

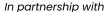


DIAGNOSTIC TOOLS FOR IMPROVING EDUCATION POLICY PLANNING: A CASE STUDY ON YEMEN GIRLS DROPOUT IN PRIMARY EDUCATION IN EMERGENCIES

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ABOUT THE LEARNING CYCLE ON DIAGNOSTIC TOOLS FOR IMPROVING EDUCATION POLICY PLANNING

This case study is a result of the KIX EAP Learning Cycle "Diagnostic tools for improving education policy planning". Facilitated by the UNESCO International Institute for Educational Planning (IIEP), this professional development course ran from 20 September to 11 November 2022. Across 8 weeks, this Learning Cycle enabled participants to identify system bottlenecks for improving education policy planning, with a special focus on the use of diagnostic tools for system performance analysis. 14 national teams from 13 countries took part in this Learning Cycle: Cambodia, Georgia, Kyrgyz Republic, Lao PDR, Maldives, Moldova, Mongolia, Pakistan (Balochistan), Pakistan (Sindh), Papua New Guinea, Sudan, Tajikistan, Timor Leste and Yemen.



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LIST OF ACRONYMS AND ABBREVIATIONS

CSO Central Statistic Organization

EAP Europe, Asia, Pacific
EiE Education in Emergencies

Education Management Information System

GER Gross Enrolment Ratio

HBS Household Budget Survey

HNO Humanitarian Needs Overview

HR Human Resources

IDP Internally Displaced People

IIEP International Institute for Educational Planning
INEE International Network of Education in Emergencies
INGO International Non-Governmental Organisation

KIX Knowledge Innovation Exchange

MoE Ministry of Education

NGO Non-Governmental Organisation

OCHA United Nations Office for the Coordination of Humanitarian Affairs

SDG Sustainable Development Goal

SDR Secondary Data Review
TEP Transitional Education Plan
UIS UNESCO International Statistics

UNESCO United Nations Educational, Scientific, Cultural Organization

UNICEF United Nations International Children's Fund
UNICCA United Nations Common Country Analysis

USAID United States Agency for International Development

WB World Bank

YEC Yemen Education Cluster

YHRP Yemen Humanitarian Response Plan

YNC Yemen National Commission

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EXECUTIVE SUMMARY

Introduction

Political instability, crisis, and wars that have existed since 2011 have led to complex challenges and obstacles to Yemen's education system, resulting in high rates of illiteracy and dropout of girls in schools. Girls aged between 6–14 are regarded as one of the most vulnerable groups in Yemen. There has been an increase in girls' dropout in primary education as a result of the ongoing war and conflict in the country. As such, this case study focuses on the school completion of girls in primary education in public schools at the ages of 6–14. The research focuses on the population at large for the school period of 2014–2018.

Data Availability

The EMIS team, including the cyclic educational survey, produces regular education data on enrolment in public education by age, sex, grade, and governorate, usually through the national school census, which is conducted almost on a regular basis. In addition, some tools, such as surveys, are used for collecting educational data (Ministry of Education [MoE], 2019). The ongoing war has hindered the collection of data throughout all governorates in the country (MoE, 2019). This report draws on data from the last Education Management Information System (EMIS) report (2016), the educational survey done by the Ministry of Education in 2016, the Yemen Country Report on Out-of-School Children (2015), and from reports of major international organizations like UNICEF, Save the Children, OCHA, and the World.

Examining Level Completion

Using the IIEP Policy Trees, several indicators were identified—that is, enrolment rates in primary education by the governorate, the rates of gross enrolment of both girls and boys in primary education at public schools, etc. Based on the data and using the pathways of the decision tree, the analysis found that the war led to decreased enrolment rates (91.0% to 87.05% for boys and 77.15% to 73.97% for girls) and completion rates (52.4% to 44.9% for boys and 42.6% to 36%).

Potential root causes were identified and are as follows: : (i) economic barriers, (ii) displacement, (iii) insecurity, and (iv) physical damage to school buildings and infrastructure, especially those located in or near conflict areas.

Potential Policy Options

To address the economic barriers that have been accelerated by the conflict, the following policy options are recommended: (i) provide economic incentives, (ii) provide income-generating activities for families (i.e., providing monthly school feeding for both girls and their teachers at primary schools), (iii) establish a joint fund between NGOs and official governmental partners for supporting girls' education, and (iv) build flexible learning strategies/alternative learning programmes.

To address teacher-related constraints, it is suggested: (i) to develop partners with communities and NGOs to pay teacher salaries, (ii) to increase teacher motivation and satisfaction, and (iii) to shorten the school week.

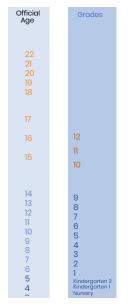
INTRODUCTION

1.1. Country Context

Yemen is located in southwestern Asia bordered by Saudi Arabia, Oman, the Red Sea and the Arab Sea. It has a strategically important position in international trade with sea and land roads linking two continents (Asia and Africa) and leading to the Mediterranean Sea via the Red Sea.

At present, education in general—and women's education in particular—in this country has faced many complex challenges and barriers, leading to high rates of illiteracy and girls' dropout at schools as a result of political instability, crises, and wars. The current crisis and conflict in Yemen started in 2011, with short periods of stability until the beginning of the war in 2015. The ongoing war and conflict has led to the world's worst humanitarian crisis, combined with increasing rates of poverty and job loss, low rates of enrolment in education and inequalities accompanied by social, economic and political instability (United Nations Office for the Coordination of Humanitarian Affairs [OCHA], 2019). Therefore, 80% of the 30 million people in the country live under the poverty line (OCHA, 2019).

Figure 2. Structure of the Formal Education System in Yemen



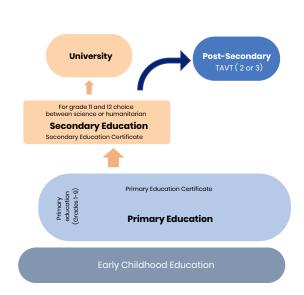


Figure 1: Yemen Map



Source: Central Statistical Organization [CSO] (2019a)

1.2. Education Context

In general, the formal educational system structure in Yemen includes all stages of education, from the preschool stage to university education. Figure 2 shows the different systems of formal education in Yemen.

Reports indicate that before 2011, Yemen had achieved progress towards increasing access to education at all levels, including greater inclusion of girls. However, these gains have been lost due to the war (MoE, 2019). In general, the education sector has been severely affected by continuous war and conflict at different levels. According to some international non-governmental organization (INGO) reports, 4.7 million children need access to education (OCHA, 2019; UNICEF, 2021). Girls' education is one of the sectors most affected by the war. The number of children out of school is estimated to be over two million since the start of the war in 2015, and 62% of this number are girls (OCHA, 2019). Generally, 36% of girls are out of school compared to 24% of boys (United Nations Yemen, 2021).

1.3. Rationale

Considering Learning Cycle 4 domains related to school completion, the current Knowledge Report mainly focuses on girls' dropout in primary education in public schools at the ages 6-14, namely girls in grades 1-9 in all governorates in the country during the period 2014–2018. The rationale behind choosing this topic and stage of education (girls' dropout in primary education) is the very crucial importance of primary education as the cornerstone for later stages of education. Further, girls (aged between 6-14 years) are regarded as one of the most vulnerable groups to war impact and its shortand long-term consequences, such as early child marriage, exploitation and the re-emergence of socio-cultural constraints. In addition to the participants' interest, the topic of girls' dropout in primary education as a result of the ongoing war and conflict in the country can be useful for the decision makers in the government and stakeholders through drawing their attention to the severity of this problematic issue and its multiple and complex impacts that may require decades to be tackled in the case that no immediate interventions are taken by the concerned stakeholders. This report is expected to bring significant insights about girls' dropout, especially by following well-designed standards and toolboxes offered by international specialised institutions, such as IIEP.

1.4. Objectives of the case study/report

This report is intended to achieve the following objectives:

- To investigate the main causes and consequences of girls' dropout at public primary schools during the current situation of conflict and war in the country.
- To examine and contrast the available different diagnostic tools and sources of educational data by the EMIS in the MoE and other relevant official and NGOs sources on the rates of girls' dropout in primary schools in the conflict and war situation.
- To apply the UNESCO-IEP diagnostic tools (Education Policy Trees & Education Policy Toolbox) in a guided analysis of school completion and determinants of

- access and dropout of girls in primary education.
- To identify the promising policy options in IIEP Education Policy Trees & Toolbox that can be applicable in overcoming the issues and causes of primary school girls' dropout.
- To offer practical and significant insights and suggestions for the country decision makers about girls' dropout whether in times of emergencies or ordinary situation, especially in light of the international educational policies, standards and frameworks that are developed by UNESCO- IIEP.

1.5. Data sources of girls' dropout at primary schools

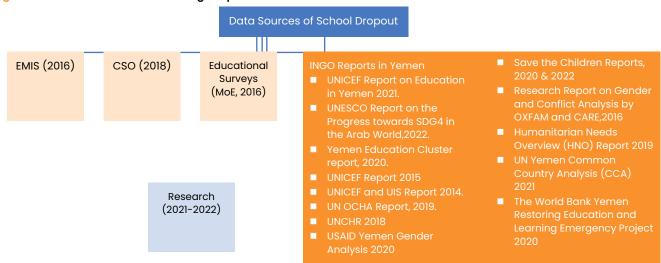
In this context, we should refer to the main available diagnostic reports and data sources related to girls' dropout in public education, including primary schools in Yemen. Based on searches and contacts with official bodies and institutions, the main relevant diagnostic reports are as follows:

- Education Management Information System (EMIS), last report from 2016
- Central Statistic Organization (CSO), a governmental organisation (2018)
- Ministry of Education (MoE) Education Survey (2016)
- Yemen Country Report on Out-of-School Children (2015):
 UNICEF Yemen Country Office
- Some relevant academic research in 2021

Due to the impact of the war causing difficulty in obtaining the latest data from national entities, we primarily used in this report the available official educational statistics and data carried out by EMIS (2016), MoE Education Survey (2016) and CSO (2016–2018). Therefore, these official entities will be the main basis for the data analysis in this report. Other related data are taken from Educational Surveys (2016) and the CSO (2016–2018). Further, some relevant data from the Yemen Education Cluster (YEC) reports and some INGOs are used in this report to provide more information and clarification needed for accurate analysis and interpretation of the data related to the impact of the conflict and war on girls' dropout in primary education. For the purpose of this report, we used the data sources summarised in Figure 2.

Figure 3 shows the main sources of the data related to girls' dropout in primary education used in this report, including official and INGO reports, as well as relevant academic research. This figure was designed according to the available sources of the girls' education in primary education stage.

Figure 3. Data Sources of the Knowledge Report



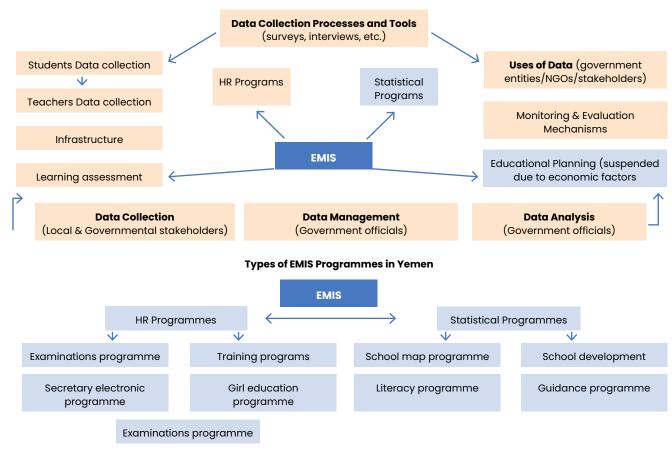
Source: Developed by the authors

1.5.1. EMIS Structure in Yemen

This section briefly sheds light on the main national entities in charge of producing and supervising educational data and statistics in the country, along with the mechanisms and tools used for collecting such data. As mentioned in the previous section, the official national authorities or bodies responsible for educational data are EMIS, which produces educational surveys and the CSO.

In general, in ordinary situations away from current war and conflict conditions, the EMIS team, including a cyclic educational survey at the MoE, produces regular education data on enrolment in public education by age, sex, grade and governorate, usually through the national school census that is conducted almost on a regular basis. In addition, some tools, such as surveys, are used for collecting educational data (MoE, 2019). Figure 3 shows the structure, sections and types of EMIS in Yemen:

Figure 4. Structure of Yemen Education Management Information Systems of General Education (EMIS)



Source: Developed by the authors

1.5.2. Status of EMIS During the Ongoing War

EMIS has been affected by the conflict in the country, which has caused its inability to collect data throughout all governorates in the country (MoE, 2019). The last updated EMIS data, namely the school census data for the years 2015/16 and 2014/15, were collected between May 2016 and the end of 2017 with support from UNICEF (through Global Partnership for Education funding) (MoE, 2019). Insecurity that hinders data collection from all schools in the country, as well as the lack of an operational budget, are the major problems facing EMIS during the ongoing war (MoE, 2019).

1.6. Enrolment Rates in Primary Schools in 2016

The following figure shows the educational data and statistics provided by EMIS in 2016 concerning the rates of enrolment in primary education in terms of age, gender and governorate level.

EMIS (2016) data show the gross enrolment ratio (GER) of both girls and boys in primary education at public schools. Clearly, the data indicate differences in enrolment rates at the gender and governorate levels, which vary from one governorate to another.

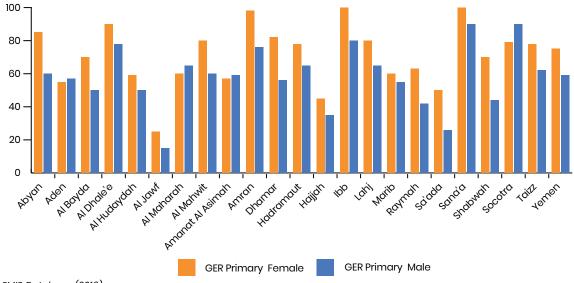
Table 1 and Figure 4 display educational statistics of the rates and number of enrolments in primary education for both boys and girls, in addition to the number of teachers in every governorate according to the EMIS database (2016). The main educational statistics are summarised in Table 2 below.

Table 1. Number of Teachers and Enrolled Students (2015/2016)

Table 1. Number of Teachers and Enrolled Students (2015/2016)						
	Number of Enrolled Students in				r of Teache	
	Primary Ed	Education F		Primary Education		
Governorate	Males	Females	Total	Males	Females	Total
lbb	362862	301456	664318	8030	2026	10056
Abyan	57607	42096	99703	4160	2163	6323
Sana'a City	249602	239764	489366	2624	7197	9891
Al-Baida	74814	58287	133101	2388	562	2950
Taiz	312615	273534	586149	6639	2189	8828
Al-Jawf	22117	17580	39697	1187	283	1470
Hajjah	166879	124811	291690	5632	1351	6983
Al-Hodeidah	261385	220578	481963	7741	4061	11802
Hadramout	146032	118374	264406	7513	3233	10746
Dhamar	225810	160060	385870	5915	992	6907
Shabwah	64895	44056	108951	3158	729	3887
Sa'adah	85831	56350	142181	2493	494	2987
Sana'a	173746	132530	306276	3737	569	4306
Aden	68943	59397	128340	1261	4365	5626
Laheg	107889	86614	194503	4600	1728	6328
Mareb	28915	24908	53823	1075	468	1543
Al-Mahweet	78049	58229	136278	2321	326	2647
Al-Maharah	12831	11707	24538	422	368	790
Amran	146922	112971	259893	4374	531	4905
Al-Dal'e	83732	70762	154494	2766	841	3607
Reymah	55854	39475	95329	1823	282	2105
Sokatra	7528	7312	14840	265	149	414
Total	2,794,858	2,260,851	5,055,709	80,124	34,907	115,101

Source: EMIS (2016)

Figure 5. Gross Enrolment Ratio (GER) in Primary Education by Governorate, 2016



Source: EMIS Database (2016)

Table 2. General Education Statistics According to EMIS (2016) and CSO (2016–2018)

` ,		
Item	Data	Note
Number of Governorates	23	
Number of Students at General Education	Around 6,000,000	Source: CSO (2019a)
Number of Students at Primary Education	5,055,709	This is gross enrolment ratio.
Number of Boys Enrolled at Primary Education	2, 794, 858	
Number of Girls Enrolled at Primary Education	2,260, 851	
Number of Teachers & Employees in Ministry of Education	304,407	
Number of Teachers	280,761	
Total Number of Teachers at Primary Education	115, 101	Male: 80,194 Female: 34,907
Number of Schools	12692	

Sources: CSO (2019a), EMIS (2016)

KEY DETERMINERS OF EDUCATION COMPLETION

Based on the selected topic of the Knowledge Report, this section deals with the key determiners of education completion from the perspective of the IIEP Education Policy Trees.

2.1. Examining Indicators Related to the IIEP Education Policy Trees

This section briefly highlights the decisions the team has made regarding selecting the most relevant pathways, indicators and topics of the IIEP Completion Tree, which are of high priority to the girls' dropout at primary education in Yemen.

After identifying and examining indicators of education completion for primary school girls in Yemen, especially during the ongoing war and conflict in light of the IIEP Completion Tree, the authors of this report decided to include the most important topics pertinent to the country context. Through the IIEP Completion Tree in Figure 5, we highlight the topics related to girls' dropout in primary education as follows:

Figure 6. Levels 1 and 2 of the IIEP Completion Tree Source: UNESCO-IIEP (n.d.) School Completion Availability of **Grades Repetition** Grades Natural Made Hazards Disasters V Man Made Hazards (War) School Supply Teacher Supply School location School buildings are not usable Individual Learning Difficulties Barriers to School Attendance School Climate School Violence Teacher related constrains Socio-cultural Barriers to Schooling School Infrastructure School Community Relationship Economic Barriers to schooling School Construction Language of Instruction Teacher Deployment, retention Teacher recruitment Teachers Salaries School infrastructure Buildings Teachers Salaries Availability Students Drop out War Impact Extent in School construction **Financial Constrains** $\sqrt{}$ Teaching Skills Teacher Absenteeism Teacher Behavior \downarrow **小** School readiness Individual learning need Opportunity Cost of Schooling Logistical constrains in paying Teachers Financial constrains in paying Teachers Appropriate teacher candidate Direct Cost of Schooling Teacher incentives Logistical constrains in School Construction **School Construction** Insufficient Budget for High cost for School Priority Not priority Suggested adaptation

14

The boxes in light blue refer to the selected topics of girls' school completion and dropout with high priority. The topics and branches in light orange have no great priority in relation to the present report topic of girls' school dropout, especially in the current country situation affected by the war and conflict since 2015. The dark orange boxes include a suggested addition of education in emergencies (EiE) to the tree.

Due to the particularity of the education situation in Yemen since the beginning of the war in 2015 and its devastating impact and consequences on the education field, the authors of this report suggest adding an independent branch of EiE to the IIEP Completion Tree for the following reasons:

- Wars and conflicts are the leading barriers to education completion.
- EiE has special and various conditions that differ according to the emergency situations and political and economic contexts of a country.
- It is more convenient to gather and highlight EiE issues in an independent unit or branch within the IIEP Completion Tree instead of being separated in different pathways.
- Some policy options offered in the IIEP Completion Tree and Toolbox are built on considerably affected situations and bottlenecks that can be solved on a short-term basis. Therefore, it is recommended that this comprehensive framework (IIEP Completion Tree) include and take into

consideration the worst conditions and impacts on the education field in countries that have severe conflicts and wars for long periods, such as non-payment of salaries, loss of tens of thousands of jobs and high rates of poverty of most populations, which can deactivate many suggested options and solutions.

Figure 7 shows the relevant and prior issues in the Level 1 layer: access to education, in light of girls' enrolment in primary schools in Yemen. This is divided into educational demand, school supply and teacher supply.

Regarding the topic of education demand, we chose socio-cultural barriers to schooling and economic barriers to schooling (direct cost of schooling and opportunity cost of schooling) due to the huge impact of war on the national economy and individual income. For teacher supply, we selected teacher salaries and financial constraints in paying teachers, as well as teacher incentives. For school supply, only school infrastructure, school not usable and school location are selected, especially due to the effect of armed conflict and airstrikes on the schools.

In terms of dropout determiners, we selected only obstacles to teaching and learning, which includes more factors and branches in the IIEP Tree and is subdivided into teacher-related constraints (teacher absenteeism). Most importantly,

Access to Education 乊 マ Teacher supply, School Supply > Economic Barriers to schooling School Community Relationship Supply Teacher Supply School location School Socio-cultural Barriers to Schooling Language of Instruction Teacher recruitment Teacher Deployment, retention > School Infrastructure Teachers Salaries School Construction School buildings are not usable > Teacher incentives Construction School Violence Teachers High cost for School Individual Learning Difficulties Appropriate teacher candidate Teachers Logistical constrains in paying Financial constrains in paying $\sqrt{}$ > Financial Constrains School Construction Insufficient Budget for in School Construction Logistical constrains in School construction

Figure 7. Level 1 of the IIEP Completion Tree

Source: UNESCO-IIEP (n.d.)

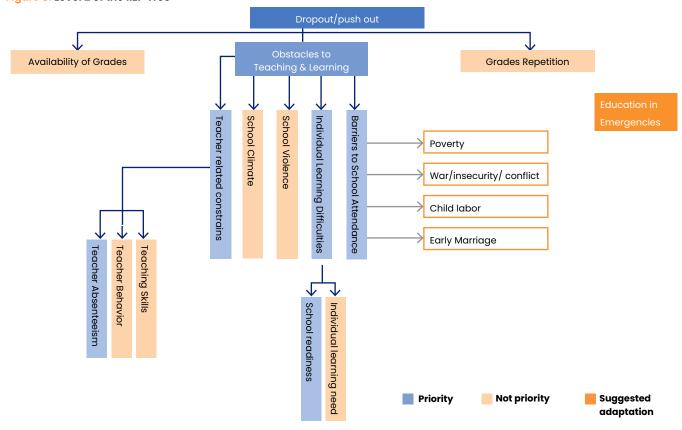
we focus on barriers to school attendance as a result of their great relevance to the topic of this report. These barriers include four major causes:

- Conflict/war: leading to insecurity and displacement
- Poverty

- Early marriage
- Child labour

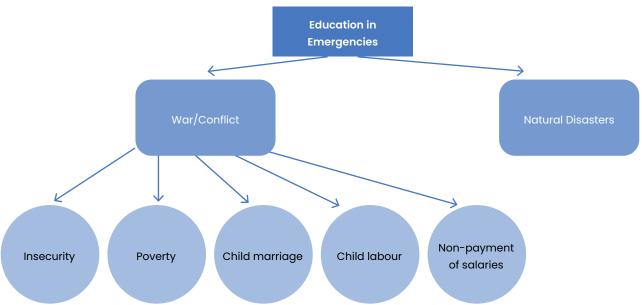
Thus, we suggest adding EiE to the dropout segment, as shown in Figure 9.

Figure 8. Level 2 of the IIEP Tree



Source: UNESCO-IIEP (n.d.), with some adaptation by the authors

Figure 9: Education in Emergencies



Source: Developed by the authors

This framework of EiE above was suggested by the first author of this report and revised by the three other authors to address the peculiarity of EiE situations in Yemen and similar countries.

2.2. Root Causes and Constraints of Girls' Completion of Primary Education

Based on the framework of the IIEP Tree, the major root causes of girls' dropout in primary education in Yemen at the current time can be adapted as follows:

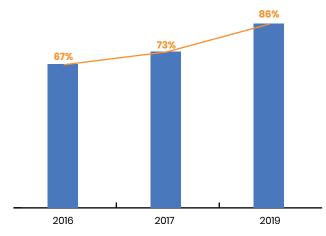
- Conflict/war, leading to insecurity and displacement
- School buildings affected by war and conflict
- Poverty
- Early marriage
- Child labour
- Non-payment of teachers' salaries (teacher absenteeism)
- Economic barriers

2.2.1. Conflict/War

There is no doubt that war has a massive impact on education because it usually leads to many consequences at the immediate and long-term levels. In Yemen, the ongoing war and conflict have caused several problems, such as insecurity, displacement and physical damage to many schools, especially those located in or near conflict areas.

War and School Completion Rates

Figure 10. Rates of Enrolment in Primary Education During 2016–2018



Source: CSO (2019a)

It is clear from Figure 10 that the ratio of enrolment to public education (boys and girls) has been decreasing since the beginning of the war, as observed by the differences in the enrolment rates of 86% in 2016 to 67% in 2018. This clearly indicates that economic obstacles are worsening every year due to the continuity of war.

Moreover, girls are more affected by conflict than boys, as illustrated in Table 3, which shows the large differences between the rates of enrolment and completion for boys and girls at primary schools before the war in 2015 and after the war in 2016. This is obvious by comparing the rates of boys enrolling (87.05%) and completing their education (44.9%) after war with girls' enrolment (73.97%) and completion (38.0%).

Table 3. Enrolment and Completion Ratios of Primary Education Before War (2015) and After War (2016)

Enrolment/ Completion Rates	Before War (2015)		After War (2016)	
Gender	Female	Male	Female	Male
Ratios of student enrolment in primary education (Grades 1–9)	77.15%	91.90%	73.97%	87.05%
Completion rate of primary education (Grades 1–9)	42.6%	52.4%	38.0%	44.9%

Source: CSO (2019a)

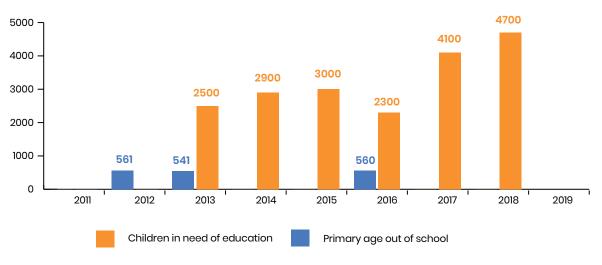
War Leading to the Loss of Previous Progress in Girls' Education

Before the war, the country witnessed considerable progress in girls' access to education at both primary and secondary levels with a Gender Parity Index of 0.84 and 0.72, respectively, during the period 2003–2015, especially through adopting three main strategies of supporting girl's education: the National Basic Education Development Strategy (2003–2015), the Medium-Term Results Framework (2006–2010) and Medium-Term Plans for the National Basic Education Development Strategy (2013–2015) (MoE, 2019). However, all these achievements in basic education enrolment, especially girls' education, have been lost since the war as a result of the massive impact of the war and conflict, leading to high rates of girls' dropout from primary and secondary schools (Yemen Education Cluster [YEC], 2017).

War Causing High Rates of School Dropout

It is estimated that the number of children out of school has been over two million since the start of the war in 2015, 62% of which are girls; overall, 36% of girls are out of school, compared to 24% of boys, (OCHA, 2019; UN Yemen, 2021). Additionally, UNICEF states that 4.7 million children are in need of access to education (UNICEF, 2021). Figure 10 shows the increasing rates of children out of school due to the war until 2019.

Figure 11. Children Out of Schools Due to the War



Sources: Humanitarian Needs Overview [HNO] (2019), UNESCO Institute for Statistics (2014)

In terms of the impact of conflict on girls' education, the rates of girls dropping out of school are higher than the boys' dropout rates; displaced girls are especially at risk of dropping out of school "as families with limited resources deprioritise their right to education" (OCHA, 2019). There is a rise in genderbased violence after four years of conflict and economic decline, exposing women and girls to even more risks and vulnerabilities and creating additional barriers to education (OCHA, 2019).

2.2.2. Insecurity and Physical Damage of Schools

Wars, including armed conflicts and airstrikes, have a negative effect on educational facilities. In a report by the Yemen Education Cluster (2017), the impact of conflict on schools was revealed through the data shown in Table 4.

In such areas of conflict and airstrikes, a lack of safety and security can be a real barrier to school completion and attending school for both students and teachers. For children in areas of violent conflict, parents are less inclined to send their children to school, especially when they have to walk long distances to reach school and where armed groups are located close to schools (Save the Children, 2018). Other barriers to access and completion include the presence of unexploded ordnance and other explosive remnants of war that impact the safety and security of children and education (Save the Children, 2016).

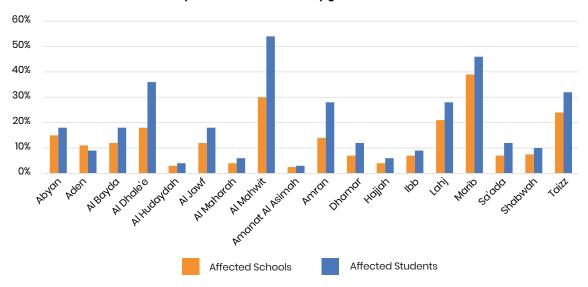
Moreover, there is a direct impact of conflict on schools, students and teachers, especially in areas of conflict. Many schools repeatedly come under attack, resulting in the injury and death of students and teachers and causing

Table 4. States of schools affected by the conflict between January 2016 and September 2017

Item	Data	Note
Schools unfit for use due to war and conflict-related damage	1,842 schools	
Schools closed or not functioning	3,584 schools	Unfit for use or teachers and students stopped coming to school
Schools occupied by armed groups	23	
Schools occupied by IDPs	150	
Schools partially damaged	1,413	
Schools totally damaged	256	
schools affected by the conflict	2,407	
Learners affected by attacks on schools	1,479,891	
Teachers affected by attacks on schools	56,525	
The governorates with the most schools affected by the conflict	Taiz, Amanat al- Asimah and Sa'ada	

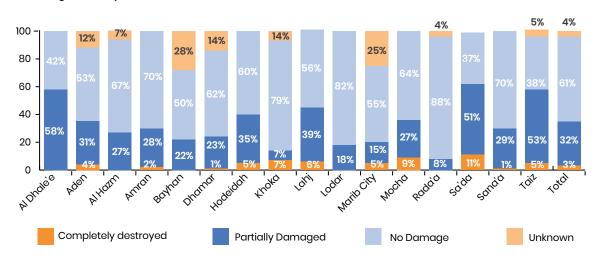
Sources: MoE (2017), YEC (2017)

Figure 12. Affected basic and secondary schools and students by governorate, 2017



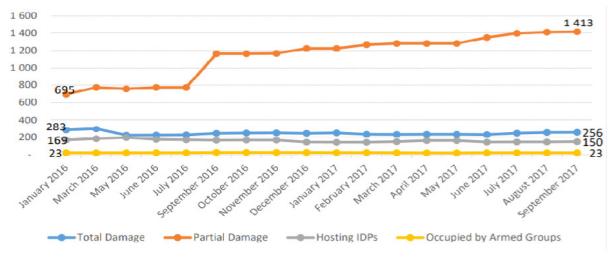
Sources: MoE (2017), Save the Children (2018)

Figure 13. Damaged and Operational Schools



Source: World Bank (2020)

Figure 14. Schools Affected by Conflict



Source: YEC (2017)

considerable material damage. It is estimated that 3,336 children were killed in Yemen between March 2015 and February 2021 (Save the Children, 2022). Commenting on the horrible impact of war and conflict on children, Save the Children (2022) states:

Children have seen their friends, parents and teachers killed. They have witnessed the repeated attacks on their schools and have seen the hospitals they rely on to recover damaged and crippled beyond what the health sector can cope with. Ultimately, these unforgiving years have left children afraid, traumatized and in urgent need of humanitarian intervention.

During the same period (2015–2021), there were 465 verified incidents of attacks against schools (Save the Children, 2022). There is no doubt that this environment of insecurity largely contributes to children's school dropout, especially girls who are more vulnerable than boys.

2.2.3. Displacement

Due to the conflicts taking place in different areas of Yemen, there have been high rates of internal displacement. It is estimated that the current total number of internally displaced people (IDPs) is more than 4 million, which is regarded as the fourth-highest level of internal displacement globally (United Nations Yemen, 2021). In the education field, "displacement leads to dropouts, limited re-entry into schools, overcrowding of schools and school closures when they are used for shelter" (YEC, 2020).

Women and children constitute more than 70% of IDPs in Yemen, and approximately 30% of displaced households are female headed, compared to 9% before conflict worsened in 2015 (OCHA, 2021). The statistics in Figure 14 show the massive internal displacement of the population.

Figure 15 shows that the number of IDPs rose significantly during and after the war: 2015, 2017, 2018 and 2019.

Most IDPs are displaced from areas of conflict, such as Al Hudaydah, Taizz, Hajjah, Sa'ada and Amanat Al Asimah (OCHA, 2019), with 89% of all IDPs displaced for more than one year (UNHCR, 2019). In 2017, UNHCR registered 25,172 refugee children of school age (6–18) in Yemen, with only some 7,000 enrolled in basic and secondary education for the academic year 2016/2017. Many of the refugee children remained out of school for reasons such as insufficient family income, the need for children to work to support their families, school fees and lack of school uniforms (UNHCR, 2017).

It is clear that displaced children, including girls, have low enrolment in education as a result of the difficult financial status of their families, which consequently leads to school dropout, child labour and early child marriage, especially for girls (Save the Children, 2018; OXFAM and CARE, 2016).

2.2.4. School Distance as an Obstacle to School Enrolment and Completion

Generally, school distance can act as a major factor hindering children from enrolling in primary school or causing them to drop out (UNESCO-IIEP, n.d.). This barrier is increased during the economic crisis and war, particularly near the areas of conflict, as a result of lack of safety and security hazards, especially for girls on their way to/from school. In this case, parents refuse to send their children to school, especially when they have to walk long distances to reach school and when armed groups are located close to schools (Save the Children, 2018).

The survey carried out by the MoE in 2016 in 12 governorates revealed that distance to school is one of the major causes of dropout and low enrolment (47%), with the highest levels

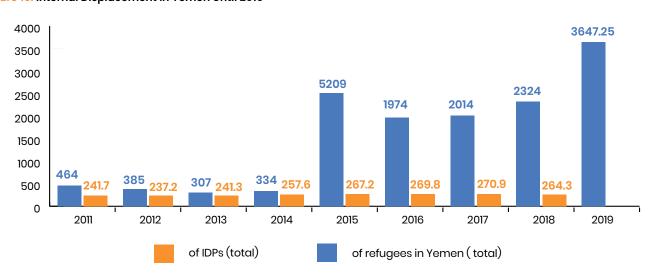


Figure 15. Internal Displacement in Yemen Until 2019

Source: HNO (2019)

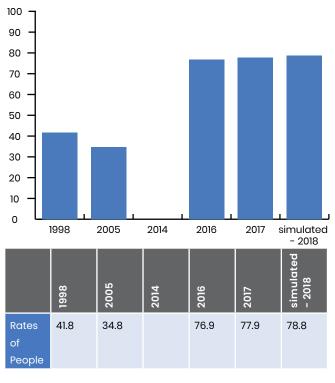
in Marib (67%), Amran (66%), Al Hudaydah (50%) and Hajjah (50%) (MoE, 2019). In these difficult and dangerous situations, girls are more likely to miss out on education than boys. Thus, insecurity and long distances of schools from homes are major factors that prevent girls from going to school (OCHA, 2019).

2.2.5. Poverty as a Major Cause of Girls' School Dropout

Almost all reports from official and INGOs sources confirm that the major cause of dropout by primary school students, including girls, is the increasing rate of poverty, which is aggravated by the ongoing war and conflict (CSO, 2019a). UNICEF (2018) states that "poverty is a major cause of children being excluded from schooling". Generally, constant war has led to increasing rates of poverty, reaching about 80% of the total population living under the poverty line (UNICEF, 2021; UN Yemen, 2021).

According to Sustainable Development Indicators Report in Yemen 2016–2018, the national poverty rate indicates 8 in 10 children live in families that do not have enough income to meet their basic needs (CSO, 2019a). In Yemen, 84.5% of children live in monetary poverty. In the long run, this situation will continue to perpetuate the cycle of poverty. Poor and vulnerable children and adolescents are also more likely to have never been to school, to drop out of school and to never return to school. Figure 15 shows that the rates of poverty increased with the continuity of the war period.

Figure 16. Rates of People Living Below the National Poverty Line, 1998-2018



Sources: CSO (2018), World Bank (2014)

The impact of the war on general national poverty can be clearly observed in Table 5.

Table 5. Poverty Rates Due to War, 2014-2018

Year	2014	2016	2018
Population	50%	76.9%	77.9%
living below			
the national			
poverty line (%)			

Source: CSO (2018)

The impact of poverty on girls' education is illustrated in Table 6, adapted from the Save the Children Report (2020).

Table 6. Impact of Poverty on Girls' School Dropout

Out-of-school rate, Poorest	Out-of-school rate, Richest	Out-of-school rate, Boys	Out-of-school rate, Girls	Vulnerability index	Risk
48.67	11.37	19.98	35.08	0.59	Extreme risk

Source: Save the Children (2020)

The rate of out-of-school girls is clearly the highest among the other groups, at 35.08%.

2.2.6. Economic Barriers to School Enrolment

Economic barriers caused by continuous war and conflict constitute a major cause of primary school children dropping out, especially girls. According to the IIEP Education Policy Tree, there are two types of economic barriers: the direct cost of schooling and the opportunity cost of schooling. Direct schooling costs (such as the costs of school uniforms, textbooks, general school supplies, transport and examination fees) are considered one of the major barriers to primary enrolment and completion (UNESCO-IIEP, n.d.). Opportunity costs of schooling refer to the immediate need for children's contributions to the household. Opportunity costs are more common in poor, rural, agricultural households, especially in girls' contexts involving household work, raising children, etc. (UNESCO-IIEP, n.d.).

In this regard, a study conducted by the MoE in 2016 revealed that economic obstacles are one of the major causes for girls' and boys' dropout and low school enrolment. The study indicated that 41% of the participants in the survey in the target governorates attributed the children's school dropout to the impact of the economic crisis, including low family income (39%) and the need for children to contribute

to family income (34%), with the highest proportion in Sana'a (43%), Raymah (41%) and Al Hudaydah (39%).

In 2016, the MoE conducted a field study (using surveys) in 12 governorates on the major causes of students' (boys and girls) dropout and low school enrolment and revealed the results in Table 7.

Table 7. Causes of Dropout and Low School Enrolment

Cause	Percentage of Respondents	Note
Lack of teachers	24%	
Economic reasons	37%	
Low family income	39%	
Need for children to contribute to family income	34%	
Impact of the economic crisis	41%	

Source: MoE (2016)

A report by Save the Children (2018) indicated that the economic crisis and safety and security issues have created extra constraints and challenges for children enrolment to school as a result of the war impact. Another report also revealed that the economic consequences of the war were realised in the increasing number of children and youth in need of educational assistance between December 2014 (1.1 million) and December 2018 (4.1 million) (OCHA, 2019). These needs include support for school feeding, transport and other basic needs (OCHA, 2019).

Other reports confirm the significant impact of financial constraints in most governorates on reducing children's access to education, especially in light of increasing rates of poverty, with more than 80% of Yemenis living below the poverty line (YEC, 2020). Consequently, school fees and school operating costs have a negative effect on children's access to education and, in some areas, these factors have caused high levels of dropout in primary education (YEC, 2020).

It is clear that both official and INGO reports and surveys emphasise the crucial impact of economic barriers on primary school students' dropout, including girls.

2.2.7. Early Marriage and Girls' School Dropout

Early child marriage is regarded as one of the main causes of girls' dropout from primary education, especially in developing countries that suffer from poverty. In such countries, early marriage is often regarded as a means of providing security for vulnerable young girls living in poverty, where one-third of girls marry before the age of 18 and one in nine are married before the age of 15 (International Centre

for Research on Women, n.d.). It is also estimated that more than 41,000 girls under the age of 18 marry every day in the developing world (Wodon et al., 2017).

Yemen is considered one of the countries with the highest rates of child marriages in the world (Hunersen et al. 2021). In Yemen, the Sustainable Development Indicators Report 2016–2018 revealed that 72.5% of girls get married while they are still children (under 18 years) (CSO, 2019a). The report also indicates that early marriage usually causes adolescent girls to drop out of their education due to having children earlier, in addition to having more burdens and responsibilities in the house and family.

A joint research survey by OXFAM and CARE (2016) revealed the following results:

- High rate of the girls' early marriage, with 52% of Yemeni girls getting married before the age of 18 and 14% marrying before the age of 15.
- The ongoing crisis increases the ratio of early marriage, leading families to use it as a coping mechanism to avoid frustration and stress caused by bad financial conditions and a sense of instability and displacement.
- Another factor in the early marriage of underage girls is the lack of privacy and security in IDP shelters (OXFAM and CARE, 2016). In this respect, Wodon et al. (2017) stated that early marriage problems are often aggravated in countries with conflict and humanitarian crises, where early marriage is considered protection against the threat of sexual violence.

A survey conducted by UNICEF (2019) on girls' dropout at primary schools in five governorates revealed the following main results:

- 9% of girls were married before the age of 15.
- 32% were married before the age of 18.

According to the UNICEF (2019) report, the main causes of girls' early marriage include:

- The economic and social conditions caused by the ongoing war in Yemen, which also led to the internal displacement of thousands of families.
- Increasing rates of poverty and difficult living conditions have been aggravated by non-payment of employees' salaries since 2016, as well as the high rate of unemployment.
- The role of customs and traditions in society in the early marriage of girls in order to preserve integrity and fear of spinsterhood. (UNICEF, 2019).

Table 8 summarises the available data from the above sources.

Table 8. Summary of Data Related to Early Marriage and Girls' School Dropout

Data Source	Year of Data Collected	Marriage Age	Percentage
Oxfam and	0010	Before the age of 18	52%
Care	2016	Before the age of 15	14%
	2019	Before the age of 18	32%
UNICEF		Before the age of 15	9%
SDGs indicators	2016-2018	Before the age of 18	72.5%

Sources: CSO (2019a), Oxfam and Care (2016), UNICEF (2019)

Further, Hunersen et al. (2021) conducted a study using quantitative surveys and qualitative interviews to estimate the rates of child marriage among displaced populations in three governorates (Sana'a, Ibb and Aden) based on these governorates' geographical and cultural representation, concentration of IDPs and accessibility to research. The study population sample in each governorate included 200 IDP households and 200 host community households. The study revealed that displaced girls aged 10-19 had the highest rate of early marriage (18.1%) compared to boys and host counterparts, and that females had about five times greater odds of being married than males of the same age (Hunersen et al., 2021). The main factors causing higher rates of girls' early marriage among displaced people include economic instability, lack of income and lack of job opportunities, leading girls' families of girls to marry them off to reduce burden and lower family costs. Other causes are of a cultural nature related to society's belief that women's societal roles are limited to marriage responsibilities in the home as well as parents' belief that marriage is a proper way to prevent threats to honour (Hunersen et al., 2021).

All the sources above agree that the rates of early child marriage among girls have increased as a result of the war impact. There is growing evidence that the traditional practice of early marriage (children below the age of 18) has increased since the start of the armed conflict and war, leading to girls' dropout (MoE, 2019).

It should be noted in the data in Table 8 that there is no consistency between the data of the three sources, which entails the necessity of accuracy, validity and updating the process of data collection as well as the cooperation of the concerned institutions and organisations in conducting and collecting regular and comprehensive data of girls' education, including school dropout.

2.2.8. Child Labour: Girls

Commenting on the role of child labour in preventing children from attending and completing school, UNESCO states:

Many children participate in labour activities, such as working on their family's land, which their family may depend on for survival. Even if this labour does not prohibit them from attending school altogether, combining work and school has been shown to increase absences and hurt educational performance, often leading to school dropouts (UNESCO, 2015).

Unfortunately, we could not find data on child labour, whether regarding girls or boys.

2.2.9. Financial Constraints in Paying Teachers' Salaries Teachers' Absenteeism Due to Non-Payment of Salaries

Due to the continuous war for more than seven years in Yemen, most teachers have not received their salaries. One of the most critical challenges facing the education system is the payment of salaries. Due to the suspension of public expenditures, 67% of the total number of teachers in Yemen has faced difficulties receiving their salaries since October 2016 (YEC 2020).

It was reported that about 171,600 teachers (73% of the total number of teachers) have not received their salaries or regular incentives since October 2016 in 13 governorates (YEC, 2017). In other governorates, especially the southern and eastern governorates, salaries are delayed in addition to the low rate of Yemeni Riyal currency, which causes teachers' dissatisfaction and suffering (MoE, 2019). It is known that non-payment of teachers' salaries makes them resort to other alternatives, which contribute to students' school dropout, including girls in primary schools.

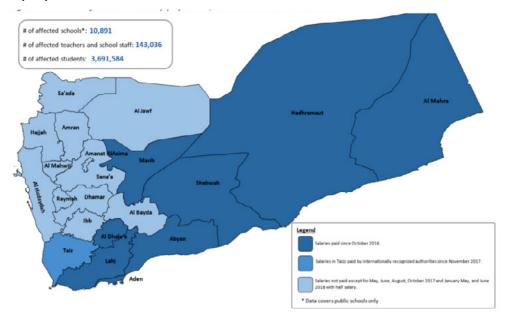
Figure 16 below shows the status of teachers' salary payments from October 2016 to June 2018, illustrating:

- Salaries paid since 2016.
- Salaries in Taiz paid by internationally recognised authorities since November 2017.
- Salaries not paid since October 2016, except half salary three times a year.

In this regard, UNICEF provided 117,554 teachers and school-based staff with incentives in 11 governorates in 2020–2021 to enable them to pay for transport to school and continue teaching and working, especially in the absence of salary payments.

To evaluate the beneficiary teachers' and school staff's opinions on this initiative, a team of academic researchers,

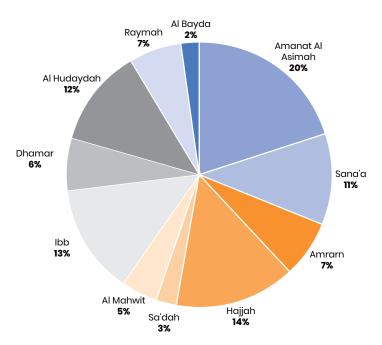
Figure 17. Salary Payment Areas



Source: YEC (2018)

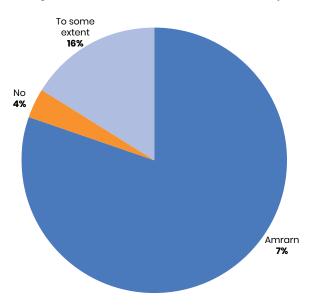
supported by the Yemen National Commission for UNESCO, conducted a survey in 2021. Figure 19 displays teachers' responses to a question related to the importance of teachers' salaries in continuing teaching and reducing learners' school dropout.

Figure 18. The Target 11 Governorates in UNICEF Teachers' Incentives (2021) Included in the Survey Sample



Source: Yemen National Commission for UNESCO (2021)

Figure 19. Teachers' Responses to the Relationship Between Receiving Salaries and Incentives and Students' Dropout



Source: Yemen National Commission for UNESCO (2021)

Figure 19 shows that most teacher respondents (80%) confirmed the role of teachers' salary payment in reducing the students' school dropout.

A recent survey study conducted by a group of academic researchers in the Centre of Studies and Educational Research and some Yemeni universities (Alshamiri et al., 2021) supported by the Arab Campaign for Education on the impact of war on girls' education in Yemen, revealed the results shown in Table 9.

Table 9: Means and Extent of War Impact on Girls' Education

No	Item	Mean	War Impact Degree
1	War impact on the learning process of girls	4.17	High
2	Economic impact on girls	4.00	High
3	Disruption of schooling because of war for one or more semesters	3.43	High
4	Family inability to provide school essentials (uniform, pens, etc)	4.26	Very High
5	Most girls go to school on foot because they can't afford transportation cost	4.18	High
6	Girls attend school without eating breakfast at home	4.01	High
7	Some families obligate girls to find work and stop pursuing education	3.51	High
8	Widespread of girls early marriage	3.35	High
9	Teacher absenteeism due to no salary payment.	4.27	Very High
10	Girls fear to go to school by themselves.	3.66	High

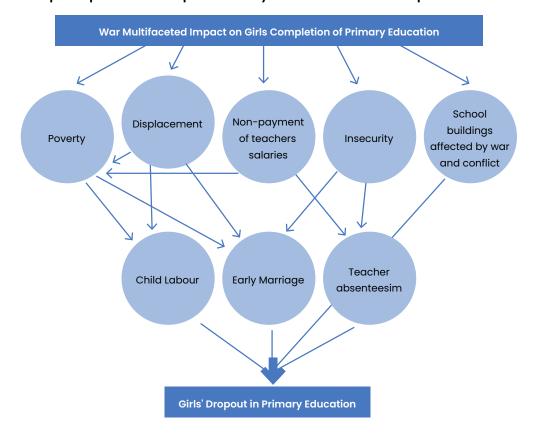
Source: Alshamiri et al. (2021)

The survey used six different governorates in Yemen as a sample—Sana'a, Amanat alasimah, Aden, Taiz, Saada and Ibb—random sampling two districts in every governorate. It is clear from Table 9 that most respondents agreed with the findings of the present Knowledge Report about the root causes of girls' dropouts in primary education. For example, the negative impact of the war on girls' education is obvious in the high means of responses, such as financial/economic difficulties caused by the war (economic war impact on girls) with a high mean of 4, and family inability to provide school essentials (uniform—pens, notebooks, bags) with a very high mean of 4.25. More surprisingly, the highest mean was exhib—

ited by the impact of teacher's absenteeism on girls' education as a result of non-payment of salaries. These effects of the war on girls' education cause high rates of girls' dropout from both primary and secondary schools. In light of the impact of war on education completion, the subsequent war chain is illustrated in Figure 20.

This EiE diagram was developed by the first author of this research and revised by the other three authors on the basis of the analysis of the available data in this research and the observations of the education situation in Yemen during the conflict for about seven years.

Figure 20. War Complex Impact on Girls' Dropout in Primary Education: Multifaceted Impact of War on Girls' Education



Source: Developed by the authors

3. POTENTIAL POLICY OPTIONS

Drawing on the School Completion IIEP Tree, the authors of this report prioritise the most relevant issues and root causes of girls' dropout at primary education in Yemen, including the massive impact of war on girls' education, causing other immediate effects and consequences such as economic barriers, increasing rates of poverty of the community, displacement, insecurity and early child marriage. Table 10 summarises these issues along with the main issues and IIEP Tree policy options that might have the potential to stimulate changes in the national education policy context in terms of girls' dropout at primary schools.

Table 10. High Priority Bottlenecks and Policies Related to Girls' Dropout – Yemen (Access to Education)					
Problems	Barrier/ bottlenecks	Policies	Notes		
Economic barrier to schooling	Direct cost of schooling	Scholarships and fee exemptions Conditional and unconditional cash transfers Providing school uniforms or eliminating uniform requirement Reducing textbook costs/rental schemes Providing monthly school feeding for both girls and their teachers at primary schools INGOs and official governmental partners establish joint funds for supporting girls' education.	Ministry of Education and other actors –such as non-governmental organisations– may provide economic support to families through income–generating activities. Some examples are micro-enterprise programmes for parents, savings and loan schemes based on the condition that the income generated is invested in children's education (Girls' Education Challenge, 2018). However, the MoE may not be able to do such interventions since the country is in a state of war and most teachers are without salaries for many years. In addition, the researchers, based on their connection and work in the education field, notice that INGOs are not prioritising education in the country, especially since the beginning of the war in 2015. Therefore, these organisations, in cooperation with the MoE and the community, are supposed to make serious plans and joint funds for girls' education.		
Supporting reports	Poverty has increased by one-third over the course of the conflict, with more than 80% of Yemenis now live below the poverty line. Consequently, financial constraints are a considerable obstacle to children's access education. School fees (added informally by schools as a result of non-payment of teacher salaries, absorb of schoolbooks and school operating costs) create a real barrier for children to access education and in locations have been directly attributed to high levels of dropout (YEC, 2020).				
Economic barriers to schooling	Opportunity cost of schooling	School feeding programmes Flexible learning strategies/ alternative learning programmes Raising awareness of the value of education in general and girls in particular Conditional cash transfers Inclusion of poor families of girls in funding support projects from development partners.	School feeding programmes can off-set the opportunity costs of families and are particularly effective for increasing the school attendance and participation of vulnerable children (MoE, 2019).		

Nutrition deterioration Supporting Yemen is experiencing one of the world's worst food crises. Close to 2.3 million children under 5 years—2 out reports of every 5 children of that age in Yemen-are now at risk of acute malnutrition, including about 400,000 at risk of severe acute malnutrition. Nearly 1 in 2 children under 5 are stunted, a situation that has not changed since 2011. Malnutrition causes irreversible damage to the physical, mental and social development of the child and impacts learning (UNICEF, 2021). Paying salaries of all Teachers' Financial teachers and employees salaries constraints in Ministry of Education. Due to the expansion of primary schooling, many countries in paying Communities and NGOs face financial constraints and are unable to adequately teachers pay for teachers' salaries pay salaries for the increased required number of or a part of salaries teachers (World Bank, 2010). Some IIEP Toolbox policy regularly. options suggested to address financial constraints include Funding support from increasing budgets through tax revenue and increasing funding, support from donors and expanding national development partners. commitment to education budgets. Providing allowances for unpaid teachers and However, the situation in Yemen is different due to the nonschool staff payment of salaries of more than 70% of teachers for more Increasing non-monetary than 6 years. These teachers need their salaries to continue compensation in lieu of teaching and not resort to alternative work to secure their salaries. income. Planning national commitment to education budgets An estimated 171,600 teachers —or two-thirds of the teaching workforce—have not been paid a regular salary for four years. This puts nearly 4 million additional children at risk of missing out on their education as unpaid **Supporting** teachers guit teaching to find other ways of providing for their families. (UNICEF, 2021) reports "Where it is not possible to preserve teachers' salaries and benefits, and where no viable social protection programmes exist to compensate them for loss of income, humanitarian organizations can consider the use of cash voucher assistance for teachers and school staff to cover their basic needs, until schools are reopened" (Save the Children, 2020).

 Table 11. High Priority Bottlenecks and Policies related to Yemen (Dropout/Push out)

Problems	Barrier/ bottlenecks	Policies	Note
Teacher- related constraints and teacher absenteeism	Non-pay- ment of teachers' salaries	 Monthly school feeding for teachers at primary schools (monthly food baskets by INGOs) Supporting and training teachers on using electronic learning to be complementary to face-to-face learning Shorter school week 	Based on the data and reports included in this study, the main causes of teacher absentee-ism in the Yemen context are due to non-payment of teachers' salaries for more than six years. It should be mentioned here that the WFP provides school feeding in most parts of Yemen for teachers as a food basket, which is a good initiative. However, it is provided only every two or three months.

Insecurity and distance to school	Lack of safety in conflict areas and ground mines. Long distance to schools	 Conditional cash transfers Unconditional cash transfers Open and distance learning Utilising geographic information systems Providing transport Providing enough disaster risk reduction (DRR) programmes Promotion of school safety and disaster management 	The policies suggested here are intended to the students living in areas near armed conflicts and those whose houses are too far from schools especially in rural areas.
Early marriage		 Promoting and supporting girls' education Raising awareness of the consequences of early marriage Governmental measures to protect children (including girls) from early marriage, enforcing the law setting 18 as the minimum age for marriage 	Under the economic impact of the war, families with limited income do not prioritise girls' education, leading to threefold increase of child marriage between 2017 and 2018 compared to when the conflict escalated in 2015 (YEC, 2020). Before the war, there was a proposed law setting 18 as the minimum age for marriage, which started to come into force but has been abandoned since the beginning of the conflict (YEC, 2020).
Supporting reports	Families with limited resources deprioritise girl's education (YEC, 2020). About 72.5% of girls in Yemen get married while still having children (under 18 years old). Early marriage makes it almost impossible for an adolescent girl to finish her education. It also leads girls to have children earlier and to have more children over their lifetimes. This, in turn, reduces the ability of households to meet their basic needs and contributes to poverty (UNICEF, 2021). School distance can be a major factor in preventing children from enrolling in primary school or causing them to drop out (UNESCO-IIEP, n.d.). Widespread school closures are due to damage caused by the conflict, occupation by IDPs or armed elements and insecurity around them. By early 2019, 43% of school-aged children across did not attend school (YEC, 2020).		

4. RESULTS AND RECOMMENDATIONS

4.1. Results

The main results of this report are as follows:

- There is a great degree of comprehensiveness and appropriateness of the IIEP Tree in diagnosing and analysing educational conditions and policies, whether in ordinary situations or emergencies.
- Some adaptations are needed in the IIEP Tree in terms of dropout/push out namely EiE caused by conflict and war, in order to be a very flexible tool for diagnosing and evaluating and improving educational policies everywhere.
- Based on the data analysed in this report, it is found that girls' education at primary schools in Yemen, especially at the present time of constant crisis, faces complex and diverse challenges that require sincere efforts and systematic collaboration among all partners and stakeholders, including the community.
- There is an increasing rate of girls' dropout in primary education due to the continuity of war and conflict in the country, and it was revealed in this report that this group of learners (girls aged between 6–14 years) is regarded as one of the most vulnerable groups in Yemen.
- The main root causes of primary school girls' dropout are the ongoing war and conflict in the country since 2015, which have caused several problems and obstacles to education, including (i) economic barriers, (ii) displacement, (iii) insecurity (non-payment of the majority of teachers and educators) and (v) physical damage to school buildings and infrastructure, especially those located in or near conflict areas. Consequently, according to the available data, the war has caused a negative impact on girls' education—the enrolment rate since the war (2016) has decreased from 91.0% to 87.05% for boys and 77.15% to 73.97% for girls, as well as for the completion rate, which exhibits a decrease from 52.4% to 44.9% for boys, and 42.6% to 36% for girls.
- The ongoing conflict has also caused an increasing rate of early marriage of girls, creating more immediate joint impacts on early marriage, such as displacement, loss of jobs and families' economic difficulties. Therefore, early marriage has often led adolescent girls to drop out of school because of having children earlier and more bur-

dens and responsibilities in the home and family.

- Poverty as a major cause of school dropout is doubling and complexing the consequences of dropout on education, such as early marriage, displacement, child labour, etc.
- Constant non-payment of teachers' salaries for more than 73% of teachers and school staff in Yemen in 11 governorates is a crucial cause of weak and low education quality and disruption in the continuity of learning/ teaching and students' attendance at school, leading to dropout of many primary school girls and boys.

4.2. Recommendations

- Mobilise INGOs and local and international educational institutions to call for non-politicising education in Yemen and provide salaries or allowances for unpaid teachers and education employees to ensure constant access to girls' education, especially in primary education.
- Establish a joint fund by the MoE and other partners for supporting and retaining girls out of school in primary schools.
- INGOs working in Yemen should change their policies towards the education sector, especially girls' education, since children's education and education in general are basic human rights.
- Highlight the EiE section on the first page of the IIEP Tree instead of being distributed in different parts of the Tree.
- Apply the IIEP Tree to the analysis and diagnosis of data collected through official or INGOs sources to help standardise educational diagnostic tools.
- Authorise and legalise relevant UNESCO educational bodies and institutes not only to train experts in learning assessment and education planning but also to assess, check and direct the quality of the data offered by official institutions and INGOs to ensure the effectiveness and futility of such data and EMIS.
- Involve IIEP and KIX EAP Learning Cycles trainees in activities and projects of national educational policies planning, learning assessment or any relevant sectors to

- translate and put into use the knowledge and innovative professional skills to support and enhance any relevant needed educational fields or competencies.
- Form joint research teams (INGOs/MoE/academic researchers) under the supervision of UNESCO IIEP to conduct research and comprehensive survey studies on urgent relevant educational issues, such as the impact of war and conflict on child labour, early marriage and dropout at primary and secondary schools.
- Support well-planned free e-learning tools using various modes and mediums like radios, TV, free mobile applications and open learning systems to help overcome many challenges that act as barriers to education for both girls and boys at primary schools, including those with special needs.
- Encourage global education partners (GPE) and the MoE to take serious steps and fund the requirement for activating the EMIS body to regularly perform all tasks and provide valid and reliable annual educational data that help to overcome many educational challenges and make the right decisions for improving educational policies.

REFERENCES

Alshamiri, E, Alhawsali, M, Alnaqeeb, Z, & Aldawkari, A. (2021). War impact on girls' education in Yemen. Educational Research Centre.

Central Statistical Organization [CSO]. (2018). General Domestic Product. Bulletin.

Central Statistical Organization [CSO]. (2019a). The Sustainable Development Goals Indicators Report in Yemen 2016-2018. Yemen: Ministry of Planning.

Central Statistical Organization [CSO]. (2019b). Report on the effects of the aggression on Yemeni economy. Yemen: Ministry of Planning.

Girls' Education Challenge. (2018). Girls' Education Challenge: Project Profile. United Kingdom.

Humanitarian Needs Overview [HNO] (2019). Yemen Humanitarian Response Plan [YHRP]. UN Yemen.

Hunersen, K., Attal, B., Jeffery, A., Metzler, J., Alkibsi, T., Elnakib, S., & Robinson, W.C. (2021). Child marriage in Yemen: A mixed methods study in ongoing conflict and displacement. *Journal of Refugee Studies*, 34(4).

International Centre for Research on Women. (n.d.). Facts and figures on child marriage.

Ministry of Education [MoE]. (2016). Education survey report. Yemen: MoE.

Ministry of Education [MoE]. (2017). Survey on damaged schools and educational offices. Yemen: MoE.

Ministry of Education [MoE]. (2018). National strategy and integrated plan for education in emergencies 2018-2019. Yemen: MoE.

Ministry of Education [MoE]. (2019). Transitional education plan. Yemen: MoE.

Ministry of Education [MoE]. (2020). Education in Yemen report. Yemen: MoE.

OXFAM and CARE. (2016). From the ground up: Gender and conflict analysis in Yemen. Oxford: UK.

Save the Children. (2016). Futures on the line: Yemen's children missing on education. Yemen: Save the Children.

Save the Children. (2018). Education and child protection rapid assessment, Al- Mokha district, Taiz governorate.

Save the Children. (2020). Protect every child's right to learn in the COVID-19 response and recovery. Yemen: Save the

Save the Children. (2021). Education in crisis: A brief on education in Yemen after six years of conflict. Yemen: Save the Children.

Save the Children. (2022). The impact of seven years conflict on children in Yemen. Yemen: Save the Children.

United Nations Office for the Coordination of Humanitarian Affairs [OCHA]. (2018). Yemen Humanitarian Response Plan 2018.

United Nations Office for the Coordination of Humanitarian Affairs [OCHA]. (2019). Yemen Humanitarian Response Plan 2019.

United Nations Office for the Coordination of Humanitarian Affairs [OCHA]. (2021). Humanitarian needs overview report. Yemen: OCHA.

UN Women. (2020). Impact of the Conflict (2015-2019) and the COVID-19 Pandemic on Yemeni Women's Political Participation and Engagement in Peace Negotiations and Peacebuilding.

UNESCO Institute for Statistics. (2014). Available at: http://uis. unesco.org.

UNESCO. (2015). EFA global monitoring report. Arab states overview. UNESCO.

UNESCO. (2022). Progress of SDG4 in the Arab region. UNESCO.

UNESCO-IIEP. (n.d.). Education Policy Toolbox. https://policytoolbox.iiep.unesco.org/

UNHCR. (2019). EAC Programme 2015–2019: Educate a child (EAC) enabling, encouraging and excelling. UNHCR.

UNHCR. (2020). IDP strategy 2020-2021. UNHCR Yemen.

UNICEF. (2015). Yemen country report on out-of-school children. UNICEF: Yemen Country Office.

UNICEF. (2019). The state of the world's children. UNICEF.

UNICEF. (2019). Child marriage among girls. UNICEF: Yemen Country Office.

UNICEF. (2021). When education disrupted: Impact of conflict on children education. UNICEF: Yemen Country Office.

United Nations News. (2019). Humanitarian crisis in Yemen remains the worst in the world, warns UN. United Nations.

United Nations Yemen. (2021). Common Country Analysis (CCA) November 2021 Report. United Nations.

USAID. (2019). Yemen Gateway to Education Annual Report, October 2019. USAID.

USAID. (2020). Education data snapshot: Yemen conflict. USAID.

War Child. (2019). Being kept behind: The impact of conflict on the education of Yemen's children.

Wodon, Q. T., Male, C., Nayihouba, K. A., Onagoruwa, A. O., Savadago, A., Yedan, A., Edmeades, J., Kes, A., John, N., Murithi, L., Steinhaus, M., & Petroni, S. (2017). Economic impacts of child marriage: Global synthesis report (English). Economic impacts of child marriage. World Bank Group. Washington, DC.

World Bank. (2010). Republic of Yemen education status report challenges and opportunities. World Bank.

World Bank. (2014). World Bank experts' calculations using the HH Budget Survey 2005/06 and 2014 Family.

World Bank. (2017). Yemen poverty notes. Yemen: World Bank

World Bank. (2018). Missed opportunities: The high cost of not educating girls. World Bank.

World Bank. (2020). Yemen Dynamic Needs Assessment. World Bank.

Yemen Education Cluster [YEC]. (2017). Annual report. YEC.

Yemen Education Cluster [YEC]. (2018). Teacher salary status. YEC.

Yemen Education Cluster [YEC]. (2020). Yemen education crisis: Secondary data review (SDR) report. YEC.

Yemen National Commission for UNESCO. (2021). The teachers' perceptions on UNICEF teachers' incentive. [Unpublished research paper].

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