WORKING PAPER

# A Girl-Centred Approach to Digital Learning:

# Conceptualisation, Application and Recommendations

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## 1. Introduction

Girls affected by crises such as wars and political instability, environmental disasters, and those becoming refugees, are at particular risk of missing valuable school years. Children living in poverty worldwide often rely on the physical setting of schools to provide educational materials, guidance, and sometimes the only decent meal of the day. Further, schools aspire to provide a designated space for learning, and the school day structure protects time for children to concentrate on their learning.

In recent years, the global education crisis was exacerbated by the closure of schools during the COVID-19 pandemic, which affected up to an estimated 1.6 billion children and youth (UNICEF-ITU 2020). Different countries, regions and schools responded differently to the pandemic, but for most this involved some degree of school closure and forms of emergency remote learning (ERL), which Khlaif et al. define as the unplanned and sudden shift from the traditional form of education into a remote one following emergencies (2021). ERL took place with the help of paper handouts, radio and television, SMS and Whatsapp, as well as online learning platforms. UNICEF estimated that education response to Covid-19 largely leveraged online platforms (91% of countries) and TV (85%) to provide remote learning (Giraldo et al. 2021). Where there were high-quality digital learning platforms available, there often was an increase in enrolments on these platforms. However, due to intersecting inequalities and digital divides, equitable access to these solutions remained a challenge. Globally, an estimated 31% of schoolchildren could not be reached by remote learning, with an estimated 1.3 billion school-age children having no internet access at home (UNICEF-ITU, 2020). Many girls who had been enrolled in school may now not return to class. UNESCO estimated that 11 million girls might not re-enroll after the reopening of schools due to the disruption of their education and the need to generate an income, as well as household and care responsibilities (2020).

Digital technology can clearly play a central role not just in emergency remote learning but also in enhancing learning.

This paper is an output of a research project focusing on the opportunities and challenges of digital learning for adolescent girls in lower and lower-middle income countries, funded by Malala Fund. The wider research project combined a literature review and key informant interviews[1] to generate data which was analysed to produce a report for Malala Fund. In the course of the analysis, the authors developed the girl-centred approach to digital learning, which this working paper introduces.

The research project adopted a working definition of digital learning: Learning, which is mediated via digital devices, including mobile phones, tablets, laptop and desktop computers. It is formal or informal, and supports girls to progress broadly along a school curriculum. Beyond this definition, we also recognise the role that analogue radio, TV and SMS play, in particular as they can be more available to marginalised learners.

There is very little in the literature that argues that digital learning should be a deliberate substitute for in-person learning in a school classroom. The interview partners were unanimous in seeing digital learning as a complement, not a substitute for in-person learning in a physical school. Certainly, the quality of schools and teachers varies. However, based on the evidence available, we conclude that a good classroom learning experience with competent in-person teaching embedded in a supportive, safe and egalitarian school environment is the preferred core part of an adolescent girl's learning experience. Digital learning offers opportunities for emergency remote learning and as a complement to in-person learning.

While the potential for digital learning is considerable, the related initiatives, applications and platforms are numerous and further proliferating. The ICT4D field (information and communication technologies for development) has a history of hype cycles in which different technologies are lionised and overestimated in their impact, only for practitioners, policy and academia to realise over time their limitations and risks, amidst project failures. Thus it is important to recognise the potential of digital tools for learning, while not overestimating their power for social transformation. This is particularly the case where girls are affected by deep-rooted intersectional inequalities, including gender inequality. Digital learning by itself is unlikely to be transformative. However, digital learning has the potential to be a key aspect of the socio-technical setting in which a girl learner receives or is denied her educational opportunities. Thus, it is essential to examine the role digital learning can play for adolescent girls' educational opportunities in low and lower-middle income countries and contexts.

In this short paper, we firstly recognise intersectional inequalities before we introduce the girl-centred approach to digital learning, represented in an overview framework. From this we develop an orientation framework of factors to consider when analysing and evaluating different digital learning solutions. The report closes with recommendations for policy, practice and research as well as concluding considerations.

[1] The project period was June 2022-March 2023. The literature review was carried out by Henrietta Nanyonjo, while the interviews were conducted by Dorothea Kleine and Fiona Ssozi. See also the forthcoming longer paper by Kleine, Ssozi and Nanyonjo.

## 2. Intersectional Inequalities

Girls are not a homogenous category. Even when we focus on adolescent girls in low and lower middle-income countries, there is a further need to distinguish different intersecting axes of inequality. Income, class, ethnicity/race, caste, prior education, living in rural/urban areas, disability, gender identity and sexual orientation, being a refugee, on the move, or affected by an emergency, are all potential further sources of inequality. Therefore, contextual considerations are central when thinking about digital learning interventions or solutions for girls in these different categories.

## 3. A Girl-centred Approach to Digital Learning

Digital-related development interventions have frequently focused too intensely on the technology and insufficiently on the purpose that is to be served, as well as the people who are meant to use it. Further, it is not only the technology that needs to be understood and engaged with, but the whole socio-technical system.

This is certainly the case for digital learning. Based on findings from the literature on gender and digital learning, as well as interviews with key experts for this study, a clear shift is needed. One that puts girl learners, rather than technological solutions, at the centre of a progressive approach to digital learning for adolescent girls. Further, this approach draws on Kleine's work on a people-centred approach to digital development, and the role of social norms on time and space in ICT4D (Kleine 2013, 2019), Malala Fund's nascent work on social norms in education, and Ssozi's research on co-designing ICT solutions for and with rural communities, as well as the influences for the adoption and use of such tools developed using a participatory method (Ssozi et.al, 2016, 2017). This approach is linked to both the authors' practical experience and the empirical evidence in the literature.

As a holistic approach, the girl-centred approach to learning calls for interdisciplinary as well as inter-stakeholder collaboration in research, policy and practice. Fig 1 shows the approach as an overview framework.

### The Girl Learner

The girl learner as both an individual and socially embedded actor is at the centre of the approach. Recognising her agency, dignity and inherent rights is the starting point. Central to her learning experience is motivation, self-efficacy, resilience and perseverance, as well as creativity and vision. Much of these can also be classed as psychological resources (Kleine 2013, 2019). Importantly, unlike material or financial resources, these can often be supported and increased at relatively low financial expense.

### The Home Context

The next area to consider is the home context of the girl. This includes the material and educational circumstances of the guardians/parents, the support offered to the girl learner by the parents/guardians, as well as the existing gender relations in the family. Families and households are powerful spaces of informal learning, where gender roles are modelled. Further, these are spaces structured by gendered social norms. This includes gendered social norms of the use of space – where are men and boys expected to be, where girls and women? What is the likelihood that a girl will have a quiet place of her own to study without distraction?

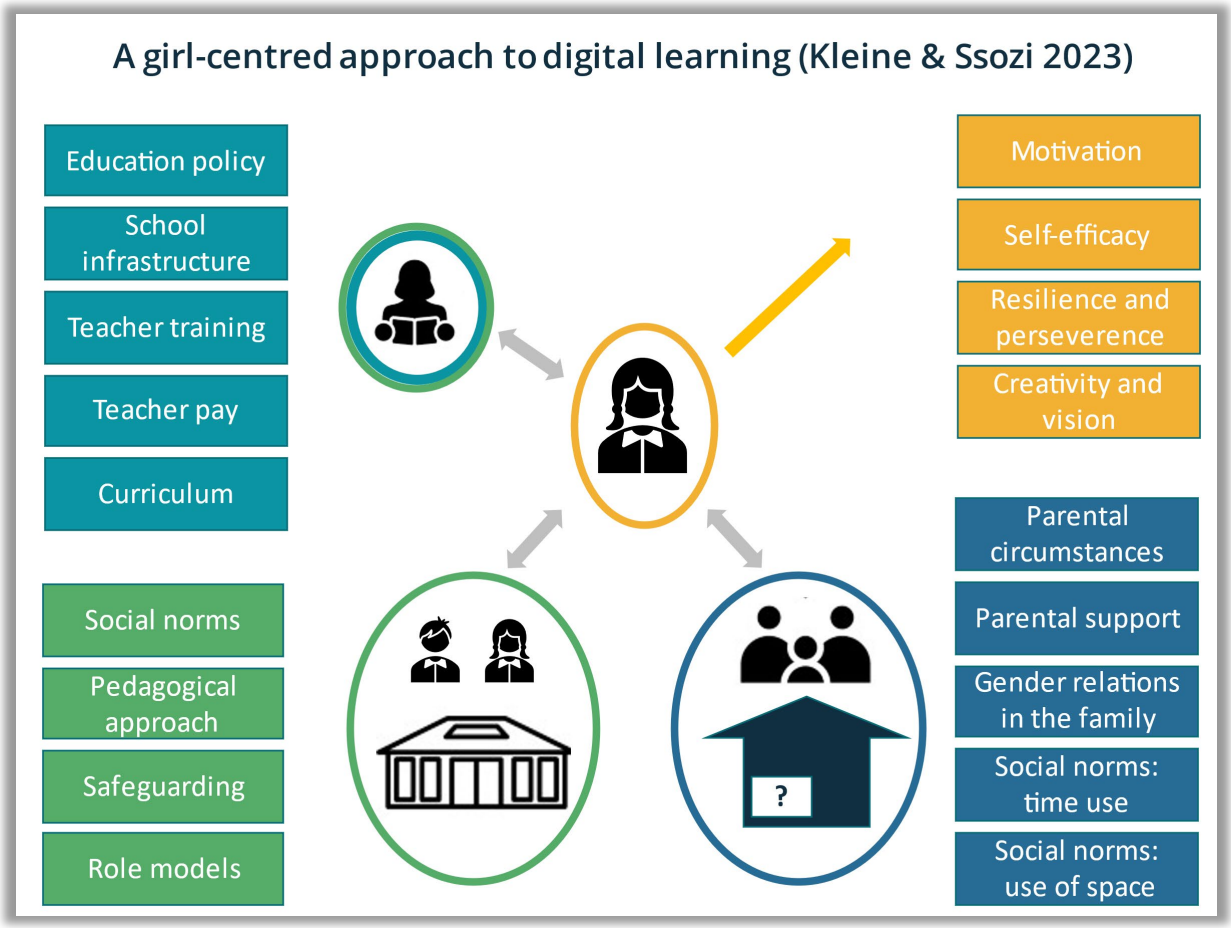


Fig.1 Overview framework for the girl-centred approach to digital learning (Kleine & Ssozi 2023)

Further, it includes gendered social norms of the use of time. Which tasks are men and boys expected to undertake, and which ones women and girls? How much is the free time and study time of girls impacted by gendered household chores, including childcare for siblings, provisioning, cooking and cleaning? What is the likelihood that a girl will have protected study time to learn without distraction? Conversely, what can parents/guardians do to support the girl learner?

<u>The school and classroom environment</u>

A further area of analysis is the social and institutional space of the school. The school's ethos, the pedagogical approach at school and at teacher level, and its approach to safeguarding, inclusion and gender equality are key factors. Both the overall pedagogical approach and the specific social norms co-define the learner and teacher relationship, the classroom management, and the feedback culture, including praise, critique and in some cases punishment. As will be evident in section 4, the role of teachers is central, and frequently they can act as role models. Schools are also spaces of peer encounter and social norms of inter-student behaviour require attention. Peers, in particularly older peers, can also act as role models for girl learners.

The policy context

The school environment in turn is embedded in the local, regional and national education policy context. Policy and funding decisions determine the school infrastructure that will be available, including educational learning materials such as books, digital tools and connectivity, and suitable learning environments. Prompt and appropriate teacher pay is central, as is a teacher training that champions values such as gender equality, and then offers methodological, didactic and pedagogic examples of good practice. The curriculum itself is frequently set at national level, and both curriculum and textbooks can be examined for balance of content and evidence of gender stereotyping.

These various aspects constitute and intersect in the girl-centred approach to digital learning which we propose with this working paper. Only once the girl and her learning environment is considered and understood, can the opportunities, barriers and risks of introducing new digital tools in this socio-technical system be examined.

In the following section, we lay out key concrete considerations for the application of the approach.

## 4. An Orientation Framework for the Application of a Girl-centred Approach

To apply a girl-centred approach to digital education, it will be essential to take into account a significant number of factors. We therefore offer an orientation framework for a girl-centred approach to digital learning which can be used as a tool to map out the potential strengths and weaknesses of different initiatives and plan new ones.

Girl: In line with a girl-centred approach, we advise to start by defining the exact target group, recognising intersecting inequalities for adolescent girls such as income group/class, prior education, age, rural/urban, ethnic group, caste, religion, disability, sexual orientation, gender identity, pregnancy and maternity status, refugee and citizenship status etc. A clear understanding of the specific target group will then allow for a more sensitive and effective approach. Digital learning cannot be delivered effectively with a one-size-fits-all approach.

Context: Building out from this, the next consideration is the home context of the girl learner, the school context, and indeed the country context. In terms of the country context, this includes the infrastructures for learning (schools, platforms, curricula, exam boards etc.) as well as the position of teachers (supply, training, pay and conditions etc.). An important factor when considering home and school environments is where there are protected times and protected spaces for girls to learn.

Content: Digital learning opportunities differ vastly depending on the subject matter and intended learning outcomes. Thus the ways of learning such as information absorption, rote learning, transfer, critical thinking, project work, group work and practical skills learning have to be distinguished, as well as the different subjects.

Empowerment: The literature reviewed documents the difficulties of replicating the affective and social dimension of learning in the online space. This however is what emancipatory and empowerment approaches focus on. Thus digital learning solutions that are progressive and girl-centred need to consider factors such as the motivational effects of being among peers (these can be positive or negative) and the potential for motivation that a good learner-teacher relationship brings. Further attention should be paid to building the social and psychological resources of the girl learners, as the evidence has shown that these play a key role in achieving good learning outcomes.

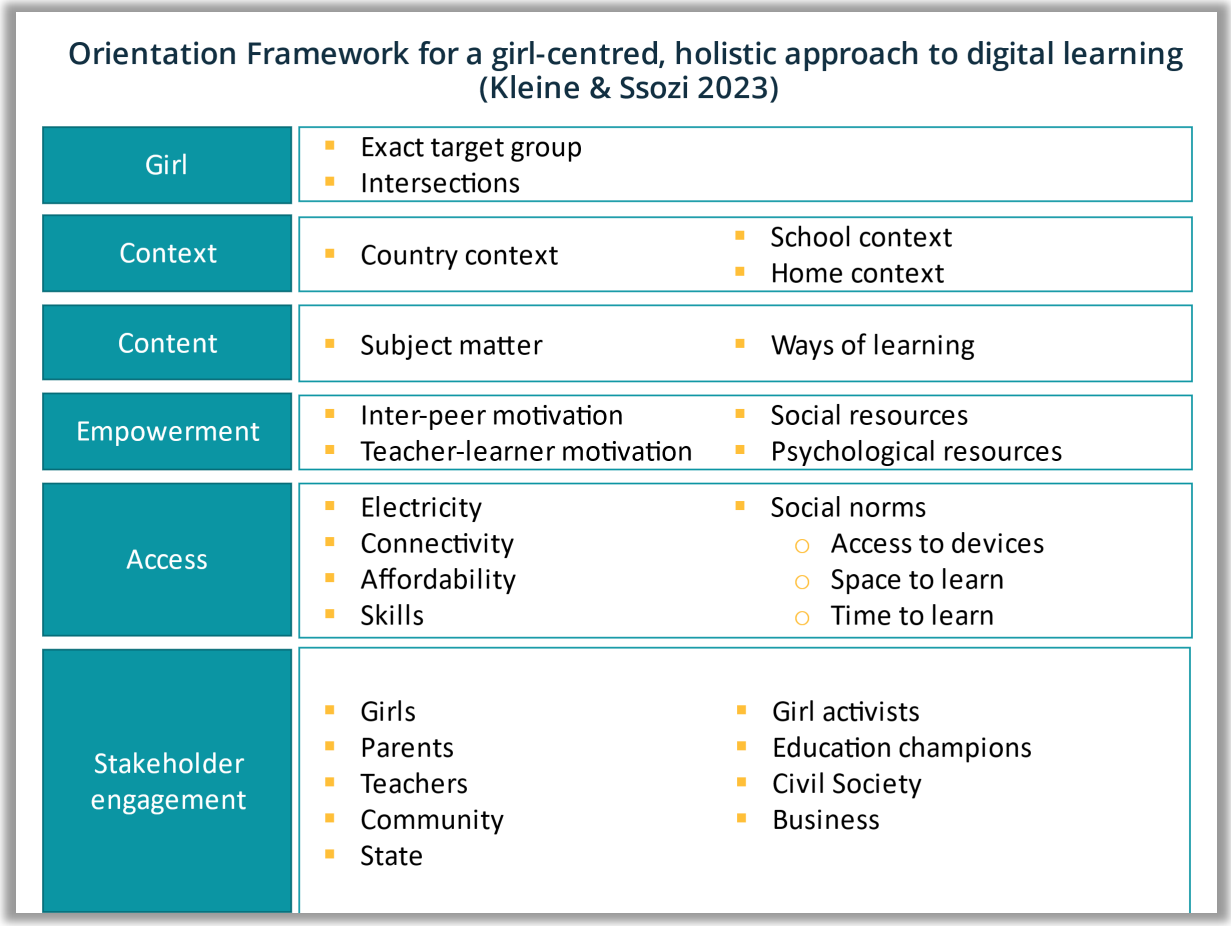


Fig.2 Orientation framework for a girl-centred approach to digital learning (Kleine & Ssozi 2023)

Access: For many girls in low and lower-middle income countries, as well as for those living in disadvantaged circumstances in richer countries, access to digital learning is a complex challenge. There are the practical challenges of electricity supply, internet connectivity (often related to mobile coverage), cost of connection, and affordability of data, as well as skills required to take part in digital learning, particularly where this requires literacy in a language that is not their first language. In addition, girls are often less powerful actors in the households they live in and have social norms and family decisions imposed upon them, for instance on who gets to use which device, where there is a good space to learn and when time is made available for the girl to study.

Stakeholder engagement: We propose that girls should be involved as key actors, and given opportunities for consultation and, where possible, co-production and co-design of digital learning initiatives created for them. Parents and guardians act as mediators, gatekeepers, and enablers in girls' learning opportunities and thus must be fully involved as stakeholders. Teachers are central to the intellectual, didactic, pedagogic, affective and indeed gender equality dimension of learning and thus are key stakeholders. Local communities and the state can shape the context, including social norms and discourses. Further, many digital learning initiatives should be integrated with the national curriculum and exam system, thus collaboration with the education ministries is central. Civil society, and within it education champions and girl activists, play a key role in progress towards gender equality in education and thus should be involved in co-design of digital learning initiatives that have gender equality

aims. Finally, most digital learning initiatives are multi-stakeholder partnerships involving public, civil society, and private sector, joint ventures or solely commercial operations. Thus business is a key stakeholder group to engage with. It will be beneficial for digital learning initiatives to do a thorough stakeholder mapping and develop stakeholder engagement strategies alongside developing the digital learning project or programme.

## 5. Recommendations

Given the diversity of target groups, contexts and stakeholders, the potential policy considerations and recommendations are extensive and frequently will need to be bespoke. We recommend reviewing key generic guidelines such as:

- The UNESCO 10 recommendations to plan distance learning solutions https://en.unesco.org/news/covid-19-10-recommendations-plan-distance-learning-solutions

- World Bank Guidance on Remote Learning http://documents.worldbank.org/curated/en/531681585957264427/pdf/Guidance-Note-on-Remote-Learning-and-COVID-19.pdf

- OECD Framework to Guide Education Response during Covid19 https://www.oecd-ilibrary.org/docserver/6ae21003-en.pdf?expires=1669387456&id=id&accname=guest&checksum=F503C9A661ADB5DD5F00F9BAFEB3B3E7

Our own 10 essential considerations for policy, practice and research are these:

I) Girls at the centre: We propose to put girls at the centre when discussing digital learning for them. From a design perspective, this means including them in many stages of policy, programme and project development, including in design processes. Here, there is a need to develop gender-just design approaches for digital technology to allow for active participation of girls in shaping the digital technologies aimed to support their learning.

II) Internet as a right: An important pre-condition for girls' digital learning is access to the internet. Thus in high-level policy making, it is essential to support universal coverage and a universal right to internet access.

III) Recognise multiple intersecting inequalities: Consider the different ways in which girls are disadvantaged and do not treat them as a homogenous group. In terms of digital learning, pay attention to girls that live under particularly patriarchal social norms, those affected by displacement such as refugees, and those with disabilities. Funders and donors need to recognise that working with hard-to-reach groups is often more expensive per learner, riskier in terms of retention, and more complicated to scale - and need to adjust their monitoring and evaluation methodologies accordingly.

IV) Connect with the national curriculum: Initiatives should be linked to the specific country context and fit in with or complement, existing national education provision,

including national curricula. They do not have to necessarily be authorised by national authorities, but they should build on and enhance, rather than distract from what is offered in the national public education system. Curricula need to be examined from a gender equality perspective. Gender-just curriculum content can be amplified, gender stereotypes balanced out with alternative content.

V) Multiple dimensions of learning: Empowerment through learning happens not just through knowledge transfer and intellectual growth, but also through the social and affective dimension of learning. It is here that the social and psychological resources of the learner are expanded. Digital learning initiatives, and their role combined with in-person classroom learning, need to be understood with these multiple dimensions of learning in mind.

VI) Teachers play a key role: Good teachers and good teaching practice build confidence and inspire learning, while bad teaching practice undermines confidence and can impede learning. Teachers, their approaches, attitudes and practices are central to traditional, hybrid and digital learning. Human teachers need to be engaged as key stakeholders for most higher-level learning and there needs to be investment in life-long teacher training. Girls benefit from strong women teachers as role models, thus education systems should foster strong women teachers in their midst. Where teachers are assisted by Artificial Intelligence (AI), it is necessary to firstly center the human teacher, and secondly avoid training the AI system in a way that replicates gendered stereotypes.

VII) Social norms are central: Access is a multi-dimensional challenge including considerable practical barriers such as electricity, connectivity and skills. However, social norms on the use of space, the use of time, and the use of devices determine the learning conditions of the girl. Further, social norms in the classroom or online learning space, on who participates, who is praised and encouraged, and who is safe (and who is not), are key factors to consider in policy and practice.

VIII) Safeguarding: Adolescent girls need safe spaces to learn. This needs to guide policy on online digital learning spaces, as well as school policy on learning in schools. Further, girls need safe and appropriate learning spaces in the home.

IX) Environmental Sustainability: Digital learning initiatives need to consider environmental sustainability. There is growing evidence (as documented in (Digitalization For Sustainability (D4S), 2022) that digitalisation comes with significant energy costs and most devices produce e-waste at the end of their use life. On the other hand, in some cases there are emission savings compared to daily travel to school. The climate and environmental costs of different modes of digital learning compared need to be examined, published and considered, before these are endorsed and taken to scale.

X) Institutional Sustainability: Many commercial start-ups fail, many civil society projects end when project funding periods finish. Thus the financial and institutional sustainability of digital learning initiatives needs to be considered in advance. Long-term solutions may include sustainable business models, connection with national education strategies and budgets, or at least the ongoing archiving and curation of content that can be reused.

## 6. Conclusion

This short paper proposes a girl-centred approach to digital learning. Conceptually, we propose shifting attention from a focus on a specific technology to a systemic and holistic girl-centred approach that starts with the aspirations and interests of the girl learner and then engages with the whole socio-technical system of digital learning. This is situated in specific home and school contexts and structured by the national education policy and infrastructure as well as local social norms. The approach also recognises the importance of the affective and social dimensions of learning, and the key significance of enhancing not just the educational, but also the social and psychological resources of the girls. To use such a systemic and holistic approach to collectively shape digital learning initiatives, it is firstly necessary to engage closely with the girl learners and secondly, to collaborate across disciplines and various stakeholder groups.

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