



SKILLS FOR THE FUTURE



► Introduction

The theme of 'Skills for the future' has dominated policy debates in recent years. Globalization, new technologies, migration, changing labour markets, and environmental and political challenges have changed the ways in which we learn, work, communicate and interact. These changes are altering the nature of economic and political institutions, social and cultural systems, production systems, educational institutions and workplaces. No group will be affected by these changes more than adolescent girls and boys.

The focus on adolescents is a conscious choice. There are 46 million adolescents in Indonesia, equal to 18 percent of the population. This cohort holds the key to investing in sustainable development and human capital and yet, despite Indonesia's steady economic growth, they still continue to face significant deprivations which leaves their rights unfulfilled. Enabling adolescents to realise their potential by investing in their education, skills and participation in society will contribute to a competitive labour force, sustained economic growth, improved governance, and a strong and vibrant civil society (UNICEF, 2017).

This 'youth bulge' means that, as the working age population grows larger than the dependent population, there is the opportunity of a demographic dividend. With this in mind, this study purposely takes an adolescent-centric approach to examine the kinds of skills required to make sure that young people are able to maximize their lifelong potential and have the skills to adapt to a rapidly changing world.

23%
under 15

35%
under 19

35% of population
is under age of 19.



By 2030, almost a
quarter (23%) will
be under the age
of 15.

The Government's current focus on human capital is timely, but there is still the risk that if large numbers of young people have low skills levels and cannot find meaningful employment that they could become an economic burden on society. Already around 21 percent of adolescents in Indonesia are not in education employment or training; and a youth unemployment rate of 15 percent sees Indonesia languishing as the nation with the second highest youth unemployment rate in the Asia Pacific region. It is important to act now to ensure young people in Indonesia have access to opportunities.

For young people to reach their potential, significant investments must be made in learning and skills development. Investment at this time is crucial to equip young people with the capacity to manage the challenges ahead and enable them to make informed choices about their future that will include, not only education, but also health and wellbeing, skills and employability and their role as active citizens. This will allow them to positively contribute to their country's development and make the safe transition into adulthood.

► Study Outline

In furthering support for the government of Indonesia's pending National Medium-term Development Plan 2020-2024 (RPJMN) for the Education Sector and, in its development of the new Country Programme (2021-2025), UNICEF Indonesia undertook the study 'Skills for the Future in Indonesia.'

The purpose of the study is to provide an analysis of the skills currently being acquired by adolescents and the skills they need for the future as outlined by the private sector, the government, educators and adolescents themselves. These skills have been selected in the context of current trends forecast for Indonesia and how Indonesia envisions itself in the global economic market in the future. The study examines what kinds of skills adolescents will need to maximize their potential and enable them to cope with change and also those skills they will need to successfully navigate the transition from childhood to adulthood, and become healthy, empowered, employable, productive, and active citizens of the world.

The study focuses on the perspective of adolescents, their educators, parents and government workers

The focus of this study is not just on skills for **employability**; it is also on understanding the skill sets that adolescents will need to **successfully navigate the future** across the different domains of their lives.



and the private sector. The results presented were obtained through focus group discussions and key informant interviews in Jakarta, Sorong, and Semarang and through a nationwide U-Report online poll of adolescents across the country.¹ Adolescents discussed the kind of lives they aspire to, their vision for the future, their fears and concerns about adulthood and the kinds of skills they think they will need to achieve their goals. The study utilizes UNICEF's Global Skills Framework to conceptualize the different kinds of skills that adolescents have and need. In line with the framework, the study divides skills into three main categories: foundational skills, job-specific (technical) skills and transferable skills. Transferable skills become particularly important in this context as these are cross-cutting skills which can be applied to an individual's personal, social, and professional life.

► Skills and the Global Framework

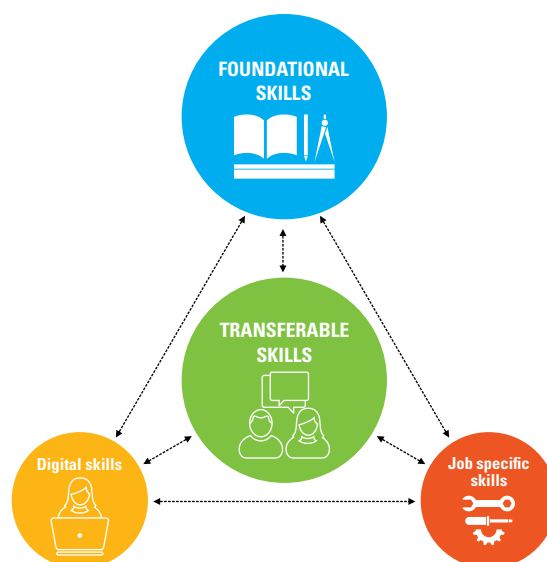
UNICEF's upcoming Global Framework on Skills highlights four broad sets of skills which adolescents need to navigate successfully from childhood into adulthood: foundational skills, transferable skills, job-specific skills, or technical skills and digital skills.

Foundational skills such as literacy and numeracy are core skills and the basis for learning new skills. Without these skills it is difficult to develop non-cognitive skills.

Transferable skills are skills which are applicable across domains. UNICEF identifies four broad groups of transferable skills: skills for learning, skills for employment and entrepreneurship, skills for personal empowerment, and skills for active citizenship. These include communication, problem-solving, critical thinking and empathy.

Job-specific or technical skills are skills required to perform a specific task in pursuit of a livelihood; for example, business management, accounting or engineering skills.

Digital skills have recently been added by UNICEF as a separate component to highlight their increasing importance. Digital skills are diverse and range from job-specific technical skills, such as coding or software programming, to using and managing technology safely and effectively



It is important to note that UNICEF is advocating a **lifelong approach to skills development** that focuses on developing foundation and transferrable skills early on in life, then advocating that individuals constantly build **new technical or job-specific skills** to ensure they remain **employable** and have **sustainable career pathways** and **learn to navigate risks across their lifespan**.



¹ U-Report is a social messaging tool and data collection system developed by UNICEF to improve citizen engagement, inform leaders, and foster positive change. The program sends SMS polls and alerts to its participants, collecting real-time responses, and publishes the gathered data. The program currently has three million participants in forty-one countries.

► Findings

It was transferable skills that were crucial to their future according to adolescents, their parents, teachers, employers, recruitment agents and the government officials interviewed. Adolescents in all three regions believed they possessed a range of transferable skills including creativity, cooperation-collaboration, and broad attitudinal skills such as diligence (*rajin*), persistence (*pantang menyerah*, *daya juang*, *ketangguhan mental*), the “ability to work hard and learn new things”, communication skills, social skills (*kemampuan bersosialisasi*), and public speaking. Adolescents were still keen to develop these skills further, believing that they would be important for the future. Adolescents believed that improving these basic skills would help them learn and acquire new skills, while making them more self-confident and more employable in the future.

Adolescents had a good grasp of what is meant by foundational or learning skills and repeatedly highlighted that confidence and communication skills, in addition to ensuring they gain dignified employment, would be essential throughout their lives and that feelings of empowerment were essential for them to become active and engaged Indonesian citizens.

The basic tasks of speaking up, asking questions, or asserting themselves were all felt to be reliant on young peoples' level of confidence and self-belief. What is more, adolescents felt that it was more important to be aware of what skills are important and why they are important, rather than simply being aware of which specific category a skill fits into.



Parents and other adult respondents often emphasised the importance of **religious and moral values**. Despite their concerns, adolescents across all regions recognised that they would need to possess the “**right attitude and values**” and the lifelong **societal skills** of **respecting diversity, sociability, cooperating with others** and **participating** in wider society.

► Top Skills for the Future



Creativity *Kreatifitas*

Developing their creativity was by far the first choice for adolescents. Being creative is the ability to generate, articulate or apply inventive ideas, techniques and perspectives; often in a collaborative environment. Using creativity, learners develop a sense of self-efficacy and persistence, which leads to feeling empowered. Creativity is a means of knowledge

creation that can support and enhance self-learning, learning how to learn and lifelong learning. This makes the promotion of creativity a core component of improved learning processes and education systems. Social creativity, a collaborative phenomenon, encourages individual learners to be even more creative by combining different ideas, sometimes across cultures and encourages social cohesion and celebration. These different dimension of creativity suggests a dynamic inter-relationship between the personal and the social that involves an ethical dimension and may arise from the interaction of differing cultures and values. What is more, creativity and creativity-related life skills are widely sought after in the workplace.



Digital Skills *Keterampilan Digital*

The acquisition of digital skills is perceived as a critical for adolescents' futures. A recent addition to the UNICEF Global Framework, digital skills, which were once considered technical skills or transferable skills, have now become core foundational skills that are essential across job roles (World Bank, 2018). There was a clear gender division on digital skills, with female

adolescents overwhelmingly identifying digital skills as a skill they lacked. All parents, teachers, employers, and government officials also saw the acquisition of digital skills as a requirement for the future.



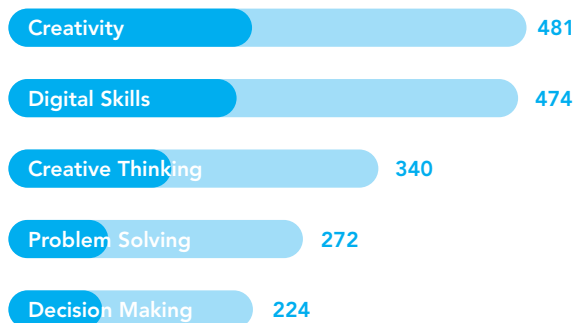
Critical Thinking *Berpikir Kritis*

Critical thinking is an instrumental and long-standing life skill that encourages academic achievement. By thinking critically, children, young people and all individuals learn to assess situations and assumptions, ask questions and develop various ways of thinking. Conducive to self-efficacy and resilience, thinking critically also fosters self-management, helps

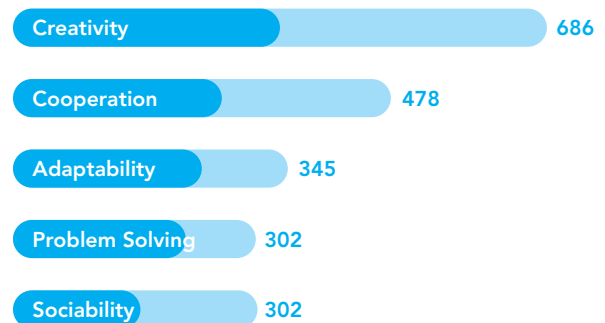
adolescents' make safer choices about their health, and gives them the ability to work collaboratively to the benefit of all members of their community.

Critical thinking skills are among the most important in all work situations. Providing the basis to assess demands from the market and relations with others, and to propose alternative perspectives to problem-solving, which is at the core of the knowledge economy. Improving critical thinking skills is extremely important as employment demands are growing more complex and multifaceted.

Top Five Skills Possessed



Top Five Skills for the Future



► Perspectives of Parents and Government

Key government goals promote 'strong identities', 'mutual cooperation' and 'tolerance', whilst strengthening 'civic education' and 'national values'. Skills linked to 'Character Education' were held in high regard by adolescents across all regions and was reflected in the skills choices they made. Cooperation and sociability scored well, as did teamwork and respecting others' opinions and inputs.

These skills, combined with the desire for greater creativity, have a strong social dimension that contribute to societal problem-solving, strengthen inclusive citizenship and social cohesion and ultimately lead to creative approaches to conflict management that facilitate social engagement and the promotion of the common good.

► Private Sector Perspectives

Rapid urbanization and the Fourth Industrial Revolution are bringing unprecedented change to Indonesia. This is set to change employment patterns for young people. Currently, Indonesia's young people struggle to access high-skilled jobs, and youth unemployment is the second highest in the Asia Pacific region. A plethora of studies have shown that youth unemployment, among other factors, is caused by a skills mismatch and limited awareness of job opportunities. The study found that a large number of recruits are over or under qualified for even low skilled labour, and that many of those entering the workforce possess obsolete skills or gaps in the critical skills needed by the labour market. Highlighting trends in digitalization and automation, women especially, were reported to be less prepared in studies related to science, technology, engineering, and mathematics.

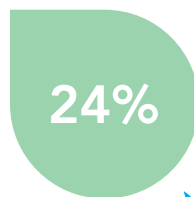


“**Soft skills** are particularly important in the company's area of work, as we are a service sector organisation. It takes three to six months for new staff (even those who are formally trained elsewhere) to pick up these skills. There is a **huge skills gap** and we are trying to fill that gap.”

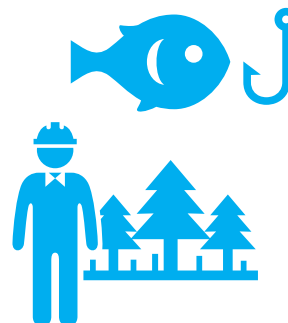
Service Sector CEO & FGD Participant



33%

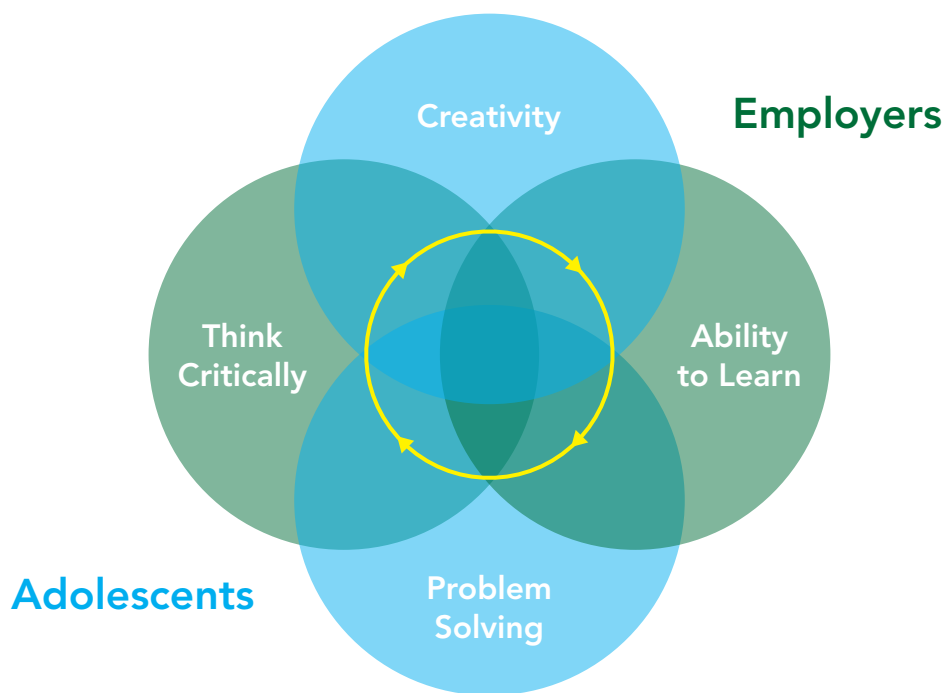


24%



There are geographical elements to be considered. Current trends see young people in urban areas primarily working in the wholesale, retail, and manufacturing sectors. This stands in contrast to young people in rural areas, who are mostly employed in agriculture, forestry and fisheries. Nationwide, wholesale and retail jobs are by far the most popular with young women (33 percent), while young men mostly work in more traditional areas like agriculture, forestry or fisheries (24 percent). Currently, one third of primary and secondary school graduates make up the agricultural sector workforce. The ILO also found that by 2025, workers with inadequate qualifications would fill about 63 percent of high-skilled jobs. This indicates a skills gap between qualifications, requirements, and employer's expectations. A reverse trend also exists, with overqualified people working in low skilled jobs, revealing that over half of the workers in Indonesia's labour force are underqualified because their level of schooling does not meet the standard requirements of their occupation; 40 percent are considered well-matched, and over 8 percent are considered overqualified for their occupations (Allen, 2016). This has serious implications for future education reform and providing innovative skills acquisition pathways for young people in Indonesia.

Traditional employment is changing, and the past decade has seen the rapid growth of a vibrant start-up ecosystem. By 2016, the disclosed funding of start-ups in Indonesia was estimated to have reached US\$1.7 billion with financial technology (Fintech), e-commerce, 'software as a service' (SaaS) and an on-demand or service marketplace the areas of focus for these high technology start-ups. Increasingly, employers look for candidates with key attitudinal and transferable skills, believing technical competencies can be learned more quickly. Interestingly, adolescents also feel these are the skills they will need for the future.



As a result of this need, private sector respondents stated that they provided on-the-job training where specific skills were needed, such machine operation or basic IT skills. Where they struggled, was filling the gap on transferable skills. Employers specifically discussed the lack of key transferable skills such as “having the right attitude towards work”, “communication skills”, “diligence” or “persistence” (*pantang menyerah*). Such skills cannot be taught through short on the job training schemes and employers repeatedly emphasized that these transferable skills must be taught to adolescents in schools and at home. In the words of a recruitment agent, the onus for remaining up to date with employer requirements will rest on the individual and the key skills adolescents will require will be to have a “thirst for knowledge” and the “ability to learn.” All employers stressed the importance of strengthening the education system to ensure that educational standards are high. Some respondents attributed the poor foundation for skills training of those entering the workplace to low quality education. Even those having completed TVET courses, often geared for specific sectors, lacked many of the soft skills required by employers, suggesting that such courses should not be considered merely as an alternative to the general education system, but as complementary to it. The demands of the economic and industrial sectors are ever changing, and the education system might not always be adaptive and agile enough to be able to respond to it effectively and immediately. To keep up with these changes, adolescents need transferable skills..

The role of the education system came out strong in terms of skills development for young people. The private sector sees its own training opportunities as only being effective if key skills, both foundational and transferable, are developed early on.

“In Indonesia, we have a serious **problem of quality**. People may have **degrees** on paper but will **not have the skills needed** in the workplace. This includes **technical** knowledge, but also includes **attitudes** and **values** such as **discipline**, **punctuality**, and **time management**. These skills gaps hinder growth in the country.”



Manufacturing Sector FGD Participant

► Teachers' Perspectives

The current 2013 curriculum is designed to place the student at the centre of learning and aims to strengthen their foundational skills, develop transferable skills and support personal empowerment. The new 2013 curriculum lays the foundation for structural change in the education system in Indonesia. It aims to improve three key domains: attitudes, skills, and knowledge. Students are encouraged to implement collaborative learning methods by observing, questioning, experimenting, associating and networking. Teachers agreed that the 2013 curriculum aims to enhance the creativity, confidence, and communication skills of adolescents, but were concerned that limited training sees them facing difficulties in teaching the new curriculum in the classroom. By extension the 2013 curriculum is a part of the strategy to embed the 21st Century Skills Framework as part of a larger human development plan. This framework focuses on building additional competencies such as creative and critical thinking, responsibility, tolerance and adaptiveness to change into the core school curriculum. Again, teachers across regions felt they needed relevant training to be able to teach 21st Century Skills and that this training must also include innovative pedagogical approaches that can enhance creativity and promote critical thinking and analytical skills. This is also reflected in the need to introduce changes in the examination and assessment systems to shift them away from rote-learning approaches and to test the critical thinking abilities of students.

► A Geographical Divide

The study found that opportunities for skills development made all the difference for young people, but that opportunities are uneven across different regions in Indonesia. These limitations are often linked to the existing regional economic differences and are likely change in the near future. Even in remote regions, changes in employment patterns and the skills with which adolescents need to be equipped is predicted to happen at pace, making it essential that future plans for young people in these areas take these predicted changes into account.

Employment patterns such as these reveal that location matters for skills acquisition. Jakarta and Semarang have vibrant industrial clusters and provide adolescents with the opportunity to learn a range of employability-oriented skills. This, combined with well-informed parents and teachers, gives adolescents in these regions the advantage. Meanwhile, Sorong's remote location and its limited infrastructure and training resources provides far fewer opportunities for adolescents to learn new skills and sees an urgent

► Aspirations

Girls and boys across the three locations had high aspirations and are optimistic about the future. In urban centres like Jakarta and Semarang adolescents saw entrepreneurship as a career path; associating it with tech-based star-ups, glamour, success, wealth and hard work. In contrast, in Sorong, entrepreneurship was viewed as little more than a fallback option, such as starting a small business in the local market, rather than a pathway to wealth.

The vibrant economic centres of Jakarta and Semarang allow adolescents wider aspirations and multiple pathways to acquire and develop new skills. In remote regions, with fewer economic opportunities, adolescents seem to have far lower aspirations and a limited vision of their future.

It is clear that these aspirational differences, rather than arising from the desires of adolescents themselves, are the result of limited opportunities that are further exacerbated by limited access to information, poor digital connectivity, a lack of mentorship and career guidance and financial constraints. **All adolescents, irrespective of financial or educational background, were keen to better themselves.** In regions with a predominantly agrarian culture, adolescents no longer aspired to a career in farming and instead sought to continue their education or seek service sector employment. Interestingly, in Sorong, adolescents did not



score digital skills quite as highly as their peers in Semarang and Jakarta; and yet, despite limited technology-based employment opportunities, **adolescents in Sorong still believed that mastering digital technology was vital for the future** to the point that every group discussion included examples of adolescents who travelled long distances to learn basic IT skills. Such barriers can be bridged. But it will take effective government interventions that simultaneously focus on strengthening institutions at a regional level and removing financial barriers by providing funds, information, and mentorship to support adolescents in accessing skills building opportunities.

All adolescent respondents stated that realizing family expectations was a big part of their aspirations. This included taking care of their parents and realizing their parents' expectations of them, supporting their families, getting married, having a family and making their country proud.

Gender, especially in regard to digital skills, arose as an important theme of the study. The key insight from this study was that while there was virtually no difference between aspirations held by girls and boys, and both felt that they should have similar skills and the same opportunities to acquire them. In practice, parents and teachers agreed that expectations of males and females differ greatly. Interestingly, while adolescents did not subscribe to many of these more traditional views, parents and teachers both believed that boys need to grow up to be financially responsible and that higher education for girls is more a luxury than a necessity.

Create a consensus around 21st Century Skills

The evolution of skills demanded by a changing Indonesian society is an urgent policy priority for the government of Indonesia. Although this cohort holds the key to investing in sustainable development and human capital, unfortunately, despite Indonesia's steady economic growth, adolescents continue to face significant deprivations that hinder their aspirations and leave their rights unfulfilled. If investment is not made in equipping young people with the skills to reach their full potential and manage the challenges ahead, a crucial opportunity for them to contribute to their country's development and make the safe transition into adulthood will be missed.

Currently, both the understanding of skills and the skills ecosystem in the country is fragmented. A national level strategy focused on skills development that addresses the requirements of adolescents will help young people in Indonesia reach their potential and become full, productive members of society. This strategy will be a strong basis for the creation of a competency framework for assessing 21st Century Skills and incorporating their assessment into the mainstream school and TVET curriculum. This will ensure that adolescents are assessed on a wide range of skills and competencies beyond just literacy and numeracy and ensure they acquire a range of transferable skills to enable them to maximize their potential in their personal and professional lives. UNICEF, with its focus on adolescents from the most marginalized groups, will have an important role to play in addressing the skills gaps and develop responsive, adolescent-centric solutions. Existing partnerships, such as Generation Unlimited, can be leveraged to focus specifically on addressing the skills challenges facing Indonesian adolescents.

Strengthen multi-stakeholder collaboration

Multi-stakeholder partnerships are crucial to support secondary schools (SMP and SMA), vocational schools (SMK) and training institutions including vocational training centres (BLK) and Community Based Learning centres (PKBM) to improve knowledge about the world of work and reduce the skills mismatch in the labour market. Discussions with training centres, employers and government officials show that TVET graduates still lack technical skills and that their competencies do not match employer needs. In order to both improve the quality of skills acquisition opportunities and address the “link and match” priority of the government, a stronger collaboration is needed between schools, training institutions, local government and employers. Employers in Indonesia could be essential collaborators in organizing internship programmes or work placement opportunities to sensitize adolescents to the work environment. Such internships programmes could be furthered to provide those who aspire to become entrepreneurs with the chance to be mentored by successful business entrepreneurs.

Generate more data and evidence on skills

Government officials, parents and teachers were all concerned that there was insufficient data on the skills that adolescents currently have. While adolescents are assessed on foundational skills or technical skills, the transferable skills adolescents have are not well assessed. As a result, there is limited data to inform policy. This sees the need for the integration of a skills components into regular government data collection systems. This will provide the government with baseline data that provides a clearer empirical picture of the situation in Indonesia which can then be used as a basis for future strategic planning. By gathering additional data from adolescents, through tools such as U-Report, their aspirations and perspectives on the future can be better understood. UNICEF's U-Reporters are a valuable resource for obtaining quick feedback from adolescents on specific policy interventions. These online tools can then be leveraged to create effective adolescent-centric policy and programme interventions.

Explore Multiple Pathways to Learning

The study showed that 35 percent of adolescents surveyed preferred to learn skills through extracurricular activities in school, and only 20 percent preferred to learn skills in the classroom. This might suggest that when it comes to learning new skills, young people look for flexibility and a more informal atmosphere. Aside from formal education, PKBMs were seen by parents as a positive avenue for adolescents who are out-of-school to reenter formal education systems. Currently, these centres are largely focused on school certification and academic subjects. Despite the demand to supplement them with technical and job-specific skills, they would also benefit from greater alignment with skills like, communication, critical thinking, collaboration, and creativity, which are now part of the revised K-13 curriculum. It is important to note that these different pathways to learning do not work in isolation but interact. What adolescents learn at home can be developed further at school and then honed in the workplace. For example, a male respondent in Jakarta explained how he learned his creative skills to make toys out of metal at home. These skills could be further developed through formal arts training courses and then strengthened through apprenticeships with a master craftsman in the workplace. While it is clear that school remains the major route through which adolescents' are motivated to acquire new skills, it is also important to explore other platforms through which adolescents, particularly out-of-school adolescents, can learn new skills or upgrade their existing skills and the role that online learning platforms, community-based organisations and peer networks could play in ensuring even the most vulnerable are able to acquire new skills.



Overwhelmingly adolescents saw school as the primary route to learning. Over a third of respondents wanted to learn additional skills through school-based extracurricular activities and another 20% wanted to learn these skills in school.



After school-based learning, community centres and youth clubs emerged as potential sites for learning.



Only 7% of respondents identified the internet as a potential source for acquiring skills.

Strengthen the Teacher Training and the Examination Process

Since schools are the main channel through which adolescents acquire skills, for skills development programmes to be truly effective, key actors such as teachers, need to be prepared to deliver them. According to the study, teachers are still unsure of their own ability to apply 21st Century Skills into their teaching activities. They acknowledge that skills, such as communication, critical thinking, collaboration, and creativity, that are now part of the revised K-13 curriculum, are essential but are nonetheless conscious that there is limited guidance on how to deliver these skills; making their classroom application subjective. UNICEF can help improve the training modules of 21st Century Skills and transferable skills within the teacher training programmes so that teachers are equipped with the pedagogy to teach these skills to adolescents. UNICEF could support the development of tools and materials that meet the standards and requirements set forth in the UNICEF Skills Framework then leverage government partnerships to deliver this to scale. Further collaborative training efforts will also be required for non-formal training institutions, such as vocational training centres and community based learning centres.



