default/files/20160303_Landscape_Review_ICT4E_in_Conflict_and_Crisis.pdf

de la Hera Conde-Pumpido, T. & A. Paz Alencar. 2015. Collaborative Digital Games as Mediation Tool to Foster Intercultural Integration in Primary Dutch Schools. As of October 2016: http://www.openeducationeuropa.eu/en/article/Collaborative-Digital-Games-as-Mediation-Tool-to-Foster-Intercultural-Integration-in-Primary-Dutch-Schools

de Waard, I, M.S. Gallagher, R. Zelezny-Green, L. Czerniewicz, S. Downes, A. Kukulska-Hulme, & J. Willems. 2014. Challenges for conceptualising EU MOOC for vulnerable learner groups. *Proceedings of the European MOOC Stakeholder Summit 2014*. As of October 2016: http://oro.open.ac.uk/40381/2/deWaardEtAl.pdf

Devaux, A. & M. Souto. 2016. Validation of open educational resources (OER). Thematic report for the 2016 update of the European inventory on validation. As of October 2016: http://www.cedefop.europa.eu/en/publications-and-resources/publications/4149?src=email&freq=weekly

European Commission. 2015. Schools, VET and Adult education helping newly-arrived refugees in Europe. As of October 2016: http://ec.europa.eu/education/documents/school-vet-adult-survey-refugee_en.pdf

European Commission. 2016b. Digital media for education with refugees (Webpage). As of October 2016: https://ec.europa.eu/epale/en/blog/digital-media-educational-work-refugees

European Commission. 2016c. "Asylplus": Refugees need opportunities to teach themselves. As of October 2016: https://ec.europa.eu/epale/de/node/20969

Fischer, G. 2014. Beyond hype and underestimation: identifying research challenges for the future of MOOCs. *Journal Distance Education Volume 35 - Issue 2*. As of October 2016: http://www.tandfonline.com/doi/abs/10.1080/01587919.2014.920752

Gaebel, M., V. Kupriyanova, R. Morais & E. Colucci. 2014. E-learning in European Higher Education Institutions - Results of a mapping survey. *European University Association Publication*. As of October 2016: http://www.eua.be/Libraries/publication/e-learning_survey.pdf?sfvrsn=2

Garrido, M. & L. Koepke. 2016. An examination of MOOC usage for professional workforce development outcomes in Colombia, the Philippines, & South Africa. *Seattle: Technology & Social Change Group, University of Washington Information School*. As of October 2016: https://www.irex.org/sites/default/files/node/resource/examination-mooc-usage-professional-workforce-development-outcomes.pdf

Global Business Coalition for Education. 2016. Exploring the Potential of Technology to Deliver Education & Skills to Syrian Refugee Youth. As of October 2016: http://gbc-education.org/wp-content/uploads/2016/02/Tech_Report_ONLINE.pdf

Goethe's Institutes German language for refugees initiative. As of October 2016: https://www.goethe.de/en/spr/flu.html

Grant, S. 2014. What Counts as Learning: Open Digital Badges for New Opportunities. Irvine, CA: Digital Media and Learning Research Hub. As of October 2016: http://dmlhub.net/wp-content/uploads/files/WhatCountsAsLearning_Grant.pdf

Higgens, S. 2012. The Impact of Digital Technology on Learning: A Summary for the Education Endowment Foundation. As of October 2016: https://v1.educationendowmentfoundation.org.uk/uploads/pdf/The_Impact_of_Digital_Technology_on_Learning_-_Executive_Summary_(2012).pdf

Hykova, G. 2004. Equality, communication and collaboration in online learning environment: an example of language education for refugees. As of October 2016: http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=1372419&newsearch=true&queryText=refugee

Kluzer, S. 2011. Language Learning by Adult Migrants: Policy Challenges and ICT Responses. As of October 2016: http://ftp.jrc.es/EURdoc/JRC63889_TN.pdf

Kristof, N. 2016. Meet Sultana, the Talibans' worst fear. New York Times. As of October 2016: http://www.nytimes.com/2016/06/05/opinion/sunday/meet-sultana-the-talibans-worst-fear.html?_r=0

Liyanagunawardena, T., S. Williams & A. Adams. 2013. The Impact and Reach of MOOCs: A Developing Countries' Perspective. As of October 2016: http://centaur.reading.ac.uk/32452/1/In-depth_33_1.pdf

Liyanagunawardena, T., A. Adams & S. Williams. 2012. MOOCs: A Systematic Study of the Published Literature 2008-2012. As of October 2016: http://files.eric.ed.gov/fulltext/EJ1017472.pdf

Lorisika, I., L. Cremonini, M. Safar Jalani. 2015. Study to Design a Programme / Clearinghouse Providing Access to Higher Education for Syrian Refugees and Internal Displaced Persons. As of October 2016: https://www.utwente.nl/bms/cheps/news/finalreportstudyhighereducationsyrianrefugeesandidp.pdf

Masats, D. & M. Dooly. 2011. Rethinking the use of video in teacher education: A holistic approach. *Teaching and Teacher Education*. Vol. 27, 7. October 2011. pp. 1151-1162.

Mason, B. & D. Buchmann. 2016. ICT4Refugees - A report on the emerging landscape of digital responses to the refugee crisis. As of October 2016: https://regasus.de/online/datastore?epk=74D5roYc&file=image_8_en

Moser-Mercer, B. 2014. MOOCs in fragile contexts. As of October 2016: http://inzone.unige.ch/Media-Upload_Xvc78HxeZ34xv/Kcfinder/files/MOOCs%20in%20Fragile%20Contexts.pdf

Moser-Mercer, B., E. Hayba & J. Goldsmith. 2016. Higher education spaces and protracted displacement: How learner-centered pedagogies and human-centered design can unleash refugee innovation. As of October 2016: http://cooperation.epfl.ch/files/content/sites/cooperation/files/Tech4Dev%202016/1216-Moser-Mercer-SE03-HUM_Full%20Paper.pdf

OECD. 2015. Immigrant Students at School - Easing the Journey towards Integration. As of October 2016: https://www.oecd.org/edu/immigrant-students-at-school-9789264249509-en.htm

OECD. 2015. Migration Policy Debates: Is this humanitarian crisis different? As of October 2016: http://www.oecd.org/migration/Is-this-refugee-crisis-different.pdf

OECD. 2015. Students, Computers and Learning - making the connection. As of October 2016: http://www.oecd.org/education/students-computers-and-learning-9789264239555-en.htm

Open Society Foundations. 2016. Supporting Universities Providing Higher Education to Refugees (Webpage). As of October 2016: https://www.opensocietyfoundations.org/grants/higher-education-support-program-20160404

Orr, D. 2015. Open Educational Resources - A Catalyst for Innovation. As of October 2016: http://www.oecd-ilibrary.org/education/open-educational-resources_9789264247543-en;jsessionid=2ahbecocg60eu.x-oecd-live-02

Perifanou, M. & A. Economides. 2014. MOOCs for Foreign Language Learning: An Effort to Explore and Evaluate the First Practices. *Proceedings of INTED 2014 Conference*.10th-12th March 2014. Valencia, Spain.

Redecker, C., 2010. Using Information and Communication Technologies to promote Education and Employment Opportunities for Immigrants and Ethnic Minorities. *JRC Technical Notes*. As of October 2016: http://ftp.jrc.es/EURdoc/JRC57947_TN.pdf

Reich, J. 2015. Rebooting MOOC research. *Science, Vol. 347, Issue 6214*. January 2015. pp. 34-35. As of October 2016: http://science.sciencemag.org/content/347/6217/34.full

Reich, J. 2014. MOOC Completion and Retention in the Context of Student Intent. As of October 2016: http://er.educause.edu/articles/2014/12/mooc-completion-and-retention-in-the-context-of-student-intent

Reichel D., M. Siegel, J.C. Andreo, S. Carrettero Gomez & I.C. Centeno Mediavilla. 2015. ICT for the employability and integration of immigrants in the European Union: A Qualitative Analysis of a Survey in Bulgaria, the Netherlands and Spain. *JRC Science and Policy Report*. As of October 2016: http://publications.jrc.ec.europa.eu/repository/bitstream/111111111/36857/1/jrc93966.pdf

Renz, J., F. Rampelt & A. Roe. 2016. MOOC trifft Hochschule: Herausforderungen eines Blended Learning Konzeptes für Geflüchtete. Proceedings of GML² Conference 10th-11th March 2016, pp. 247-258. As of October 2016: http://www.gml-2016.de/tagungsband-gml-2016/GML-2016_Tagungsband_final_WEB.pdf

Rizvi, S., K. Donnelly & M. Barber. 2013. An avalanche is coming: Higher education and the revolution ahead. Institute for Public Policy Research. March 2013. As of October 2016: http://www.ippr.org/publications/an-avalanche-is-coming-higher-education-and-the-revolution-ahead

Seyfarth, F. & C. Bremer. 2016. Kooperative Trägerschaft supraföderaler Lehrveranstaltungen: Der Mentored MOOC „Ready for Study" für Geflüchtete in Deutschland, in: Apostolopoulos, N. et al. (2016): in: Die offene Hochschule: Vernetztes Lehren und Lernen, Münster: Waxmann, as of October 2016: http://www.gml-2016.de/_abstracts/seyfarth.html

Seyfarth, F., C. Bremer & I. Paland-Riedmüller. 2016. Integrative Bildungsangebote für Flüchtlinge online skalieren: Ein didaktisches Modell zur Kompetenzvermittlung, in: Wachtler et al. (2016): Digitale Medien - Zusammenarbeit in der Bildung, Münster: Waxmann, as of October 2016: http://2016.gmw-online.de/wp-content/uploads/270.pdf

The Verge. 2016. Germany launches smartphone app to help refugees integrate (Webpage). As of October 2016: http://www.theverge.com/2016/1/13/10761150/germany-refugee-smartphone-app-ankommen

Tyson, J. 2016. 7 ways to apply tech to refugee education. As of October 2016: https://www.devex.com/news/7-ways-to-apply-tech-to-refugee-education-87809

UNHCR. 2016a. Connected Learning (Webpage). As of October 2016: http://innovation.unhcr.org/labs_post/connected-learning/

UNHCR 2016b. Connecting refugees. As of October 2016: http://www.unhcr.org/publications/operations/5770d43c4/connecting-refugees.html?query=digital%20learning

UNHCR. 2016c. Connecting Refugees: How Internet and Mobile Connectivity can Improve Refugee Well-Being and Transform Humanitarian Action. As of October 2016: http://reliefweb.int/sites/reliefweb.int/files/resources/connecting-refugees-unhcr.pdf

UNHCR. 2016d. Missing Out: Refugee Education in Crisis. As of October 2016: http://www.unhcr.org/57d9d01d0

Willems, J. & C. Bossu. 2012. Equity considerations for open educational resources in the glocalization of education. *Distance Education, 33:2, 185-199*. As of October 2016: http://facultyecommons.com/wp-content/uploads/2012/08/01587919.2012.pdf

Witthaus, G. & A. Inamorato dos Santos. 2016. Validation of Non-formal MOOC-based Learning. *JRC Science for Policy Report*. As of October 2016: http://publications.jrc.ec.europa.eu/repository/bitstream/JRC96968/lfna27660enn.pdf

World Bank. 2016. World Development Report 2016: Digital Dividends. As of October 2016: http://documents.worldbank.org/curated/en/896971468194972881/pdf/102725-PUB-Replacement-PUBLIC.pdf

Zawacki-Richter, O. & S. Naidu. 2016. Mapping research trends from 35 years of publications in Distance Education. *Journal Distance Education Volume 37 - Issue 3*. As of October 2016: http://www.tandfonline.com/doi/full/10.1080/01587919.2016.1185079

Zhenghao, C., B. Alcorn, G. Christensen, N. Eriksson, D. Koller & E. Emanuel. 2015. Who's benefitting from MOOCs and why. *Harvard Business Review*. September 2015. As of October 2016: https://hbr.org/2015/09/whos-benefiting-from-moocs-and-why

Annex 2: Project references

Academic Refugee Project. 2016. New project on refugee support selected for funding under Erasmus+ Strategic partnership (Webpage). Available at: http://www.unica-network.eu/news/new-project-refugee-support-selected

Apps for Refugees. 2016. Apps for Refugees homepage (Webpage). Available at: http://appsforrefugees.com/

BADGE-Empowering Female Entrepreneurship. 2016. Homepage (Webpage). Available at: http://wings-network.eu/en/learning_materials/badge-empowering-female-entrepreneurship-

Borderless Higher Education for Refugee Project. 2016. Borderless Higher Education for Refugees (BHER) homepage (Webpage). Available at: http://www.bher.org/

CommArt. 2016. CommAert homepage (Webpage). Available at: http://www.commart.eu/

Coursera for Refugees. 2016. Coursera for Refugees - Transforming Lives through Universal Access to World-Class Education (Webpage). Available at: https://refugees.coursera.org/

Digitala Sparet. 2016. Studera svenska på Internet (Webpage). Available at: http://www.digitalasparet.se

EduApp4Syria. 2016. Innovation competition: EduApp4Syria (Webpage). Available at: https://www.norad.no/eduapp4syria

Erasmus+. 2016. Erasmus+ Online Linguistic Support (Webpage). Available at: http://erasmusplusols.eu/ols4refugees/

INTEGRA-Migrants. 2016. INTEGRA - Migrants' Integrating Kit - Basic Language for Dealing with Financial Matters (Webpage). Available at: http://integra-project.eu/

Inzone. 2016. Inzone homepage (Webpage). Available at: http://inzone.unige.ch/

Jamiya. 2016. Jamiya project: reconnect Syrian students (Webpage). Available at: http://jamiya.org/

Jami3ti. 2016. Welcome to Jami3ti v2 (Webpage). Available at: https://amman.unesco.org/app/webroot/index.php

Jesuit Commons Higher Education at the Margins. 2016. Jesuit Commons Higher Education at the Margins homepage (Webpage) Available at: http://www.jc-hem.org/

Kiron. 2016. How do we support our students in their studies? (Webpage). Available at: https://kiron.ngo/for-academic-institutions/how-do-we-support-our-students-their-studies

Laser. 2016. Language and Academic Skills and E-Learning Resources (LASER) (Webpage). Available at: https://syria.britishcouncil.org/en/laser

Danish language courses in Arabic with Khaled. 2016. Laerdansk homepage (Webpage). Available at: http://laerdansk.dk/en

Leuphana Digital School. 2016. Ready for study (Webpage). Available at: www.ready4study.de

Metikos. 2016. Metikos project homepage (Webpage). Available at: http://www.metoikos.eu/index.php/en/home/14

Newbie guide to Sweden. 2016. The Refugee Guide to Sweden (Webpage). Available at: http://www.thenewbieguide.se/just-arrived/the-refugee-guide-to-sweden/

Ready4study. 2016. Ready4study homepage (Webpage). Available at:
www.ready4study.de

Refugees Welcome Map, EUA, 2016 (Webpage). Available at:
http://www.eua.be/activities-services/eua-campaigns/refugees-welcome-map

RISE - Refugee Interactive Skills for Employment. 2016. RISE homepage (webpage).
Available at: http://rise-project.eu/

Sprachportal. 2016. Mein Sprachportal (Webpage). Available at:
http://sprachportal.integrationsfonds.at/

Start-up refugees. 2016. Startup grant (Webpage). Available at:
http://startuprefugees.com/en/startup-grant/

StartupEurope 2016 (Webpage). Available at: http://startupeuropeclub.eu/spacehack-
bureaucrazy-app-winshackathon-in-berlin/

Take Care project. 2016. Take Care project homepage (Webpage). Available at:
http://www.takecareproject.eu/cy-1

Techfugees. 2016. A tech community response to the needs of refugees (Webpage).
Available at: https://techfugees.com/

University of Oslo. 2016. Start learning Norwegian today! (Webpage). Available at:
http://www.uio.no/english/about/collaboration/academic-dugnad/online-
courses/norwegian

JRC Mission

As the science and knowledge service of the European Commission, the Joint Research Centre's mission is to support EU policies with independent evidence throughout the whole policy cycle.

EU Science Hub
ec.europa.eu/jrc

@EU_ScienceHub

EU Science Hub - Joint Research Centre

Joint Research Centre

EU Science Hub

Publications Office