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Pacific Regional ASA for Education

# Secondary School–Aged Youth and Skill Acquisition in the Republic of Marshall Islands: Achievements, Challenges, and Knowledge Gaps

## Pacific Secondary School Program Phase 1 Report



August 2023

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EDU



In collaboration with



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## 1. Introduction

### *Study Objective*

**The Pacific Secondary School Program (PSSP) is a regional, multiphase program aimed at identifying and designing interventions that can improve educational outcomes of secondary school-aged youth.** The World Bank is implementing the project with financing from the Australian Department of Foreign Affairs and Trade in conjunction with regional partners including the Educational Quality and Assessment Programme of the Pacific Community. The objective of Phase 1 of the program is to review existing research and data on educational outcomes and determinants of educational outcomes in participating countries to identify what additional data and research is needed to design necessary interventions. Phase 2 will collect data as required, Phase 3 will recommend interventions from findings from Phases 1 and 2, and Phase 4 will implement and evaluate the interventions. Fiji, Kiribati, Republic of Marshall Islands (RMI), and Tonga are participating in the program. Phase 1 began 2021 and was completed at the end of 2022. Phase 2 started in mid-2022 and is expected to be completed by the end of 2023. Phases 3 and 4 are planned subsequently.

**Based on a review of previous research and analysis of available data, the Phase 1 report presents the main challenges facing secondary school-aged youth in RMI in acquiring skills and gaps in data needed to address these challenges.** Data on youth participation in education, including enrollment and dropout, and from the Marshall Islands Standards Assessment Test (MISAT) and the Household Income and Expenditure Survey (HIES) were analyzed to understand how well RMI's education system provides secondary school-aged youth with knowledge and skills. Existing research was also reviewed to understand the factors that promote or inhibit skill acquisition. The factors researched included those directly related to acquisition of skills, including teaching and home environment for learning, and institutional factors that influence these, including governance, teacher training, economic influences, and social norms. Research on these factors was limited, but based on available information, several key drivers of skill acquisition emerged as especially important for RMI. Research must be conducted to inform design of these potential interventions in these areas. The constraints on skill acquisition described in this report are the main constraints that emerge from reviewing the literature and available data.

**The purpose of this report is to present the main constraints on learning and potential research needs to help inform the government on interventions to improve access and learning outcomes.** The report is intended not to provide an overall diagnostic of the education system, but rather to identify what existing research and data indicate are the key challenges and the data gaps regarding these challenges that must be addressed before interventions can be identified or designed. Based on this report, priority areas of research to be conducted under Phase 2 of the PSSP will be identified and used to inform intervention design in the later phases of the program. The government of RMI has been consulted in the development of this report, and a broader stakeholder consultation has been conducted to help identify the main areas of research that should be prioritized in Phase 2.

### *Country and sector context*

RMI is an independent country in Micronesia with a population of just over 50,000 people (SPC 2022). It has a per capita gross domestic product (GDP) of USD 4,171 (2021) and is classified

according to the World Bank as upper middle income. Life expectancy at birth is 65, and it has a Human Capital Index of 0.4. Approximately half of the population lives in Majuro, the capital, which is on the atoll of the same name. RMI consists of five islands and 29 coral atolls. Kwajalein Atoll is the second most populated atoll, with approximately 20 percent of the population and home to a U.S. military base with 1,300 staff members. Before 1986, RMI was part of the Trust Territory of the Pacific Islands, established by the United Nations and administered by the United States. Since 1986, RMI has been an independent country and an adherent to the Compact of Free Association, under which the United States retains international defense authority and provides financial assistance (World Bank 2004), and citizens of RMI are able to live and work in the United States. Remittances are equal to 12.7 percent of the country’s GDP.

Education is divided into four levels in RMI: early childhood education from age 3 to 5, primary school (grades 1-8) from age 6 to 13, high school (grades 9-12) from age 14 to 17, and college and university (Figure 1). Some vocational courses are offered at high schools, and there is also the Life Skills Academy and vocational “boot-camps” offered by colleges in which out-of-school youth participate. Most elementary schools are public while most high schools are private; however, the vast majority of students attend public schools in both levels (Table 1).

**Figure 1 Republic of Marshall Islands Education System Structure**

Grade	Level	Ages	
4	College/University	21	<i>There are two college institutions in the country: College of the Marshall Islands and the University of the South Pacific Majuro campus.</i>
3		20	
2		19	
1		18	
12	High School	17	<i>There are six public high schools and 11 private high schools.</i>
11		16	
10		15	
9		14	
8	Elementary	13	<i>There are 80 public elementary schools and 15 private elementary schools.</i>
7		12	
6		11	
5		10	
4		9	
3		8	
2		7	
1		6	
K	Early Childhood Education	5	<i>Some private schools offer early childhood education.</i>
Pre School		3-4	

Source: RMI 2020.

**Table 1 Average Enrollment According to Location, School Type, and Sex, 2016-19 (Before COVID)**

	Enrollment		Percent of enrollment				
	Total	Majuro and Kwajalein	Outer Islands	Public	Private	Female	Male
Elementary	9,924	67	33	82	18	49	51
High school	3,381	76	24	77	23	51	49

Source: RMI 2020, average from 2016 to 2019 (pre-COVID).

RMI runs a national annual student assessment program, the MISAT, which is a summative assessment applied at the end of grades 3, 6, 8, 10, and 12. In grade 8, (the final grade of primary) it is also used as a placement test for students entering public secondary schools, but in the other grades, it is not used for placement or promotion decisions. In grades 3 and 6, English reading, Marshallese reading, mathematics, and science are assessed; in grade 8, English reading, Marshallese reading, mathematics, science, and social studies are assessed; and in grades 10 and 12, English and mathematics are assessed. MISAT reports are prepared at the national, school, and student level and used to inform policy decisions and identify student learning needs. Public expenditures on education are substantial; according to figures in the 2020 statistical digest, total education expenditures in 2018 (the latest data available) were approximately USD 20 million, equivalent to 12.4 percent of government expenditures based on data reported in the Education Statistical Digest for 2020. World Bank data show that public expenditures on education were 24.8 percent of government expenditures in 2018, declining to 16.2 percent in 2020. USD 20 million would be equivalent to 8.6 percent of RMI’s GDP in 2018<sup>2</sup>. The United Nations Educational, Scientific and Cultural Organization (UNESCO) reports that education expenditures were 15.8 percent of GDP in 2019.<sup>3</sup> Education expenditures have been declining as a percentage of government expenditures, although according to the 2020 Education Statistical Digest, education expenditures have remained stable while overall government expenditures have been increasing. Education expenditures depend on significant financing from the Compact of Free Association; in 2016, the United States provided 32 percent of government education expenditure through the compact and through grants related to the military base at Kwajalein (US GAO 2018, 60; see also ADB 2006, 103).

The government of RMI is implementing a World Bank–financed project, the Education and Skills Strengthening Project (ESSP), which within the scope of the PSSP, supports activities to improve foundational skills in secondary education through differentiated instruction, pedagogical plans, tutoring, and coaching by principals and vice principals. The ESSP would expand the vocational electives offered in secondary schools. The vocational track will also be

<sup>2</sup> Author’s estimate using GDP data from the IMF WEO.

<sup>3</sup> These figures were obtained from the World Bank, which reports UNESCO Institute for Statistics figures.

improved under the project, with revisions to the curriculum based on labor market information analysis. The government is also developing a new island skills program aimed at training students with skills needed for occupations in the outer islands.

### *Summary of education outcomes and challenges*

**RMI has made significant achievements in education, including increasing the percentage of students proficient in the grade 8 MISAT, but low learning outcomes and completion rates continue to constrain learning and skills acquisition by youth.** From 2009 to 2019 (before COVID's impact), the percentage of students achieving proficiency in the MISAT nearly doubled—from 24 to 44 percent—demonstrating that the education system has been able to improve learning outcomes over the long run. The government has established fundamental institutional structures, including a school accreditation system, and has improved the Marshall Islands Education Management Information System, laying the foundation for improving educational outcomes. In addition, a number of projects have been undertaken to improve curricula and teaching, including transition classes between secondary and post-secondary school and teacher training, but despite these achievements, secondary completion rates are low, the percentage of secondary school students achieving proficiency in MISAT is low, secondary school graduates often need remedial learning in post-secondary school, and the economy relies on foreign workers with secondary or higher education.

**Review of previous research on educational outcomes in RMI revealed the main constraints to learning outcomes and access at the secondary level: teaching and pedagogy, alignment and relevance of curricula, household poverty and learning environments, and gendered sociocultural factors.** These four constraints emerged in the review of previous studies on the Marshallese education system and analysis of existing data, and the government is investing in developing interventions and reforms related to many of these constraints. In the area of teaching and pedagogy, there is a need to strengthen the link between professional development activities and student learning. For example, the government is establishing an adaptive learning and remedial learning system to improve learning outcomes of struggling students, and more information is needed on the types of skills and content that struggling students need the most help on and the types of support and training that teachers need to be able to improve learning outcomes for students who have fallen behind. This can be built on many of the existing elements including professional development plans that already exist as well as teacher observation that are part of the evaluation system. The learning environment of households for many students also poses a constraint. For example, students from outer islands who migrate for secondary school often have poor living conditions; dormitories could help remedy this, but additional research is needed to understand many of the constraints that students report, including family problems and nutrition. Misalignment between curricula of primary and secondary schools and of secondary and post-secondary schools has begun to be addressed through transition classes, but there has been no systematic review of curriculum alignment, including a review of how it and TVET courses link to the labor market outcomes. Labor market data suggest that women earn less than men and that their labor market outcomes improve more from education than men's, as is typical globally, but it is atypical that this gender disparity in the labor market does not translate into girls significantly outperforming boys in school in terms of completion rates or MISAT performance, suggesting that

girls face barriers in education. One immediately apparent barrier is early childbearing, which accounts for a large proportion of female dropouts.

**Secondary-level education can only do so much; many children struggle to learn in primary school in RMI, and children who struggle to learn in primary school, especially with reading, do not succeed in secondary school.** A substantial body of research links early–primary school literacy as being a critical determinant of children’s future educational outcomes, including future learning achievement, school retention, and transition to higher levels of education (Alexander, Entwisle, and Horsey 1997; Entwisle, Alexander, and Olson 2005; Jimerson et al. 2000; Marteleto, Lam, and Ranchhod 2008). Children who fall behind in literacy tend to do so at an early age, and this gap in literacy skills tends to persist throughout their education (Butler et al. 1985). In the United States, studies have identified grade 3 as being the critical juncture for being able to read proficiently (O’Brien 2008); failure to read proficiently by grade 3 leads to lower achievement in school, lower graduation rates, and lower earnings (Feister 2013; Hernandez 2011). For children whose language of instruction at the secondary level differs from their mother tongue, as is the case in RMI, literacy in their mother tongue in early primary school is a critical steppingstone for becoming literate in the language of instruction in secondary school and ultimately succeeding to learn (e.g., UNESCO 2016). Preparedness of secondary entrants has been identified as an important driver of low performance on MISAT in secondary, which is indicated by low transition rates, the need for many secondary school entrants to start in the remedial grade of pre-9, and reported poor English language skills by students. While interventions are needed to improve the quality of secondary education, they would need to be designed for low learning outcomes of secondary entrants.

### *Summary of research needs for intervention design*

**To identify interventions and build on the government’s achievements in education, the following knowledge gaps and resulting research needs have been identified.** Additional research is needed to identify and design interventions:

- 1. To help students who have fallen behind catch up:** The need for interventions to support children who have fallen behind in secondary school is a priority for the government given poor learning outcomes, including literacy, at the primary level. Being able to assist students who have fallen behind is also essential for a resilient education system that can help learning recover after shocks, including COVID. The ESSP has a component dedicated to interventions to assist secondary school students who have fallen behind. Potential interventions include capacity building regarding teaching at the right level, tutoring, differentiated instruction, adaptive learning approaches, curriculum changes, and alignment and bridging programs between primary and secondary school. A critical knowledge gap is lack of understanding of which interventions would be most effective and cost sustainable to help students who have fallen behind catch up. Classroom observations are also needed to help determine what teaching methods related to differentiated instruction are currently used in class and what teacher training is needed. Analysis of assessment data (including MISAT) is needed to identify the skills and content in which struggling students require support and then to inform teacher training and design of interventions to support these students.
- 2. To build a comprehensive teacher training system linked to learning outcomes:** An assessment of the overall teacher training system is needed as well as a better understanding

of (1) the concepts and content that underperforming students need more support with (see item analysis of MISAT above) and (2) the teaching methods being used in practice in order to identify additional teacher training to improve MISAT results.

3. **To strengthen curriculum alignment for post-secondary and labor market needs:** The Ministry of Education has developed a bridge course at the end of secondary school to help ensure that college-bound students have the skills they need. The College of Marshall Islands (CMI) and the ministry developed the curriculum for the bridge course in partnership. This model of partnership in curriculum development may help ensure alignment between TVET offerings and employer needs (and between the primary and secondary school levels. To help develop this, better understanding is needed of labor market outcomes (employment, field of employment, earnings) of school leavers (those who graduate or drop out) and participants in vocational education programs. Tracer studies of school leavers discussed under the ESSP would help inform this.
4. **To address household-level constraints on educational outcomes:** Qualitative research is needed to identify how to address low perception of value for education and family challenges causing student dropout. To understand the role of poverty (and the effectiveness of associated interventions), a tracer study may be needed to determine what school leavers are doing and their contribution to household income.
5. **To address gender barriers to education:** Qualitative research is needed to understand the causes of and potential interventions to mitigate early childbearing, which was found to be a major driver of secondary school dropout for girls. Qualitative research is also needed to identify and understand gender bias in household-level support for education. Analysis of attendance and course enrollment is needed to understand gender disparities in attendance and field of study, and gender analysis in classroom observations would help detect inherent gender bias in teaching.

**This report is structured as follows.** Recent achievements in the education sector are discussed, and then assessment of the education system's ability to provide skills to RMI's youth is presented, based on a review of existing research and analysis of household survey data and administrative data. The challenges that RMI faces in improving skill acquisition are discussed, followed by a discussion of research needs and proposed activities that are based on discussions with government and local stakeholders.

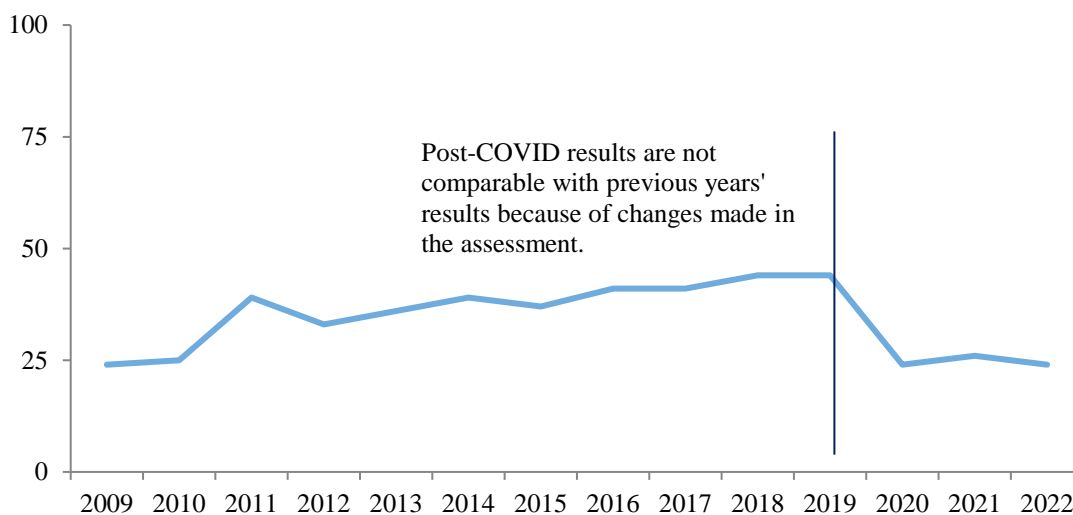
## 2. Recent Achievements in the Education Sector

**Learning outcomes have improved at the primary level, and the government has undertaken a number of actions recently to improve educational outcomes.** Data from the MISAT suggest that, before COVID-19, the percentage of grade 8 (the final year of primary) students achieving minimum proficiency on its overall scale, which combines a range of subjects, had been increasing and that proficiency rates in literacy and numeracy measured using the Pacific Islands Literacy and Numeracy Assessments (PILNA), a regional assessment, increased between 2012 and 2018. The government has undertaken numerous actions to improve educational outcomes, including establishing and strengthening its school accreditation system, conducting a rigorous study of truancy, piloting a number of programs to improve transition from secondary to post-secondary school, and strengthening the professional development system.

### *Improvements in learning outcomes at the primary level*

**The percentage of students achieving proficiency on the combined score of subjects on the grade 8 MISAT had been trending upward since at least 2009 until COVID-19, based on historical data in the 2022 MISAT report (Figure 2).** The percentage achieving proficiency nearly doubled—from 24 percent in 2009 to 44 percent in 2019. The proportion achieving proficiency on the grade 8 MISAT has declined significantly since 2019, which the 2022 MISAT report attributed to changes in the test made in 2020. In other words, the results of the MISAT before 2020 are not comparable with subsequent results. Although, despite improvements before COVID-19, the percentage achieving proficiency was quite low, suggesting that many students are struggling to meet curricular standards in primary school.

**Figure 2 Marshall Islands Standards Assessment Test Grade 8 Percentage Proficient (Overall Score)**

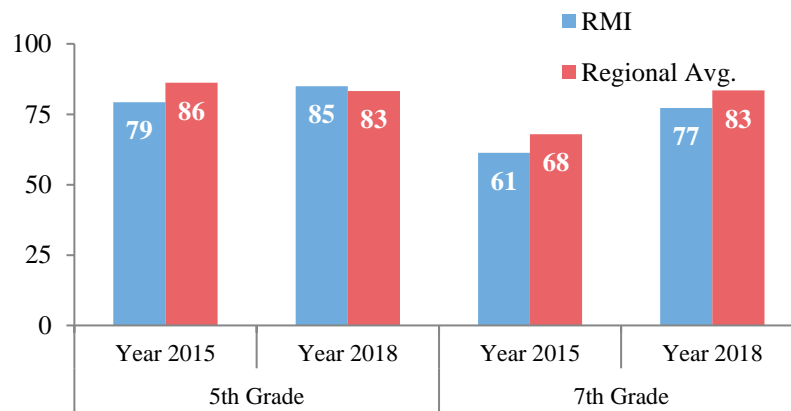


Source: PSS 2022.

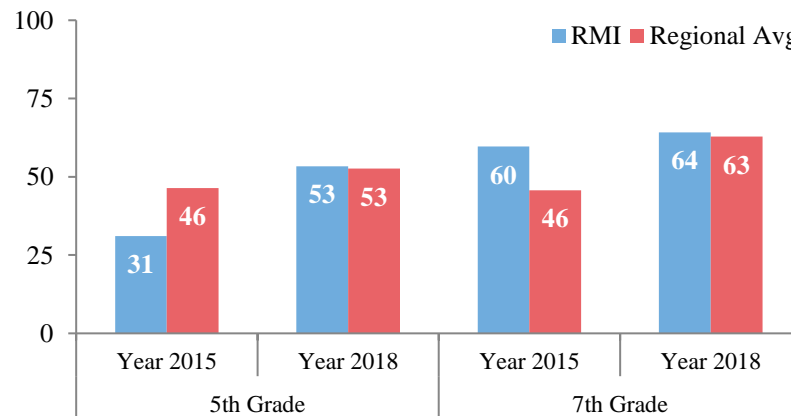
**Substantial improvements in learning outcomes at the primary level have been found on PILNA.** There have been large increases in the percentage of students achieving minimum

proficiency in numeracy and literacy in the two grades<sup>4</sup> assessed (5 and 7) (Figures 3 and 4). The percentage of students achieving minimum proficiency in grade 5 numeracy increased from 79 percent in 2015 to 85 percent in 2018—just above the regional average, which declined over this period. In grade 7, the percentage of students achieving minimum proficiency increased from 61 to 77 percent. The percentage of students achieving minimum literacy increased from 31 to 53 percent in grade 5, on par with the regional average, and from 60 to 64 percent in grade 7, remaining above the regional average. These results for grade 7 are substantially better than the grade 8 MISAT results. It is likely that the differences in results reflect differences in the difficulty of the two assessments, with the PILNA study aiming to assess regionally defined standards for learning, whereas the MISAT measures RMI’s curriculum goals.

**Figure 3 Percentage of Students Achieving Minimum Proficiency in Numeracy on the Pacific Islands Literacy and Numeracy Assessment**



**Figure 4 Percentage of Students Achieving Minimum Proficiency in Literacy on the Pacific Islands Literacy and Numeracy Assessment**



<sup>4</sup> Because of differences in the timing of the school year, PILNA was conducted at the beginning of grades 5 and 7 in North Pacific countries and in grades 4 and 6 in South Pacific countries.

### *Recent government actions to improve educational outcomes*

**The government of RMI has established strong institutional foundations for education by strengthening the school accreditation system and data collection under the Marshall Islands Education Management Information System.** The school accreditation system, established in 2012, evaluates standards related to leadership, teacher performance, data management, curriculum and student learning outcomes, campus, classrooms and facilities, and school improvement planning (UNESCO 2015). An updated policy in 2018 provides guidelines on school evaluation visits, including classroom observations. The Western Association of Schools and Colleges now accredits all secondary schools except for Santo in the Kwajalein Atoll. The quality of data collected through the Marshall Islands Education Management Information System has also been improving, providing better information on enrollment and dropout; teacher attrition; and infrastructure, including water, sanitary, and hygiene facilities. Together, these two advances strengthen the institutional structure for promoting student educational outcomes in RMI.

**RMI has received the highest rating from the U.S. Department of Education for meeting requirements for students with disabilities under the U.S. Individuals with Disabilities Education Act.** Under the Compact of Free Association, RMI is eligible to receive grants through the U.S. Individuals with Disabilities Education Act. To be eligible for funding, U.S. states and other entities including RMI must establish and report performance plans and annual performance reports that include indicators related to educational outcomes for children with special education needs and setting targets for these indicators. U.S. states and entities are then assessed based on these reports and plans. From 2020 to 2022, RMI was assessed as meeting the requirements and purposes of the Individuals with Disabilities Education Act, along with 22 other U.S. states and entities. Most U.S. states did not achieve this rating. RMI's high rating reflects the government's commitment to inclusive education and monitoring and improving educational outcomes for students with special education needs. Significant progress has been made in education outcomes of children with special education needs. For example, the secondary school graduation rate for these children increased from 31 percent in 2011 to 46 percent in 2019. In addition, according to the 2021 Education Statistical Digest data, approximately three-quarters of children with special education needs are integrated into regular classes.

**Recent analytical work related to truancy has indicated that appointment of truancy officers is a critical step toward addressing key challenges facing the sector.** School dropouts are a major challenge in RMI despite school being compulsory from age 5 to 18. The government has been active in conducting analytical work to reduce truancy. A 2013 truancy study surveyed numerous stakeholders, increasing understanding of the drivers of truancy at the household, community, and student levels (discussed further below). A follow-up truancy study is underway, and the government has implemented the recommendations of their analytical work, including appointing truancy officers.

**Interventions have been implemented to improve the transition from secondary to post-secondary school and to strengthen teacher training,** and projects have been designed to support teachers and update curricula. The following are not exhaustive but are offered as examples.

- **Teacher evaluation pilot:** In 2021 and 2022, Pacific Resources for Education and Learning partnered with the public school system to train teachers and school administrators. Training was offered to teachers on how to evaluate themselves and achieve teaching standards. Teachers were also supported in establishing professional growth plans to plan and organize their training.
- **CMI and Public School System Mathematics Transition Course:** To prepare high school graduates to learn mathematics at CMI, CMI and the public school system collaborated to develop the curriculum for a mathematics transition course taught in public secondary schools beginning in 2021.
- **Upward Bound Program:** This program (financed by the U.S. Department of Education and administered by CMI) helps students in grades 8 to 11 develop academic and social skills to prepare them for post-secondary education. The current program began in 2017.
- **Teacher professional development:** In February 2022, the PSS Curriculum Instruction and Assessment Unit helped outer island teachers establish the social citizenship education course, providing an example of how best-practice teacher training is being adapted in RMI. During their visits to the outer islands, the unit conducted classroom observations and followed up with training for teachers after school that included coaching and lesson assessment. This approach augments the informational workshop model of teacher training that is typically provided to teachers during the summer.

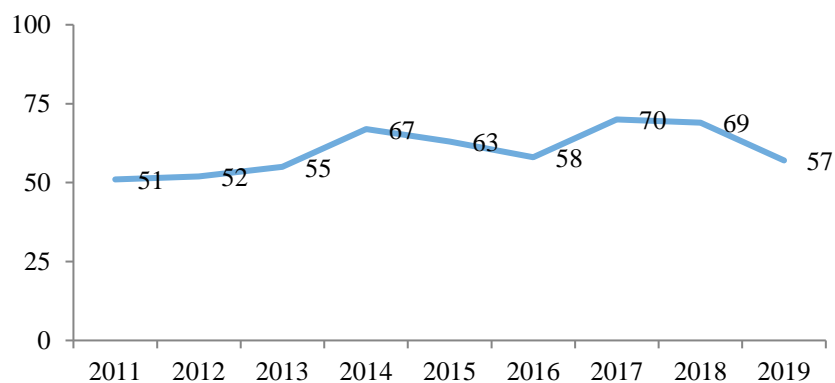
### 3. Youth Skill Acquisition

**Despite these achievements, skill acquisition remains limited in RMI for secondary school-aged youth.** Too many youth in RMI are not acquiring the skills in secondary school needed to succeed in post-secondary education or in the labor market, as evidenced by limited access to secondary education, including high dropout rates and low completion rates, and too many students struggling to learn in secondary education, including low proficiency on learning assessments, remedial learning needed by many post-secondary institute entrants, reports from employers about lack of core literacy and numeracy skills in the workforce, and lack of perceived value in staying in school. The local labor market clearly rewards education. Individuals who complete secondary education or higher earn much more than those who do not, and there is high reliance on foreign workers with secondary or higher education. Employers are demanding not only stronger technical skills, but also core cognitive skills, including literacy, numeracy, and problem solving skills. This section describes the evidence and indicators of constraints on skill acquisition, and the subsequent section describes what is known about why skill acquisition is limited.

#### *Access to secondary education*

**Completion rates for students starting secondary school range from 50 to 70 percent, with no clear improving trend.** Secondary education is characterized by high dropout rates. Analysis of secondary school enrollment data presented in the 2019 Education Statistical Digest found that, depending on grade level, average dropout rates for the 2016 to 2018 cohorts<sup>5</sup> ranged from 13 to 17 percent and transition rates from 82 to 86 percent. The secondary completion rate reported in the 2019 Statistical Digest was 57 percent. Since 2011, completion rates (the proportion of students starting secondary school who finished) have fluctuated, ranging from 50 to 70 percent, without a clear improving trend (Figure 5).

**Figure 5 Secondary School Completion Rates, 2011-19**



Source: PSS 2017, 2019.

<sup>5</sup> The average for 2016 to 2018 offers an average for the 3 years before the COVID-19 pandemic.

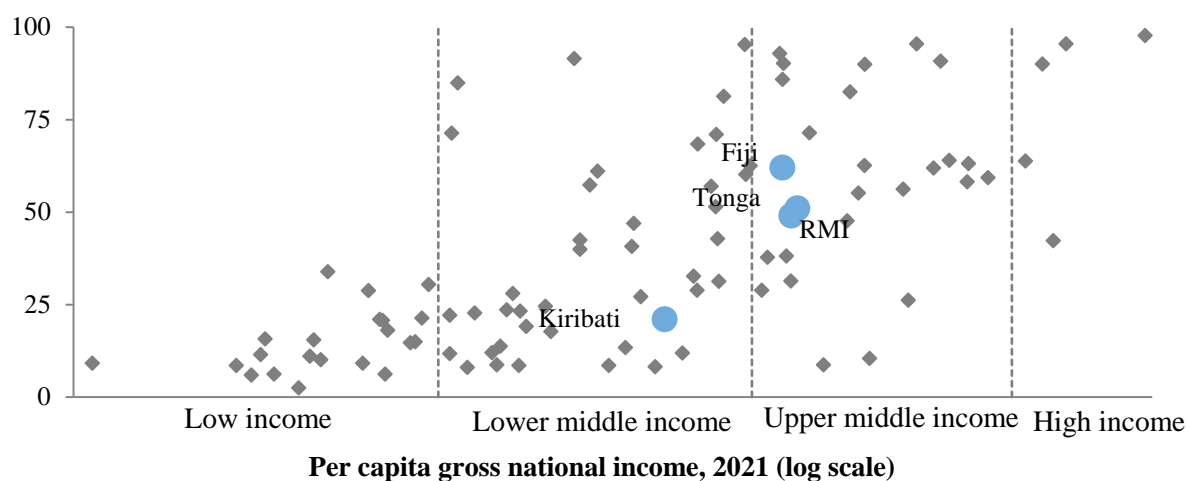
**The completion rate in RMI is lower than in other countries with a similar per capita gross national income.** To compare RMI's lower and upper secondary completion rates with those of other countries, the secondary completion rate for RMI was estimated using the HIES 2019 data using the definition and methodology that UNESCO uses to measure the Sustainable Development Goal related to completion rates. The UNESCO definition differs from the government's definition discussed above by measuring the percentage of individuals of the age that should have completed a certain level of schooling who actually complete. The UNESCO methodology estimates this by calculating the percentage of a cohort of people 3 to 5 years older than the intended age for the last grade of each level of education who have completed that grade. Using this methodology, the lower (grades 9 and 10) and upper (grades 11 and 12) secondary school completion rates for RMI were 75 and 49 percent, respectively. RMI's completion rates tend to be lower than those of other countries with a similar per capita gross national income, but they are not outliers (Figures 6 and 7). The lower secondary school completion rate tends to be well below Fiji's and Tonga's, both of which have similar per capita gross national income, whereas the upper secondary completion rate is similar to Tonga's but less than Fiji's.

**Figure 6 Lower Secondary School (Grades 9 and 10) Completion Rates According to Per Capita Gross National Income**



*Sources:* Completion Rates: Fiji (MICS 2021), Kiribati (MICS 2019), RMI (HIES 2019), Tonga (MIS 2019); all others, UNESCO Institute of Statistics. GNI per capita: World Bank. Note: GNI per capita for Kiribati and Tonga is for 2020.

**Figure 7 Upper Secondary School (Grades 11 and 12) Completion Rates According to Per Capita Gross National Income**



Sources: Completion Rates: Fiji (MICS 2021), Kiribati (MICS 2019), RMI (HIES 2019), Tonga (MIS 2019); all others, UNESCO Institute of Statistics. GNI per capita: World Bank. Note: GNI per capita for Kiribati and Tonga is for 2020.

**Secondary school enrollment rates tend to be low in RMI.** There are multiple sources of data for the net enrollment rate at the secondary level. The rate published in the official education digest in 2019 was 45 percent, and enrollment rates from previous and later years with available data have been about the same (Education Digest 2019 and 2020). Household survey estimates also differ. Based on the 2019 HIES, the secondary school enrollment rate was 60 percent (Table 2). Official net enrollment rates are calculated by dividing the total number of secondary school students who are the correct age for secondary school by the population estimate of that age group for the year, although there was a large and unexpected decline in RMI’s population according to the 2021 Census. It may be that the population of secondary school-aged individuals in RMI is lower than the population projection used to calculate the official enrollment rate.

**Table 2 Household Survey Estimates of Net Enrollment Rate According to Level and Sex**

	Total	Female	Male
Pre-primary	18.0	21.5	13.4
Primary	92.0	92.0	92.1
Secondary school	60.3	63.4	56.5
Lower secondary (grades 9 and 10)	44.1	45.3	42.7
Upper secondary (grades 11 and 12)	44.6	53.5	30.1
Post-secondary	0.18	14.2	21.9

Source: RMI HIES 2019.

**Girls have higher enrollment rates in secondary school according to enrollment numbers and household survey data, and dropout rates are slightly lower for girls than boys.** The gender difference in enrollment numbers varied from year to year between 2016 and 2020 (pre-COVID), but on average, 1,071 girls and 1,039 boys were enrolled in lower secondary school and 487 girls and 450 boys in upper secondary school. For 2019, analysis of the HIES data found that the net enrollment rate at the secondary level was 63 percent for girls and 56 percent for boys (Table 2). Large differences in the net enrollment rate between girls and boys were found at the upper secondary level, although the sample size was small, and the difference in the number of girls and boys enrolled according to the statistical digest data was negligible. Further analysis of enrollment data in the 2019 Education Statistical Digest revealed small gender differences in average dropout, repetition, and transition rates for the 2016 to 2018 cohorts. Girls tended to have higher transition rates and lower repetition and dropout rates in grades 9 and 10 (progressing to grades 10 and 11), and there was very little difference for the cohorts in grade 11 (progressing to grade 12) (Table 3). Dropout rates for girls in grades 9 and 10 were approximately 3 percentage points lower than those for boys in both grades

**Table 3 Differences According to Sex in Progression Through Secondary School, Average 2017-19**

	Transition		Repetition		Dropout	
	Female	Male	Female	Male	Female	Male
(%)						
Pre 9	m.	m.	m.	m.	m.	m.
Grade 9	84	79.5	1	1.4	16	19.1
Grade 10	88	84.4	0	1.1	12	14.4
Grade 11	85	85.5	2	1.2	14	13.3
Grade 12	m.	m.	0%	0.1%	m.	m.

Source: PSS 2020. m. denotes data not available.

**Nearly one-third of female secondary school dropouts gave pregnancy as the reason for dropping out; a perception that education did not provide benefits was the main reason for dropping out for 43 percent of boys and 30 percent of girls (excluding pregnancy).** The 2019 HIES<sup>6</sup> asked respondents about their reasons for leaving school; using this data, the main reasons for individuals aged 30 and younger who started but did not complete secondary school were estimated (Table 4). Although gender differences in dropout rates were small based on analysis of enrollment data, there were some crucial differences. The most frequent reason that girls gave was pregnancy (31 percent of female secondary school students). Excluding girls who

<sup>6</sup> The 2019 HIES for RMI was a nationally representative survey that collected data on household members about their education, demographics, and labor market activity.

cited pregnancy as a reason for dropout, approximately 30 percent of girls who dropped out of secondary school chose responses that indicated that continuing education would not yield benefits including that they had achieved their desired level of education or saw no value in education. This lack of perceived value for education was the most frequent reason besides pregnancy for girls and the most frequent reason for boys, accounting for 43 percent of male dropouts. Why so many individuals did not see value in education is not clear; it may be the result of lack of knowledge about labor market benefits of education or because they had fallen so far behind academically that further studies would not yield benefit. Thirty percent of female dropouts who did not cite pregnancy and 17 percent of male dropouts cited one of several school-related reasons: girls were more likely than boys to cite bullying from teachers or staff and slightly more likely to cite poor academic progress as reasons. Household-related reasons accounted for just over 30 percent in total of female (excluding pregnancy) and male dropouts. Boys were more likely to cite family problems and the need to find a job as a reason for dropping out, whereas girls were more likely to cite the need to help out at home. The implications of the frequency of these reasons, as well as the gender differences, including the role of gendered norms, are discussed below.

**Table 4 Reasons for Dropping Out of Secondary School (Aged 30 and Under)**

	Female	Female (excluding those reporting pregnancy as the reason for dropout)	Male
Bullying from teachers and staff	7	10	6
Poor academic progress	8	12	10
Too far away	6	8	1
Accommodations, living conditions	1	2	1
Family problems	4	6	13
Pregnancy	31	n.a.	n.a.
Had to help out at home	12	17	7
Too expensive	4	6	2
Found or needed a job	0	0	8
Achieved desired level of education	5	7	10
See no value in education	16	24	34
Other	5	7	8

*Source:* RMI HIES 2019/20.

*Note:* n.a., not applicable.

**There are large differences in access to secondary education between the wealthiest and poorest people in RMI, as well as between Majuro and Kwajalein and the rest of the country.** Using data on household assets from the 2019 HIES, it is possible to estimate net enrollment rates according to wealth quintile. Analysis of these data found substantial differences; 80 percent of secondary school-aged children in the wealthiest 20 percent of households attended

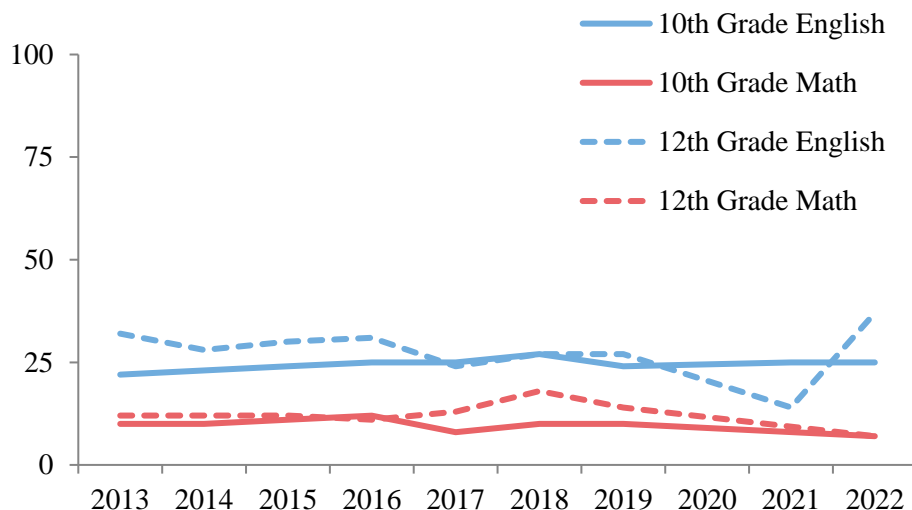
secondary school, versus 46 percent of those from the poorest 20 percent. Regional differences are also substantial; 67 percent of secondary school-aged children living in Majuro or Kwajalein were attending school, versus 37 percent in other parts of the country.

**The 2013 RMI Truancy Study found that lack of support for education from caregivers, students' lack of connection to schools, poor nutrition, and lack of counseling at school were major factors that inhibited attendance and enrollment.** The 2013 Truancy Study, which surveyed students in grades 6, 8, and 9 in selected schools and interviewed key informants, including community leaders, teachers, and parents, found that 45 percent of students surveyed thought about dropping out of school and identified a wide range of factors that lead to truancy. At the household level, having unsupportive parents was the most frequent reason that respondents gave as a reason for truancy; fewer than half of students reported that their caregivers helped them with their homework or discussed school with them. Poor nutrition was another major driver of truancy. More than three-quarters of students reported having breakfast before school, but meals were typically carbohydrates, including pancakes, bread, and noodles. Fifty-seven percent of students believed that there was no adult at school with whom they could discuss their problems, and 90 percent were not involved in any school extracurricular activity. Transportation and safe access to schools was also identified as a major factor. The study recommended a wide range of interventions to address these issues. For example, at the community level, recommended interventions include mobilizing community members, parent teacher associations, and law enforcement to enforce truancy laws and reduce children's access to alcohol and tobacco. At the school level, recommended interventions included developing extracurricular activities, better managing classrooms, creating truancy officer positions to inform parents when their children are absent, and establishing school meal programs. At the government level, the report recommended financing truancy officers and school meal programs, enforcing truancy laws, and increasing access to school transportation.

### *Learning outcomes and skills acquired at school*

**The key indicator of learning at the secondary level is MISAT; the proportion of students achieving proficiency in grades 10 and 12 has been low and difficult for policy makers and teachers to increase.** According to data from the 2022 MISAT report, the percentage of grade 10 students achieving proficiency in mathematics and English has been low since 2013 (see also analysis in World Bank 2021). Unlike the improvements in the grade 8 MISAT results before COVID, there has been little change in the proportion of students who are proficient in grades 10 and 12. There is also little change in scores from before COVID, as was observed in grade 8. Mathematics results tend to be lower than English results, with mathematics proficiency rates varying from 7 to 18 percent depending on year and grade level and English results generally higher. Low mathematics achievement was also found in the PSSP Phase 1 analyses for Fiji, Kiribati, and Tonga. There was a large increase in the percentage of grade 10 students achieving proficiency in English between 2021 and 2022, but the MISAT report provided no explanation for this change.

**Figure 8 Percentage Proficient on Grade 10 and 12 Mathematics and English Marshall Islands Standards Assessment Test**



Source: PSS 2022.

**Differences between the sexes and between public and private schools in secondary MISAT scores are small.** An average of 17.5 percent of girls were proficient overall in MISAT from 2017 to 2019<sup>7</sup> in grade 10 and 18.9 percent in grade 12, and for both grades, the percentage of boys achieving proficiency was less than 1 percentage point lower. An average of 14.2 percent of public school students (female and male combined) achieved proficiency overall in MISAT from 2017 to 2019 in grade 10 and 21.4 percent in grade 12. This was very similar to scores in private schools, which were only 1.8 percentage points lower in grade 10 and 0.9 percentage points lower in grade 12. The statistical digests did not report proficiency rates disaggregated according to school location, although there are few secondary schools outside the main islands in RMI.

**In addition to MISAT scores, there are other indications that RMI’s education system is struggling to educate students, including the need for remedial learning in college, employer reports of poor mathematics and English skills, reliance on foreign-educated workers, and low perceived benefit of schooling.** The widespread requirement for remedial learning in college was the motivation for a CMI mathematics bridging course that was designed in part to help boost mathematics learning of potential college entrants. In addition, employers have noted that secondary school graduates lack core mathematics and English proficiency skills (World Bank 2020). HIES data indicate that nearly 9 percent of workers in RMI are foreigners and that 99 percent of these have completed secondary school or higher, with 81 percent having a post-secondary education. Finally, as discussed previously, many secondary school dropouts dropped out because they did not see the value in continuing school or believed the amount of schooling

<sup>7</sup> Based on analysis from the PSS 2017 and 2019.

that they had achieved was sufficient; this lack of perceived value is consistent with low learning outcomes measured in MISAT, although further research would help explain this.

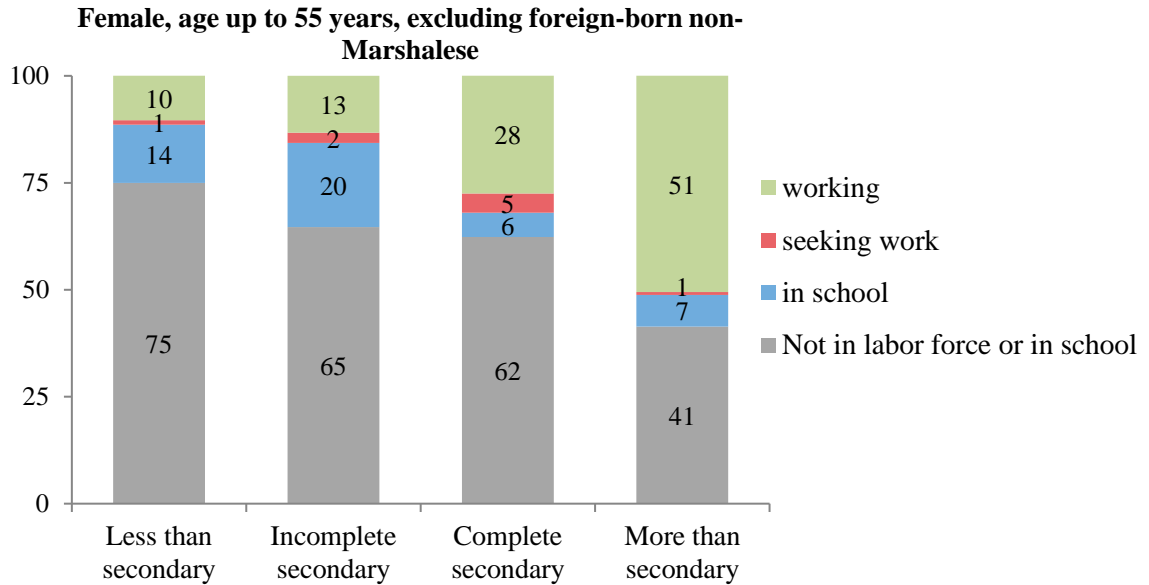
### *Labor market outcomes*

**Despite reliance on foreign-educated workers in RMI, employment rates for Marshallese secondary school and post-secondary school graduates are low.** Analysis of HIES data found that 43 percent of Marshallese aged 15 to 55 who had completed secondary school and 26 percent of those who had completed post-secondary school were not employed, in school, or in training. Only 42 percent of secondary completers and 61 percent of post-secondary completers were working. These high rates of not being employed, in school, or in training (NEET) and low rates of employment when 9 percent of workers are foreign educated may be indicative that the relevance of skills obtained in school may not be sufficient or relevant to the needs of the labor market.

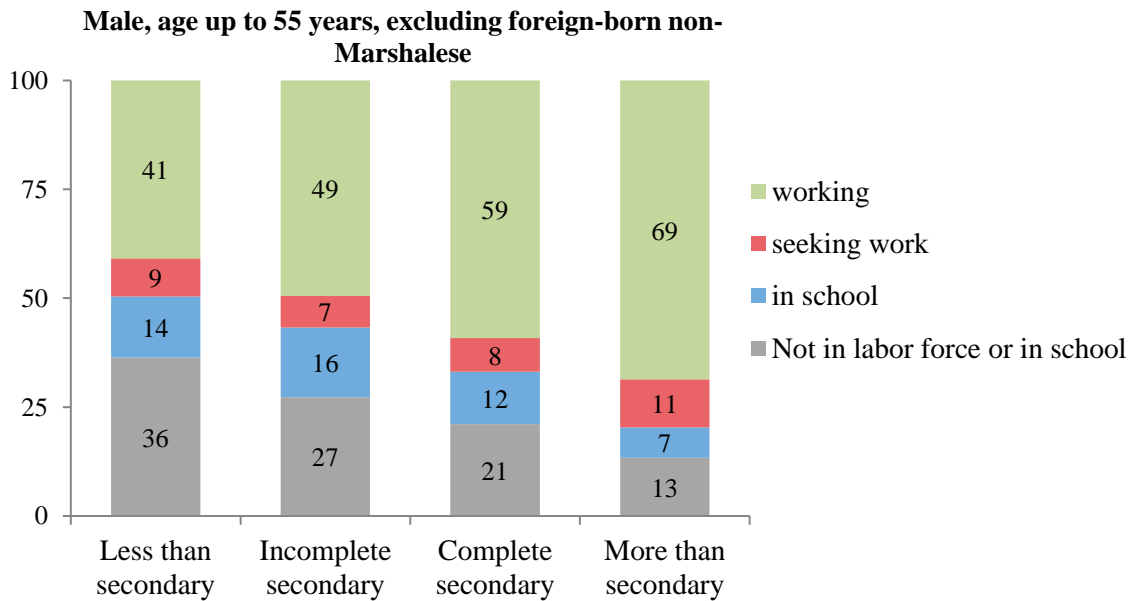
**There are substantial gender differences in employment outcomes.** For example, the percent of females who completed secondary and who had more than secondary education classified as NEET was 62 and 41 percent, respectively (**Figure 3.5**). For males, the figures were 21 and 13 percent, respectively. The high rates of NEET and low rates of employment among females may indicate a problem in the skills that they have acquired in schooling, but the large gender disparity suggests that women are less able to realize the learning and skills that they did acquire in schooling in the labor market to the same extent as males. This may be due to socio-cultural barriers to female employment including social norms, for example, requiring women to provide child and elder care or that lead them to different fields of study than men. Further research is needed to understand these drivers and what role the education system may have in alleviating them.

**Figure 9 Labor Market Status According to Education Level and Sex: (A) Women and (B) Men**

(A) Women



(B) Men

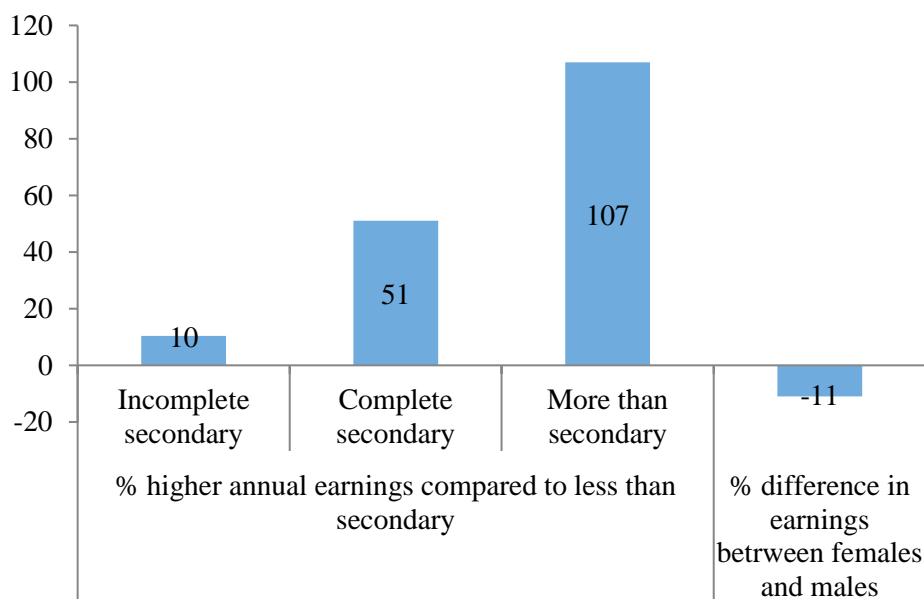


Source: 2019/20 HIES.

Note: Respondents were younger than 55 and excluded foreign-born non-Marshallese.

**Higher levels of education are associated with higher earnings in RMI.** Based on analysis of HIES data, those who entered but did not complete secondary school earned 10 percent more on average than those who did not enter secondary school (Figure 10), those who completed secondary school earned 51 percent more than those who did not enter, and those who entered or completed post-secondary school earned 107 percent more than those who did not enter secondary school.

**Figure 10 Percentage Difference in Earnings According to Education Level (Controlling for Age and Age Squared), Individuals Aged 15 to 55, Excluding Foreign-Born Non-Marshallese**



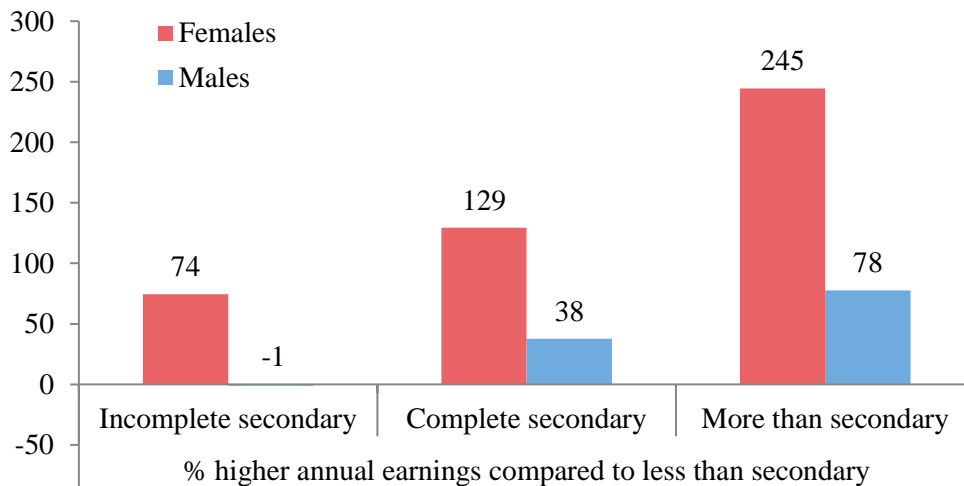
Source: 2019/20 HIES.

**Despite a clear association between higher education level and higher earnings, lack of perceived value in education is a major reason given for dropping out.** This may indicate that individuals are unaware that additional schooling leads to higher earnings, but it is more likely that many individuals do not gain anything from more schooling, especially if they have fallen behind academically and cannot access remedial learning. In this case, differences in earnings do not reflect the effect of continuing education but rather reflect differences in abilities that school leavers have attained. The association between earnings and schooling, presented here, does not reflect the causal impact of schooling on earnings, and the true effect of schooling on earnings is typically heterogeneous; for students who have fallen behind academically, additional schooling may not have a casual effect on earnings, unless the system has suitable remedial capacity. This reason is consistent with the high percentage of students who do not achieve minimum proficiency on MISAT. The interventions needed to increase school completion would differ depending on the

extent to which these two factors are at play; more research is needed to understand why lack of perceived benefits of schooling is so prevalent.

**There are substantial gender differences in earnings and in the benefits of attaining more education.** On average, controlling for individuals’ level of education, women in RMI earn 11 percent less than men (Figure 10), although education is substantially more strongly associated with earnings for women than men (Figure 11). Analysis of the HIES data found that a man who had finished secondary school earned 38 percent more than one who did not enter secondary school, whereas a woman who finished secondary school earned 129 percent more than one who did not enter secondary school. The difference is even greater for post-secondary school completers, with men earning 78 percent more than those who did not enter secondary school and women earning 245 percent more. What these figures suggest is that, although women earn less than men, this gap decreases for women with higher education. This is not atypical but is quite common across countries (Dougherty 2005). These differences in earnings were only between men and women who were employed; they do not reflect the differences in employment associated with higher levels of education. Given that the increase in employment associated with education is greater for women than men, as discussed previously, women should have a very strong incentive to attain more education.

**Figure 11 Earnings Differences Between Men and Women Aged 15 to 55 According to Education Level (Controlling for Age and Age Squared), Excluding Foreign-Born Non-Marshallese**



**The 2015 Employer Skill Needs Survey found that 86 percent of long-term employment vacancies at surveyed employers were because applicants lacked the needed skills.** The types of occupations with long-term vacancies included technical occupations (e.g., plumbers, carpenters, pharmacy technicians, pilots) and professional and managerial professions (e.g., economists, managers, chief financial officers). The most common occupations for foreign workers were managerial occupations (28 percent of foreign workers), followed by traditional trade occupations (18 percent) and accounting and financial occupations (17 percent). Employers believed that 27 percent of new workers were poorly prepared in terms of reading skills, 33 percent

in terms of mathematics skills, and 50 percent or more in problem-solving skills, including solving complex tasks, computer skills, and planning and organizational skills. The types of skills that employers demand are not strictly technical skills but include cognitive skills needed to solve complex tasks and perform managerial and professional occupations.

#### 4. Major Challenges: Knowledge Gaps and Potential Interventions

The predominant constraints on skill formation for secondary school–educated youth that emerge in the literature, reports, and data available for RMI include preparedness of students to learn at grade level, teaching methods, lack of alignment of curriculum between levels, household factors, and gender factors. To guide research activities under Phase 2 of this project and subsequent intervention design, literature, reports, and data were reviewed for RMI, and from these, the most critical constraints were identified. This section reviews these constraints and discusses the knowledge gaps that could be filled under Phase 2 to inform interventions to address these challenges.

##### *Preparedness of secondary school students to learn at grade level*

Although proficiency rates at the primary level, particularly in literacy, are increasing, they remain low, which means that many students entering secondary school do not have the literacy skills needed to learn and succeed in secondary school, especially when the language of instruction includes English in addition to Marshallese and many learning materials, including textbooks, are in English. The low proportions of students achieving proficiency on the grade 8 and 10 MISAT assessments suggest that many have not achieved a level of learning needed for subsequent grades. In addition, the World Bank and UNESCO, recognizing that literacy acquisition in primary school is fundamental to a student’s subsequent success in learning, have developed a learning poverty indicator<sup>8</sup>, which combines proficiency in reading at the end of primary and primary school participation to provide a measure of a country’s students’ potential for learning in secondary school. The World Bank’s recent interim assessment<sup>9</sup> suggests that in RMI, the rate of learning poverty is estimated to be between 41 and 75 percent with the mean estimate of 61 percent. This implies that a significant proportion of children, ranging from 41 to 75 percent, are unable to comprehend a basic text by the age of 10. The government recognizes these challenges and, under its ESSP, is designing and implementing programs for remedial learning. The government has been undertaking steps to improve the professional development available to teachers in order to address the second major constraint related to improving learning outcomes through changing teaching methods. However, despite many professional development activities, learning outcomes remain stubbornly low at the secondary level and more research is needed to help better align professional development, teaching and learning outcomes.

**At the primary level, too few children are achieving the minimum level of learning, particularly in reading, which fundamentally inhibits learning and skill acquisition at the secondary level.** MISAT assessment of primary grades revealed that a low proportion of students achieve proficiency. While end-of-primary assessment results tend to be low, as discussed previously, results are also low in 3<sup>rd</sup> and 6<sup>th</sup> grade assessments as well. For example, less than 40 percent of girls or boys achieved proficiency overall at the 3<sup>rd</sup> grade level in 2019 while less than 25 percent of girls or boys achieved proficiency at the 6<sup>th</sup> grade level (PSS 2019). Analysis of enrollment data presented in the Education Statistical Digest of 2019 found that, of 8<sup>th</sup> grade

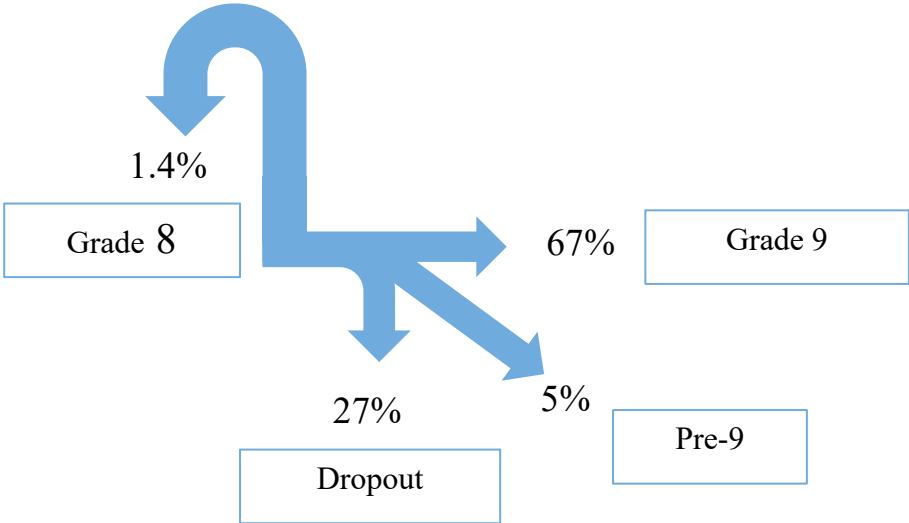
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<sup>8</sup> World Bank. 2019. Ending Learning Poverty: What Will It Take? World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/32553> License: CC BY 3.0 IGO.

<sup>9</sup> Interim estimates for learning poverty: Cahu and Sondergaard (forthcoming) based on PILNA 2018.

students in 2016 to 2018, an average of 67 percent transitioned to 9<sup>th</sup> grade, 5 percent transitioned to the pre-9<sup>th</sup> remedial secondary school grade, 27 percent dropped out and 1.4 percent repeated (Figure 12). In terms of equity, gender differences are quite small in MISAT 8<sup>th</sup> grade results. However, these results vary considerably across the country with some islands performing relatively well while others perform relatively poorly (Map 1).

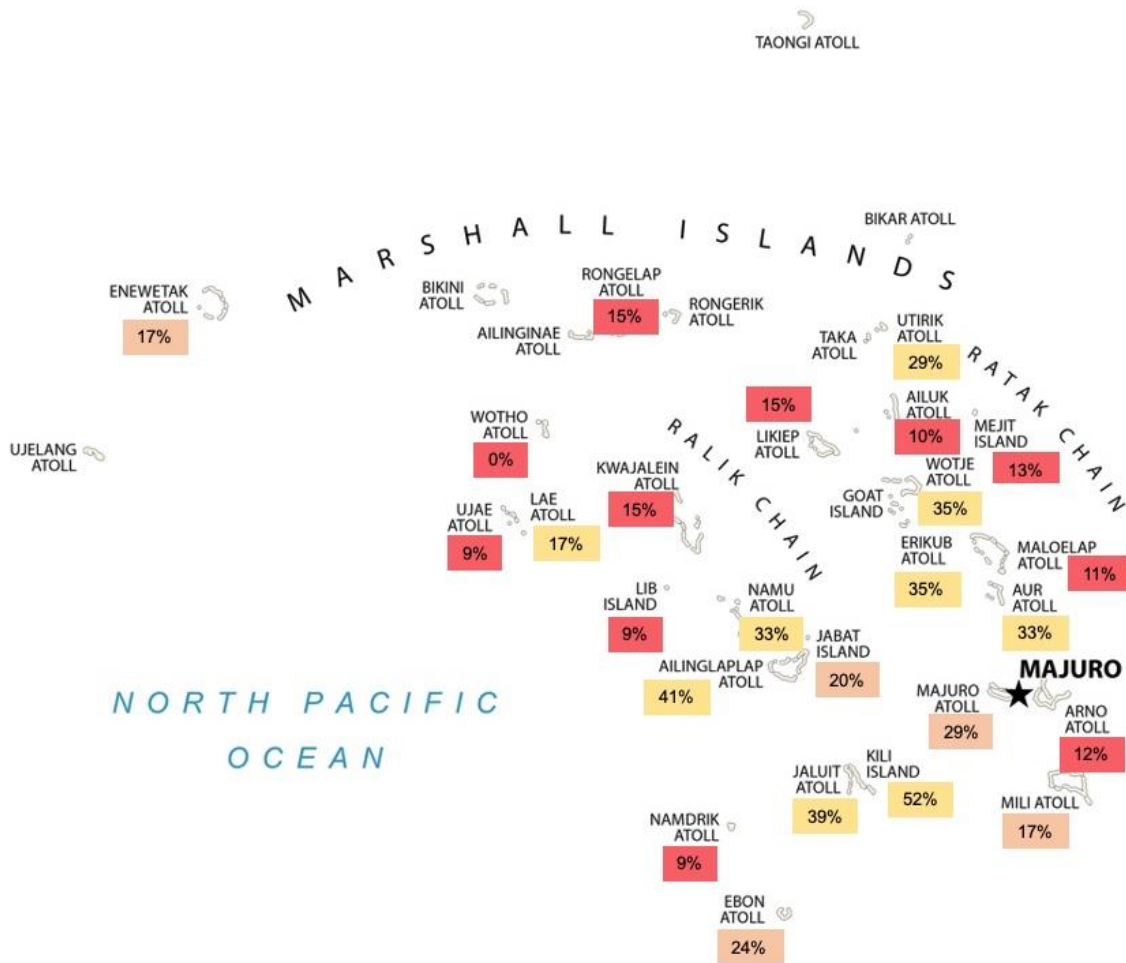
**Figure 12** Estimated Transition and Dropout Rates Between Grade 8 and 9, 2016-18



*Source:* World Bank estimates based on data contained in the 2019 statistical digest.

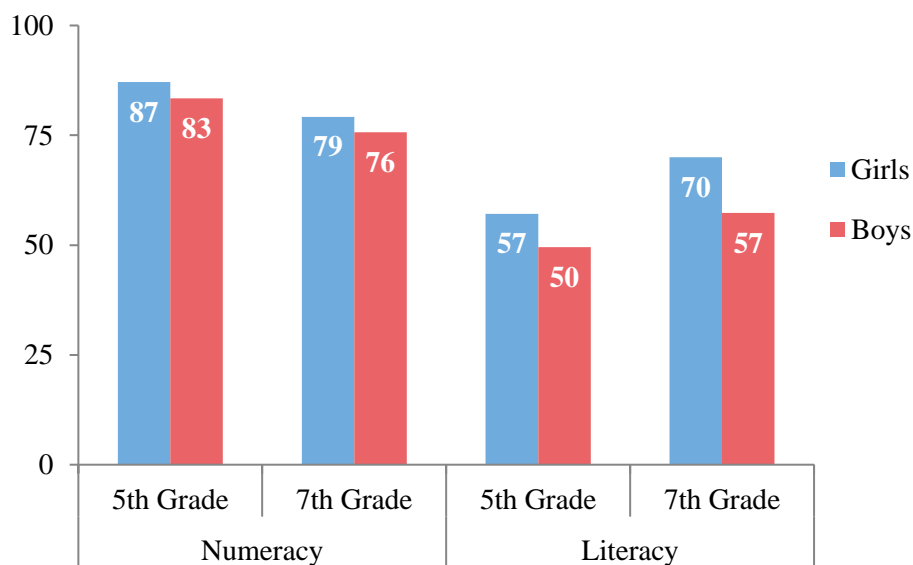
*Note:* Transition rates are based on net enrollment rates, and repetition is based on all students; dropouts are the difference

**Map 1 Percentage of Grade 8 Students Proficient Overall on Marshall Islands Standards Assessment Test According to Island, 2020**



Although there have been substantial improvements in PILNA results, still too many students are struggling to achieve minimum expected proficiency, especially in literacy. In 2018, 47 percent of grade 5 students and 36 percent of grade 7 students were not achieving minimum expected proficiency in literacy on the PILNA. There was also a large gender gap in the percentage of students achieving minimum proficiency in literacy, especially in grade 7, with 70 percent of girls and 57 percent of boys achieving minimum proficiency (Figure 13). The language of the PILNA was Marshallese, which would have been most students' first language. The PILNA report noted that students generally performed well on test questions that required them to read a text and find information in that text but less well on test questions that required thinking critically about the reading.

**Figure 13 Percentage of Students Achieving Minimum Proficiency on the Pacific Islands Literacy and Numeracy Assessment According to Grade, Subject, and Sex, 2018**



**Research strongly shows that improving a child’s literacy early in primary leads to better educational outcomes and labor market outcomes in the future.** Strong literacy skills at the primary level are an important determinant of a student’s ability to learn at higher levels of education, including secondary school, and of other educational outcomes, including likelihood of completing school (Alexander, Entwisle, and Horsey 1997; Entwisle, Alexander, and Olson 2005; Jimerson et al. 2000; Marteleto, Lam, and Ranchhod 2008). Literacy skills in a child’s home language have also been shown to be important for educational outcomes, even when the language of instruction is different (e.g., UNESCO 2003); for example, strong literacy skills in Marshallese offer a critical foundation for success in secondary school, where the language of instruction includes both Marshallese and English. This may require new pedagogical practices at the primary level. The 2018 PILNA study, for instance, recommended providing supplementary training to teachers on pedagogical practices related to reading, including “educator modelling, think-aloud and questioning to teach children how to make inferences when reading.” At the primary level, evaluations of specific teaching methods for early-grade reading have been shown to be successful at improving early reading skills; low-cost pre-primary interventions targeting parenting and home learning activities have been shown to be successful at improving school readiness and early reading skills as well. (For a review and example from a Pacific Islands country, see Macdonald et al. 2018).

**MISAT data suggest that too many secondary school students are not prepared to learn at their current grade level.** As discussed previously, many students do not achieve minimum proficiency on MISAT or PILNA at the primary level, and this lack of proficiency may inhibit learning when they arrive in secondary school. The percentage of students achieving

proficiency on the grade 10 MISAT, as discussed previously, is very low, suggesting that many students have not learned in the first two grades of secondary school and are not prepared to learn in the last two. The low proportion of students achieving proficiency on the grade 12 MISAT attests to this. Use of English as a language of instruction, especially in learning materials such as textbooks, complicates things further; if students are unable to attain the literacy skills in Marshallese needed to be able to learn in primary school, it is unlikely that they will be able to attain the literacy skills they need to learn in English in secondary school.

**The government is developing new remedial learning interventions to help students who are behind catch up. This will be essential to improving learning outcomes and increasing equity and resilience to shocks, including disasters and pandemics.** At the secondary level, ensuring that the education system can help those who are behind catch up will be essential for helping students who had poor learning outcomes at the primary level and for mitigating the impact of shocks that limit student learning more generally. Students can fall behind for a variety of reasons, including family crises and personal problems, as well as large-scale natural disasters and, as seen recently, pandemics. The government is well aware of this and is actively pursuing interventions. For example, the government is willing to finance a pre-grade 9 for approximately 7 percent of secondary school entrants. Under the government's ESSP, a range of remedial learning interventions are being considered, including tutoring, adaptive learning programs, and teaching to level rather than to grade.

**Knowledge gaps for intervention design:** Identifying the most-effective, most-cost-sustainable interventions that could help students who are behind catch up is a fundamental step in improving learning outcomes at the secondary level. This includes understanding what has worked in other countries but also adapting to the local context to ensure that government can maintain the approaches. Designing remedial learning interventions would also require understanding how teachers are currently teaching, whether they are teaching at the right level (for their students) or using adaptive teaching strategies, and what the barriers to doing these types of interventions successfully are. Conducting classroom observation studies in which trained experts collect data on how teaching happens in practice could help with this. A better understanding of the link between student performance on primary and secondary MISAT rounds would also help identify the skills and knowledge that promote success in secondary school and what remedial learning should focus on.

### *Teaching*

**The public school system and its partners have been providing various types of teacher training over the years, but secondary school learning outcomes remain stubbornly low.** According to the Education Statistical Digest of 2019, approximately 30 percent of secondary school teachers were uncertified or unqualified to teach. Although this has improved across time, this high proportion of unqualified teachers highlights the importance of a strong teacher training system. Generally, teacher training in RMI tends to take place during the summer, when teachers are able to travel to the capital, Majuro. Training is often in the form of informational sessions that the public school system organizes but is also linked to specific projects and partners. Although these initiatives are critical to teachers' professional development and offer teachers a choice in what professional development would best suit their own growth, the persistently low results on

the MISAT grade 10 and 12 assessments suggest that a stronger link may be needed between learning outcomes as measured in MISAT and the objective of teacher training.

**The government is interested in and actively piloting and developing interventions to strengthen the link between professional development and student learning outcomes.** Some ongoing teacher training projects are working toward this end. For example, the Pacific Resources for Education and Learning Teacher Evaluation Pilot Project is supporting teacher standards and development of teachers' professional growth plans, which is a fundamental step in developing a comprehensive teacher training system. The mentor-mentee approach being used in the CMI and University of South Pacific mathematics transition course may offer a model of coaching that could be extended to other subjects and could be integral to a professional development system. International research has identified the elements of teacher training that are necessary for training to be effective; these include duration of teacher training and follow-up, coaching and mentoring modalities, a focus on pedagogic approaches related to subjects, and opportunity to practice what is being taught (see Popova et al. 2018 for a review). Additional interventions could include (1) increasing understanding of and prioritizing student learning needs to achieve or catch up to the goals specified in the curriculum, (2) increasing understanding of the practices that teachers apply in the classroom and what alternative teaching practices might help promote student learning, (3) offering teachers a range of best-practice teaching methods that they can choose from to meet their development needs based on their own professional growth plans, (4) coaching teachers to help them best apply the teaching practices they choose to use, and (5) evaluating professional development activities to ensure that the system's approach is improving learning outcomes.

**Knowledge gaps for intervention design:** Given that the public school system and its partners are already providing professional development, three analytical pieces may help strengthen the professional development system. The first would be a structured diagnostic of the existing teacher training system; the World Bank In-Service Teacher Training Survey Instrument (ITTSI) is a stocktaking of teacher training practices that helps identify areas that could be reformed to strengthen the system. The second would be greater understanding of teaching practices currently used in the classroom to determine how teachers teach in practice; this would help identify additional types of training that could be offered to teachers to help improve learning outcomes. The World Bank TEACH classroom observation tool helps determine whether the core teaching methods that are linked by research to better student performance are being used in the classroom. Subject-specific teaching methods may also be assessed by adapting the instrument. The third would be analysis of MISAT items and student performance to understand what types of skills and knowledge students struggle with most to help teachers identify what topics need additional emphasis in their teaching. The Educational Quality and Assessment Programme (EQAP) is conducting an item analysis study that will help inform development of teacher training interventions.

### *Alignment and relevance of curricula and assessment*

**The need for bridging classes between secondary and post-secondary levels and remedial learning for secondary and post-secondary entrants may indicate curricular mismatches; relevance of TVET skills in the labor market is not well documented.** Post-secondary institutes rely on remedial learning for new entrants, particularly for core skills of mathematics and English, for example, CMI's Development Education for Mathematics and English courses. To address

these, RMI has developed bridging classes between secondary schools and post-secondary institutes to help ensure that post-secondary entrants are prepared for college-level learning. Lack of preparedness of entrants into secondary school has also been identified as a constraint on students' success in secondary-level education, and the pre 9<sup>th</sup> grade offering is designed to address this. However, the need for remedial learning for secondary and post-secondary school entrants indicates a larger problem of curricular misalignment between levels. The development of bridging programs offers a model of how curriculum alignment can be attained. Finally, although the Employer Skill Needs Survey of 2015 asked about the skill needs of the domestic labor market, the labor market outcomes of secondary school leavers who take vocational courses or participants in short-term vocational programs offered to out-of-school youth are not well documented. Understanding these skill needs and the labor market outcomes of TVET leavers is needed to help ensure that TVET curricula are aligned with employer needs.

**Potential interventions:** Development of bridging classes between secondary school and post-secondary institutes offers a potential model of how curricular alignment could be implemented in RMI. The working group that developed the courses was ad hoc; establishing a formal process for reviewing and updating curricular links more broadly might strengthen the link between secondary school curricula and the level of teaching at post-secondary institutes. A broader process of ongoing curricular alignment between levels may help ensure that students are better prepared to succeed in subsequent levels of education. The PSS curriculum unit is working with grade 8 and 9 mathematics teachers to better align the curricula. Similar principles would apply to better alignment of the curricula of secondary-level TVET institutes and other TVET programs targeting out-of-school youth with employer needs.

**Knowledge gaps for intervention design:** A review of curricular alignment between educational levels would be needed to understand where the mismatches are and what subjects would be priorities for alignment. The process used to establish the current bridging courses offers a model for how this alignment review could be accomplished. For TVET courses and programs, the Employer Skill Needs Survey of 2015 already examines labor market needs, but the actual labor market outcomes of participants in TVET are not documented (e.g., whether they are ultimately employed in occupations requiring the skills attained). Analysis of HIES data would provide some insights here, but tracer studies would provide a larger sample size and more-detailed data for analysis. Analysis of the MISAT data across time may offer an indication of the types of skills that students are intended to learn in primary school that are most critical for success in secondary school; this would also help in aligning curricula by emphasizing the areas that students need most support on to succeed in secondary school.

### *Household environment*

**Student household characteristics, including income and wealth and the learning environment at home, have been found to be an important determinant of attendance and learning at school.** The analysis of the HIES dataset found that just over 30 percent of male and female secondary school dropouts (excluding those who gave pregnancy as a reason) dropped out because of home-related factors, including the need to find a job, the need to help out at home, affordability, and family problems (Table 3), indicating that household poverty may prevent students from completing secondary school. The substantial differences in net enrollment between the wealthiest and poorest households found in the HIES analysis are consistent with the important

detrimental effect of poverty on participation. Family problems are another important reason for dropping out, particularly for boys, but the nature of these is not well documented. In terms of learning outcomes, living conditions for students who must migrate to other islands to attend secondary school are often not conducive to succeeding in school (World Bank 2020).

**Potential interventions:** The government is constructing dormitories and developing counseling services. Public financing of education that is targeted toward the poorest households is a typical intervention that governments use to offset poverty. This can take a number of forms, including targeted, publicly financed voucher programs that students from poorer households can use at schools that charge tuition. Targeted conditional-cash transfers have been shown to be effective in increasing enrollment of children from poorer households. Cash transfers typically require student enrollment in school and meeting a minimum attendance rate and sometimes a minimum level of performance. They are intended to provide income to households to offset the aspects of household poverty that prevent children from attending school, including the need to work. They are also used as incentives for families to send children to school in contexts in which households may not fully understand the value of attending school. In this sense, cash transfers are not meant to be a tuition subsidy and are often provided even when education is free. An advantage of conditional cash transfers is that they have been well researched, including as the subject of rigorous, randomized, controlled trials (see Millán et al. 2019 for a review), and an evaluation of a CCT program in Tonga, as an example from a Pacific Island context, is currently underway.

**Knowledge gaps for intervention design:** There are two main knowledge gaps in addressing family problems and poverty. Greater understanding is needed of family problems related to dropouts but also to learning. This may require a student survey and focus groups to understand problems. To mitigate the effects of poverty on educational outcomes, the chief knowledge gap would be how to target interventions (e.g., tuition subsidies, conditional cash transfers, related interventions). A basic approach would be to target according to geographic location (e.g., outer islands), but given the variation in MISAT performance even between the outer islands (Figure 14), it may be more efficient to use household-level indicators (e.g., household infrastructure characteristics, land holdings). Analysis of the HIES dataset may provide information on household characteristics that contribute to dropout, and this would be strengthened if household factors could be linked to test scores, for example by administering a student survey that could be linked to MISAT.

## *Gender*

**Analysis of access to school, learning outcomes, and labor market outcomes suggest that gendered sociocultural factors may be constraining skill acquisition in RMI.** Labor market outcomes are more strongly associated with educational outcomes for women than men. Typically, this disparity in the responsiveness of labor market outcomes to education translates into girls outperforming boys in educational outcomes, including completion rates and learning outcomes as in Fiji and Tonga. In RMI, however, there is little gender difference in educational outcomes, which suggests that less-visible gendered sociocultural factors may be at play. For example, pregnancy as a reason for dropping out of secondary school appears to be much more prevalent among girls in RMI than in Fiji or Tonga. If early childbearing rates were lower, completion rates might be much higher for girls than for boys. Female dropouts were also more likely to cite the need to help out at home, distance, and affordability. Neither distance from school nor affordability

should differ depending on the sex of the student; these factors may reflect families' greater reluctance to send girls to school over long distances or to dormitories or to finance their education. More research is needed to understand this. Male dropouts were much more likely than female dropouts to cite family problems and the need to find work as a reason for dropping out. Again, these may reflect gendered sociocultural factors and require more research.

**Potential interventions:** Various interventions have been used globally to increase girls' access to education. For example, stipends and conditional cash transfers targeting girls have been used to alleviate the impact of poverty and encourage households to invest in girls' education, to avoid early childbearing, and to enable them to attend and learn (e.g., Bangladesh Female Stipend Program, see Khandker et al. 2021). Incorporating reproductive health into the education curriculum offers to help reduce early childbearing (UNESCO and UNPF 1998). Building dormitories, as RMI has been doing, also promotes girls' participation in school, but dormitories must be safe and female friendly. Counseling services might also reduce early childbearing and address the family problems that boys face.

**Knowledge gaps for intervention design:** Potential interventions to address gender-related barriers to educational outcomes require greater understanding of the underlying factors that affect girls and boys differently. Further analysis of HIES data, for example, would provide insight into the role that poverty plays in contributing to early childbearing and other reasons for dropouts. Qualitative work, including focus groups and interviews, would also be needed to understand the drivers of early childbearing. As described above, stipends and conditional cash transfers targeting girls would not only alleviate poverty constraints, but also encourage girls to continue school, potentially avoiding pregnancy, but if stipends and cash transfers are not universal, they require a targeting method. Qualitative work is also needed to understand family problems that boys face. Gender differences in field of study, including participation in TVET programs, are not well documented. Finally, classroom observations can be tailored to determine whether teachers are exhibiting gender bias in their teaching to help develop teacher training to recognize and address inherent biases.

## 5. Research Priorities for Intervention Design

The following areas have emerged as priorities for further research to inform the identification and design of interventions needed to address the main challenges.

### *To help students who have fallen behind catch up*

**Identifying interventions that are effective and cost sustainable:** Being able to improve learning outcomes for students who have fallen behind is essential not only to improve learning outcomes, but also to increase the education system's resilience to help recover learning aftershocks, including COVID. The government recognizes this and has committed a component of the ESSP to interventions to assist secondary students who have fallen behind. These potential interventions include capacity building regarding teaching at the right level, tutoring, differentiated instruction, and adaptive learning approaches. Other potential interventions that have emerged in discussions with government include (1) curriculum reform through bridging programs between primary and secondary school targeting struggling students, building on the success of bridging classes between secondary and post-secondary schools, (2) accelerated-learning interventions in which core skills are taught to struggling students to help them catch up, and (3) integration of literacy and numeracy skills into vocational and other programs that target out-of-school youth or students at risk of dropping out. A critical knowledge gap is lack of understanding of which interventions would be most effective but at the same time cost sustainable. A review of international models and evaluations of remedial-type programs and cost estimates for implementing in RMI would help identify the interventions that can boost secondary school student learning in the most cost-effective, sustainable way.

**Classroom practices related to differentiated learning and MISAT item analysis:** Understanding how teachers address differentiated learning needs is a first step in designing teacher training programs that can help students catch up (see discussion below). A second need is to identify the specific learning concepts or content of subjects that students tend to be weak in. Using the MISAT data would help do this. The concepts and content that secondary school students struggle with most may be part of the secondary school curriculum, but the root of the problem may be traced back to students' struggles with foundational concepts and content taught at the primary level. Concepts and content that require more emphasis or inclusion in remedial programs may be identified through item analysis using MISAT; this involves identifying the specific test questions that poorly performing children tend to get wrong and analyzing these questions to find the specific concepts or content behind them. By merging results of MISAT tests from all grades to have a series of MISAT results for each student (a longitudinal dataset), the concepts and content that need more emphasis in the curriculum in earlier years, including primary school, to improve future learning by children can also be identified. This would help inform the design of bridging programs that target students who are struggling academically in primary school.

### *For strengthening the link between teacher training and student learning outcomes*

**Assess the teacher training system:** Although many teacher training activities are being conducted, as well as improvements to the teacher training system, learning outcomes at the secondary level remain low. These professional development activities include a wide array of training workshops offered during the summer and teacher professional development plans.

Assessing the overall teacher training system based on international best practice would help the government of RMI identify policies and reforms needed to strengthen the system and increase sustainability. The World Bank In-Service Teacher Training Survey Instrument (ITTTSI) assesses the in-service teacher training system based on global evidence of effective in-service teacher training programs. This tool collects data through an interview with a government official responsible for teacher training (or other nongovernment individuals as applicable) and would help inform government interventions to strengthen teacher training.

**Identify teacher training needs to improve student learning outcomes:** Item analysis of MISAT described previously would help identify the concepts and content that require more emphasis in teaching and the corresponding teacher training. It might also help identify good practice by identifying schools where results are better than average. In addition, teaching methods that teachers use in practice, including how they support students who are lagging behind or struggling with the bilingual language of instruction, are not well documented in RMI. Classroom observations offer an approach to determine how teachers are teaching in practice given the realities of the classroom. The World Bank has developed the TEACH classroom observation tool based on global evidence of the types of teaching methods that improve student learning outcomes. This tool would help identify teacher training needs and complement the teacher observation tool that the public school system developed recently.

#### *For strengthening curriculum alignment to the labor market*

**Labor market transition:** The Employer Skill Needs Survey of 2015 assessed skill needs, but labor market outcomes, including employment rates, field of work, quality of work, and earnings of secondary school leavers and youth vocational program participants are not well documented. HIES data can provide some insight into this, but a tracer study would help better determine whether the curriculum, including vocational courses and programs, are helping youth find work. Support for a tracer study has been discussed under the ESSP.

#### *For addressing household-level constraints to education*

**Students' perceptions and problems:** Lack of perceived value for continuing school and family problems were major reasons that secondary school dropouts gave for not completing secondary school. The 2013 RMI Truancy Study found that lack of support from caregivers for education, students' lack of connection with schools, poor nutrition, and lack of counseling support in schools were major factors that inhibited attendance and enrollment. The government is conducting a follow-up truancy study. Additional qualitative work may be needed to better understand the lack of perceived value for education by dropouts, learning barriers, and family problems.

**Poverty and accessing education:** Greater understanding is needed of how poverty contributes to student dropout in order to understand the types of government programs needed to boost school enrollment and provide guidance to the newly appointed truancy officers. For example, are secondary dropouts contributing significantly to household income (by working or in kind through subsistence agricultural work) after they drop out? If so, enforcement of truancy laws and raising awareness may have little impact. Conditional cash transfers may be necessary in these cases. The HIES provides some insights, but given the small sample size of youth in the survey, it may be advantageous to conduct a tracer study of out-of-school youth to better

understand the effect of poverty on enrollment. This type of survey could be extended to include at-risk or low-performing students who remain in school but have low attendance because of family needs.

*For addressing gender inequality<sup>10</sup>*

**Early childbearing:** Pregnancy was a major reason that girls gave for dropping out of secondary school. Qualitative work regarding girls' and boys' perceptions about sexual health, childbearing, and gender roles would help identify social drivers and household factors (including poverty) of early childbearing to identify interventions (counseling, reproductive health curriculum, awareness raising, influencer campaigns) to reduce early childbearing. Educational modalities for young mothers may also be needed to promote secondary school completion. An example of this type of program in the Pacific is the Matua program at Fiji's Nabua Secondary School which offers young mothers and others who dropped out of secondary school a chance to reenroll and complete secondary school and continue to post-secondary.

**Household-level gender disparity:** Female secondary school dropouts were more likely than male dropouts to cite cost of schooling, distance, and the need to help out at home as reasons for dropping out. This is consistent with households exhibiting some son-bias in support for education. At the same time, boys were more likely to state family problems as a reason for dropping out. Qualitative work at the household level, including interviews and community focus groups, would help explain the extent to which gender bias is being exhibited in household decision making related to education and to identify interventions to help alleviate it (e.g., conditional cash transfers targeting girls, awareness raising, influencer campaigns).

**School-level gender disparity:** Apart from exam results and enrollment rates, gender differences in other aspects of education, including attendance, field of study, and teaching has not been well documented in RMI. Analysis of registration data in elective courses and attendance data would help identify potential gender disparities. Classroom observation of teaching practices can be adapted to identify whether teachers are exhibiting (often inherent) biases in their teaching.

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<sup>10</sup> Research on gender would be included as part of all research proposals whenever possible and relevant.

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