

DIGITAL SKILLS FOR AFRICA

ZAMBIA:

Results from the Task-Based Digital Skills Assessment of Teachers and Students in TVET Institutions

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Executive Summary

Digital transformation is rapidly reshaping economies and labor markets worldwide, creating new opportunities while demanding a workforce equipped with relevant digital competencies. For Zambia—a country with one of the youngest populations in the world—this transformation presents both immense potential and pressing challenges. As digital technologies increasingly shape production, services, and learning environments, the education system must ensure that teachers and students are not only familiar with technology but also capable of using it effectively to learn, teach, and work. Building these capabilities within the Technical Education, Vocational, and Entrepreneurship Training (TEVET) system is essential for preparing the next generation of workers to thrive in the digital economy and for supporting the country’s broader digital transformation agenda.

To assess current readiness, a task-based digital skills assessment was conducted among TVET teachers and students to measure their proficiency in applying practical digital competencies. The study, part of a regional initiative led by the World Bank’s Education Global Practice, provides robust evidence on the current level of digital competencies in Zambia’s TVET system and identifies key gaps to inform ongoing education and skills reforms.

The assessment was implemented using the Pix platform, a performance-based tool grounded in the European Digital Competence Framework (DigComp). Unlike perception-based surveys, this approach measures participants’ ability to solve practical, real-world digital tasks across five domains: (1) information and data literacy, (2) communication and collaboration, (3) digital content creation, (4) safety and security, and (5) problem solving in digital environments. Data were collected from a representative sample of TVET institutions across Zambia, including both teachers and second-year craft and second- and third-year diploma students.

Key Findings

- **Teachers’ proficiency is at a beginner level. The 103 teachers assessed achieved an average proficiency score of 2.4, indicating they can complete simple digital tasks with occasional guidance.** Their performance is relatively consistent across the first four competence areas, with stronger results in problem solving (Competence Area 5)—particularly in topics related to technical specifications. Teachers generally understand how to use fundamental digital tools and connect to the internet but face challenges in more practical applications, such as recognizing email attachments, conducting effective online searches, saving documents, and managing data access when installing applications.
- **The teacher findings indicate a significant gap: teachers currently have limited digital proficiency to effectively guide students in developing their own digital skills.**

Strengthening teachers' competencies to reach intermediate levels (levels 3 and 4) would be important for supporting more meaningful use of digital technology in teaching and learning environments.

- **Students show even lower proficiency levels. TVET students scored an average of 1.9, corresponding to a very beginner level.** While they demonstrate some basic knowledge and practical abilities, their digital skills are limited to completing simple tasks with support. They performed best on topics related to smartphone use, reflecting everyday digital habits, but showed limited awareness of online safety issues, such as recognizing and using attachments, saving a document, choosing login details, phishing and malware risks, despite their frequent online activity.
- **Gender differences are small among teachers but more pronounced among students.** Among teachers, the sample was gender-unbalanced—comprising 17 women and 86 men—so results should be interpreted with caution. Male teachers performed slightly higher across all competence areas, though overall patterns were similar. Among students, of the 877 participants, 69 percent were male and 31 percent female. Male students scored consistently higher across all competence areas, and the differences were statistically significant.
- **Teachers have higher access to digital tools than students, but overall access remains limited and uneven.** Most teachers (93 percent) own a digital device, yet only 62 percent have access to a computer and 60 percent report completing a basic ICT course. Reliable electricity is a major barrier—just 12 percent of teachers have power for more than 12 hours per day. Teachers remain far better equipped than students (62 percent versus 16 percent with computer access) and are more active users of digital tools for communication, online services, and work-related tasks. A similar percentage—about 65 percent—are already using AI tools.

Implications and Next Steps

Results highlight the need for a systematic integration of digital competencies into TVET curricula and teacher training programs. Key policy priorities include:

- **Prioritize foundational digital skills training for beginners.** For participants classified as *Below Level 1*, the focus should be on building essential operational skills—such as starting and navigating devices, connecting to networks, using basic applications, sending emails, and conducting simple online searches. Training should be **hands-on, in-person, and highly practical**, with facilitators providing step-by-step guidance and opportunities for **peer learning** to build confidence and sustained engagement with technology.

- **Develop structured blended training for teachers at Levels 1–2.** Teachers who already possess beginning levels of digital skills should engage in a **comprehensive training program** combining assessment, guided instruction, and self-paced online learning. In-person sessions led by trainers or advanced peers can provide targeted support, while **online modules and tutorials**—such as Pix’s microlearning resources—allow teachers to practice and advance at their own pace. This blended approach promotes steady progress toward **intermediate digital proficiency** and sustained integration of technology in teaching.
- **Advance pedagogical digital competencies for teachers at Level 3 and above.** Teachers who have achieved intermediate or “Independent” proficiency Level should receive specialized training focused on applying digital tools in pedagogy. This could include modules on teaching and learning with ICT, evaluation and feedback, digital content creation, and personalized instruction. Complementary assessments and certification based on professional teacher frameworks can help track progress. For effective implementation, training must be supported by adequate infrastructure, alignment of EdTech tools with curricula, and ongoing pedagogical guidance that reinforces student-centered digital teaching practices.
- **Strengthen digital skills development among TVET students through integrated digital literacy and computing education.** Building both practical digital literacy and foundational computing knowledge will equip students not only to use technology effectively but also to create, adapt, and innovate with it. Digital literacy should focus on everyday competencies—such as navigating online platforms, managing information, and communicating safely—while computing education should emphasize programming, algorithms, and problem-solving. Integrating these skills into the curriculum requires structured practice, clear proficiency standards, and hands-on learning opportunities, including specialized modules in areas like cybersecurity and digital ethics.
- **Embed practical digital tasks and data-driven monitoring into student learning and certification processes.** Integrating hands-on digital activities into regular assessments will ensure that students apply digital competencies in authentic contexts, reinforcing learning and readiness for the workplace.

I. Introduction

Zambia, a landlocked and resource-rich country in Southern Africa, is one of the most youthful countries globally, with a fast-growing population. The current population is estimated at 21.7 million, growing at an annual rate of 2.71 percent, and is expected to double by 2050. Approximately 80 percent of the population is under 35 years old, with 52 percent of the labor force aged 15-35 years. Additionally, about 400,000 youth enter the labor market each year. Despite high poverty and unemployment, Zambia ranks second in copper production in Africa. Mining and agriculture are significant sectors of employment and output.

Zambia has made significant progress in expansion of primary and secondary education. In 2022, Zambia implemented a landmark reform that introduced free education from early childhood through secondary school, eliminating fees for tuition and exams. This reform has significantly increased enrollment, particularly among children from low-income families. The Technical Education, Vocational, and Entrepreneurship Training (TEVET) system has also grown significantly in recent years.

However, the country's learning outcomes are poor across all levels. Many students leave the education system with a weak mastery and critical skill gaps. Strategic investments in improving education quality are necessary for building essential human capital. This includes investing in foundation learning, and TEVET and higher education systems to equip the current and future workforce with the skills needed for productive jobs, entrepreneurship, and overall economic growth. These investments can increase individuals' productive capacity and earning potential, particularly for youth, female, and urban workers.

Zambia has placed digital skills at the center of its digital transformation agenda. Through recent reforms, including the National ICT Policy (2023) and the National Digital Transformation Strategy (2023–2027), the Government aims to expand access to technology, strengthen human capital, and foster innovation. The ICT Policy outlines eight objectives, ranging from increasing access to ICT services and infrastructure to promoting research, innovation, and entrepreneurship, enhancing digital safety, and improving the policy and institutional environment. A key priority under the second objective is the promotion of digital skills development—at basic, intermediate, and advanced levels—in schools and communities.

The National Digital Transformation Strategy positions Zambia to become “an integrated, inclusive, and digitally empowered nation by 2030.” It is built around five pillars: digital infrastructure, digital literacy and skills, digital innovation and entrepreneurship, and digital platforms and services. To advance this agenda, the Government has established Smart Zambia under the Cabinet Office to coordinate implementation of ICT plans, and the Zambia Information and Communications Technology Agency (ZICTA) to regulate the ICT sector. In

addition, tax incentives have been introduced to encourage the importation of ICT-related products and services.

Zambia’s rapid digital transformation is creating new opportunities for growth, jobs, and improved service delivery. Government services such as tax payments and company registration have been digitalized, while the digital economy—particularly e-commerce—is expanding as more citizens use online marketplaces.

Supporting the acquisition of digital skills is critical to maximizing these opportunities. Skills such as computer literacy, social media marketing, online payment systems, and website development can improve employability, raise productivity, and open new income streams. With its young population, Zambia is well positioned to leverage youth potential to drive digital transformation. In the education sector, digital technologies also offer the prospect of enhancing quality through innovative teaching and learning methods such as e-learning platforms, educational apps, and virtual classrooms.

Assessing digital skills in TVET institutions is both important and timely. These institutions are central to preparing the workforce with the competencies needed to participate in the digital economy and contribute to Zambia’s economic development. Digital skills assessments help identify gaps in student learning, enabling TVET institutions to adapt their programs to evolving labor market demands and support innovation and productivity. The findings also provide government with critical evidence to implement the ICT Policy and the Digital Transformation Strategy more effectively.

This report presents the results of the first regional initiative to measure digital skills among TVET students and teachers across several Sub-Saharan African countries. The study is based on a robust, task-based assessment—competitively selected by the EdTech Team from the Global Education and Knowledge Unit—that goes beyond self-reported surveys by requiring participants to perform tasks to demonstrate their proficiency. The assessment is grounded in a well-recognized digital skills framework, ensuring comparability and rigor.

The assessment of digital skills among TVET teachers and students builds on the 2023 analytical study *Promoting Skills Development for Youth in Zambia*, which examined the skills development landscape through TVET programs and provided recommendations to strengthen the system. The findings from the digital skills assessment will offer valuable insights into the current state of digital competencies in Zambia. These insights can inform World Bank policy dialogues and operations by identifying priority areas for intervention to enhance digital literacy and skills development. In particular, the results will contribute to the design of the forthcoming *Skills Training for Resilience and Industry-Valued Employment Project (STRIVE)*, ensuring alignment with labor market needs and the Government’s digital transformation agenda. More broadly, the assessment will generate evidence-based

recommendations that can guide future programs aimed at improving the TEVET system and supporting youth skills development in Zambia.

The report is organized as follows. **Section 2** describes the assessment methodology, and **Section 3** outlines the sample. **Section 4** presents the results for teachers, with **Section 5** focusing on students. **Section 6** compares findings across both groups, and **Section 7** concludes with recommendations on how to strengthen digital skills and mobilize resources to support this agenda.

II. The Digital Skills Assessment

The assessment applied in this multi-country implementation was developed by a firm called [PIX](https://pix.org). Pix is a French public online platform pix.org designed to assess, develop, and certify digital skills. Pix rely on an adaptive algorithm that proposes task-based questions according to the participants' level. Pix Framework is based on the European framework for digital skills, DigComp 2.2, and includes 16 competences distributed across five competence areas:

- **Competence area 1** - Information and Data: Use search engines, assess information reliability, detect fake news, organize files, and work with spreadsheets.
- **Competence area 2** - Communication and Collaboration: Exchange emails, manage calendars, use social media, collaborate on shared documents, and access digital public services.
- **Competence area 3** - Content Creation: Edit text, images, sound, and video files; respect copyright; and apply basic programming.
- **Competence area 4** - Protection and Security: Safeguard personal data, ensure accessibility, apply ergonomic practices, strengthen cybersecurity, reduce environmental impact, and address cyberbullying.
- **Competence area 5** - Digital Environment: Solve technical problems, use operating systems, manage IT equipment, and understand the history of IT.

Pix and its pedagogical teams designed the Digital Skills **SSA Assessment** with careful consideration of the targeted participant sample, alignment with curricula and national digital strategies, and the local context, including language and access to computers. Two pilot rounds provided valuable insights that informed adjustments and led to the final version of the assessment. The instrument covers 16 topics across five competence areas and is delivered in two modalities: computer and mobile/tablet. The computer version includes all 16 topics and tasks such as downloading files and manipulating text documents, slideshows, and spreadsheets. The mobile version covers 13 topics, excluding most of the digital content creation, which proved difficult to assess on mobile devices. Both versions measure proficiency up to level 5 (or advanced) and target individuals aged 15 years and older. **Table 1** describes the proficiency levels of the assessment, while Appendix 1 provides the list of topics

covered in the SSA assessment. Appendix 2 describes the messages participants received describing their results when they complete the assessment.

Table 1. Description of the Proficiency Levels in Pix SSA Assessment

| Proficiency Level | Description |
|--------------------------------------|---|
| Below Level 1 | This group includes no- and low-skilled individuals with very limited digital abilities and minimal use of digital resources. They are not able to achieve simple digital tasks without help, such as visiting a website, using basic applications, or accessing online services. To progress, they would require in-person training on the foundational use of digital devices (e.g. mouse, keyboards, connection ports) and basic internet navigation before benefitting from a more comprehensive program on digital skills. |
| Level 1 Beginner | Individuals have a very beginner level with elementary basic digital knowledge and skills and are able to perform simple tasks with guidance. They are capable of navigating the interfaces of digital tools (smartphone, tablet, computer), visiting websites, reading and responding to messages (text messages, emails), using simple applications on mobile devices, accessing online services, along with other similar basic tasks. |
| Level 2 Beginner | Individuals have beginner-level skills with solid basic knowledge, and fundamental practical skills , enabling them to perform simple tasks with only occasional guidance. They are capable of searching for information online, downloading and retrieving files, viewing and sending emails, connecting devices to the internet (computers, tablets, phones), entering text with simple formatting and saving it, and protecting accounts with strong passwords and other similar simple tasks. |
| Level 3 Independent | Individuals master fundamental digital tools in learning and professional settings, carry out well-defined and routine tasks independently, and solve straightforward problems. They are able to navigate the web to conduct in-depth research and identify relevant information, participate in collaborative activities such as messaging, shared calendars, video meetings, and shared documents, and use the main features of standard software such as word processing and spreadsheets. At this level, individuals are also aware of the risks associated with digital practices and apply basic measures to secure them, including resolving common problems such as password and login problems. |
| Level 4 Independent | Individuals have in-depth theoretical and factual knowledge, as well as practical skills to solve specific problems. They are comfortable in all common digital situations and are able to work independently. They can implement an information search strategy on the web, verify the reliability of information, use the main features of collaborative tools, and create documents with different software programs including word processing, spreadsheets, slideshows, and images. At this level, individuals also implement secure practices to protect personal data and devices. |
| Level 5 Expert | Individuals have advanced digital knowledge and skills. They demonstrate a high level of comfort with digital technology, a strong degree of autonomy in developing their digital skills, and the ability to adapt to new tools and emerging needs. They are able to transfer their digital competence to others in a structured way and to manage or supervise work or learning contexts. At this level, individuals are capable of using specialized tools to conduct reliable information searches, setting up a digital environment through installation and configuration, and understanding the broader societal impacts of digital use. |

Source: Pix

The results of the assessment presented in the report can be described as follow:

Overall score:

- Performance: average of all scores obtained for all topics by participants.
- Proficiency level: average of the levels obtained by participants on all topics.

Competence area (Information and data, Communication and collaboration, Content creation, Protection and security, Digital environment):

- Performance: The average of the levels obtained by topic of one competence area by participants on average of maximum level obtainable for the topics of one competence area.
- Proficiency level: The average of all the levels obtained by participants in the topics of one competence area.

Topic (for example: “Information sources” in competence area Information and data):

- Performance: The average level participants achieved on a given topic relative to its maximum possible level.
- Proficiency level: The average level attained by participants for a given topic.

Implementation Process

The assessment sessions were carried out between November 11, 2024, and May 5, 2025, with the final submissions received on May 9, 2025.¹ Participants completed the Pix assessment designed for computers, and the results are therefore based on 16 topics. However, 363 participants accessed the computer-based test using a mobile device (smartphone or tablet). Because the assessment includes tasks such as text formatting and spreadsheet exercises that require downloading and manipulating files, completing these tasks on a mobile device may have been more difficult and could have affected the smooth running of the assessment for these participants.

III. Description of the Sample

The assessment covered a broad but representative sample of TEVET institutions in Zambia. While the original target was 1,500 students and 400 lecturers across 20 institutions, the final sample included 103 teachers and 877 students from 19 institutions (Table 1). These

¹ See Appendix 4: Zambia Implementation Timeline.

institutions were purposefully selected to reflect the diversity of the 464 registered TEVET institutions nationwide².

Selection criteria considered several key dimensions: geographic location (urban and rural, with representation across all provinces), institutional type (trade school, college, or university), and sector or programs offered (with most institutions offering engineering-based programs). The sample also accounted for institutional quality, using the official grading system (Grade One, Two, or Three).³ Appendix 3 provides the full list of participating institutions.

The focus was on second-year craft and second- and third-year diploma students, given the assumption that by these stages they would have completed the compulsory first-year ICT module and therefore possess sufficient digital skills to undertake the assessment. The number of students selected at the craft and diploma levels was based on the total enrollment in these categories, which in turn informed the allocation across institutions. Institution size (student and lecturer population) and availability of computers were also considered when determining the final sample per institution. Within each institution administering the assessment a stratified sampling method was employed to select students, ensuring representation from all programs. Individual student participants were supposed to be selected at random using a pseudo-random number generator.

A total of 980 individuals participated in the digital skills assessment, including 103 teachers and 877 students. Across both groups, the majority were male, with 87 male teachers and 604 male students.

Teachers participating in the assessment bring significant professional experience, though with varying exposure to ICT training. On average, they have 8.3 years of teaching experience, ranging from 1 to 34 years. Sixty percent reported completing an ICT course of at least two weeks, either voluntarily or as part of their studies or work. Among them, 12 teachers were ICT instructors.

² There were 464 registered TEVET institutions at the end of 2024, including public, private and a mix of faith-based and trust-owned institutions. Programs span diverse disciplines, with engineering and technology as the dominant fields of study. TEVET qualifications include short courses, skills award (level 2 – up to 6 months), trade certificate (level 3 – 1 year), craft certificate (level 4 – 2 years), Advanced certificate (level 5 – 2 years 6 months) and Diploma (3 years). Majority of the TEVET institutions are located in the urban centers, leaving many of the rural youths with little training opportunities.

³ In Zambia, the grading of Technical Education, Vocational, and Entrepreneurship Training (TEVET) institutions is overseen by the Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA). TEVETA conducts inspections and assessments to ensure that institutions meet the minimum standards required for quality training delivery. The grading system for TEVET institutions involves evaluating various elements such as infrastructure, equipment, curriculum, and the quality of training provided. Institutions are graded on a scale from 1 to 3, with Grade 1 representing the highest quality. Institutions that do not meet the minimum standards are de-registered and given a specific period to address the highlighted areas of concern.

Table 2. Distribution of TVET Participants by Gender

| | N | | Total |
|--------|----------|----------|-------|
| | Teachers | Students | |
| Female | 17 | 270 | 287 |
| Male | 86 | 604 | 690 |
| Other | 0 | 3 | 3 |
| Total | 103 | 877 | 980 |

Note: From 19 TVET Institutions.

The average age of students is 23 years. Most come from households where mothers have relatively low levels of education: 37 percent completed only primary education, 38 percent reached secondary, and 8 percent had no formal education. A smaller share—13 percent—report that their mothers attained TVET or university education, and just 1 percent had postgraduate education.

IV. Findings on Teachers' Digital Skills

This section presents the results of TVET teachers in the digital skills assessment. Figures 1 and 2 show their performance in the overall assessment and across competence areas. The results, reported as continuous scores and corresponding proficiency levels, indicate that TVET teachers achieved an overall score equivalent to Level 2 (see Table 1). On average, this means teachers possess only beginner-level digital skills, with fundamental practical abilities that allow them to carry out simple tasks with occasional guidance.

Among the 103 teachers, about 2 percent scored below Level 1, indicating no or very limited digital skills. Around 30 percent reached Level 1, reflecting only basic digital knowledge. Nearly half (46 percent) attained Level 2, corresponding to beginner skills, while 22 percent achieved Level 3, indicating intermediate proficiency.

Figure 1. Teacher Performance in the Pix Digital Skills Assessment by Competence Area

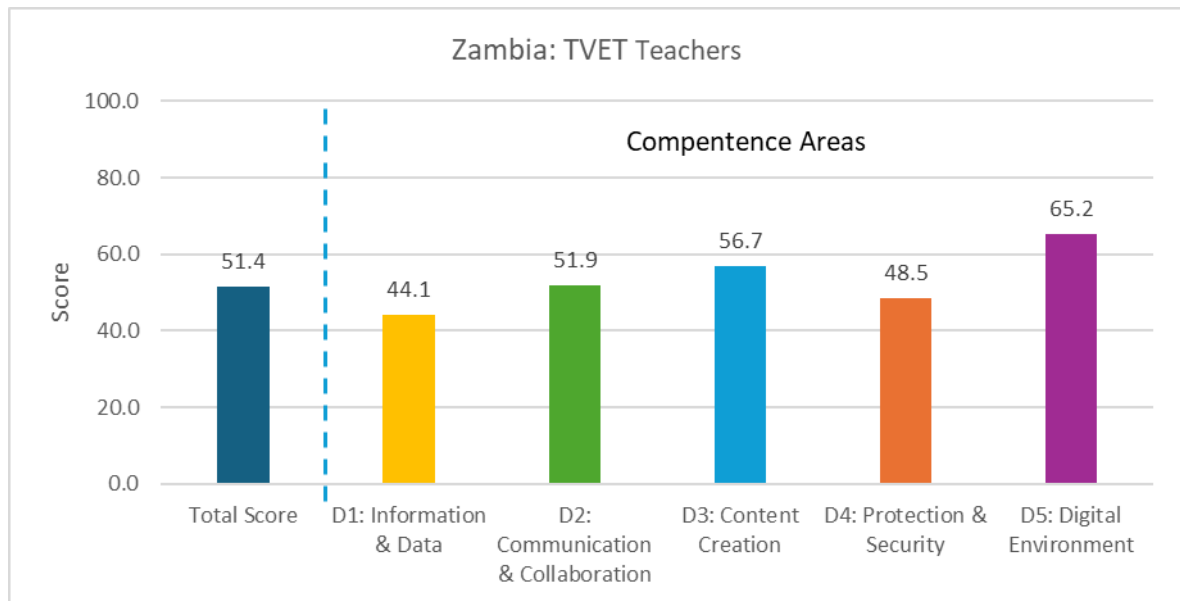
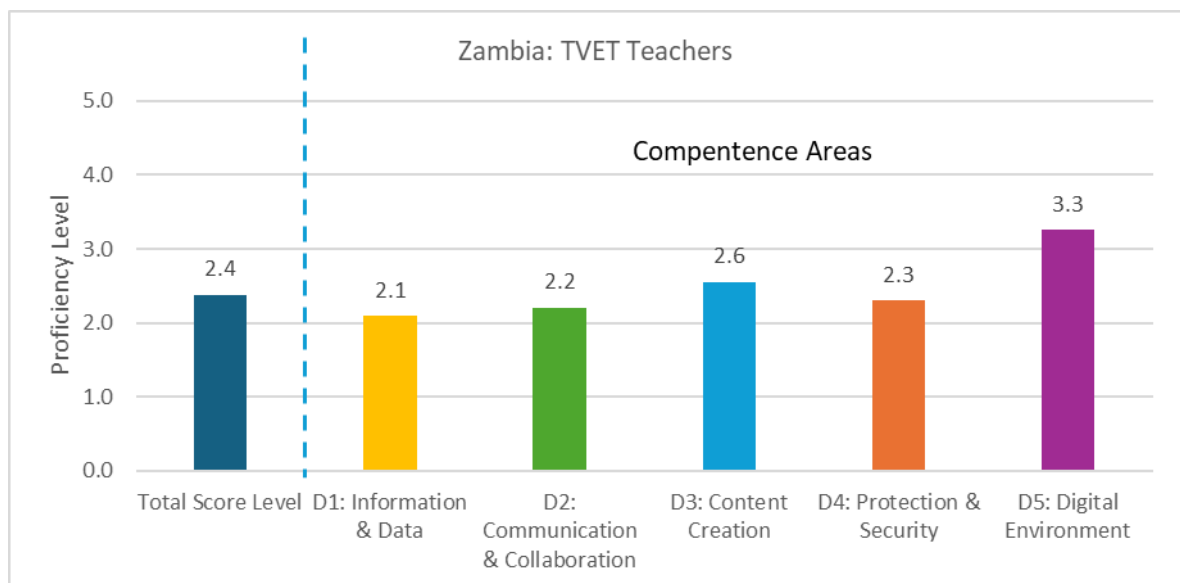


Figure 2. Teacher Proficiency Levels in the Pix Digital Skills Assessment by Competence Area



In most competence areas, the majority of teachers are positioned at Level 2 (Figure 2). Results in four areas confirm that teachers generally demonstrate beginner-level skills. In addition, the findings for Competence Area 5 (Digital Environment) show that most teachers can independently carry out well-defined and routine tasks, such as identifying digital devices and different methods of connecting to the internet. Teachers may still require occasional

guidance but possess solid basic knowledge and practical abilities. With autonomy and appropriate support when needed, they may be able to:

- Find data, information, and content through a simple search in digital environments, navigate between them, detect their credibility and reliability, and complete calculations in a spreadsheet.
- Identify appropriate simple communication means for a given context, recognize simple appropriate digital technologies to share data, information, and digital content, choose simple digital tools and technologies for collaborative processes, and identify a digital identity.
- Identify ways to create and edit simple content in simple formats.
- Differentiate simple risks and threats in digital environments, select simple ways to protect one's personal data and privacy in digital environments, and differentiate simple ways to avoid health risks and threats to physical and psychological well-being while using digital technologies.

Results by Topic

Figure 3 presents teachers' average proficiency levels across the 16 topics of the digital skills assessment. Teachers reached Level 1 in three topics (online searches, attachments, and application data access), Level 2 in 12 topics, and Level 3 (intermediate) in only one topic, *Technical Specifications*. In addition, performance in topics such as *Cyberbullying* and *Slideshow Content* was close to Level 3. Figure 4 shows the distribution of teachers by level across the 16 assessment topics.

Figure 3. Teacher Proficiency Levels across Topics in the Pix Digital Skills Assessment

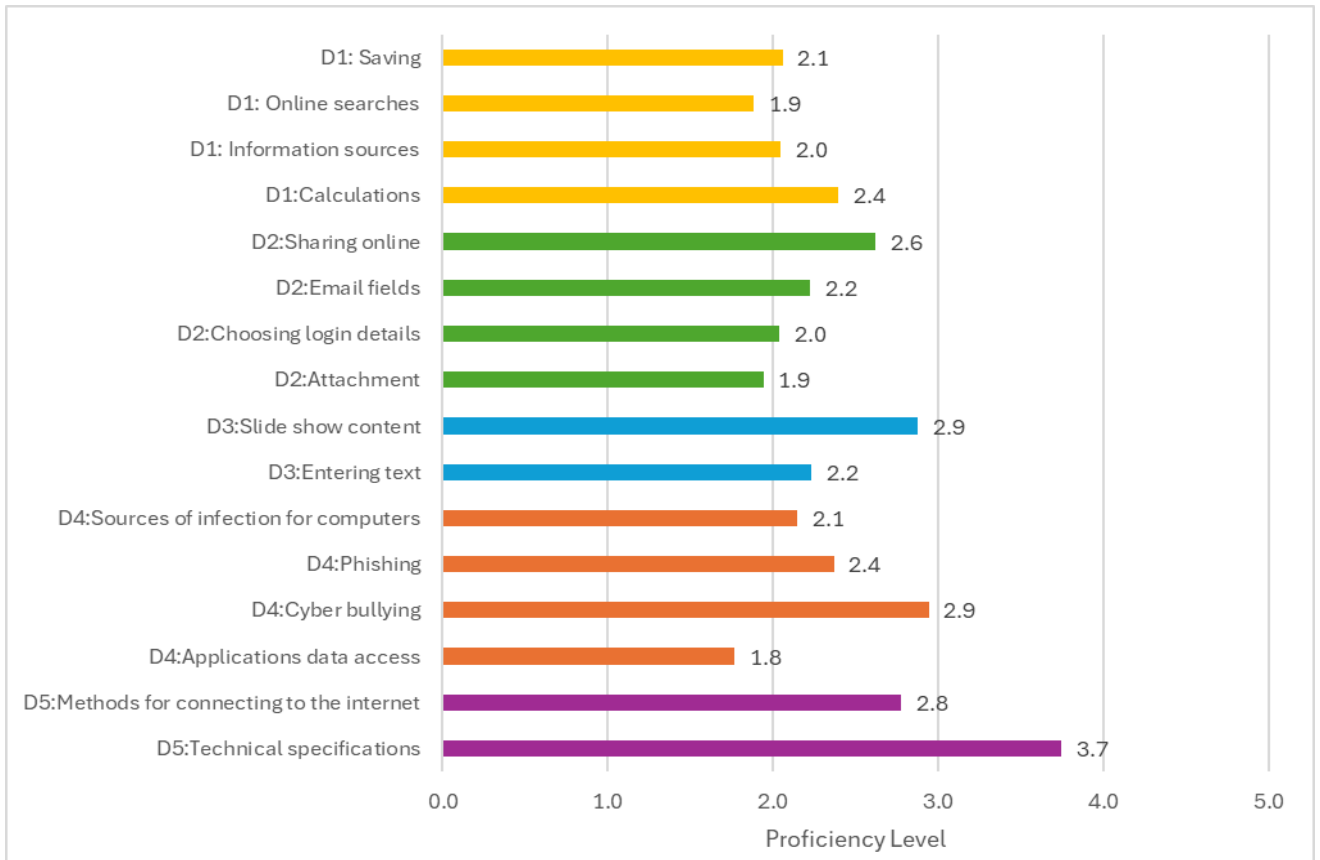
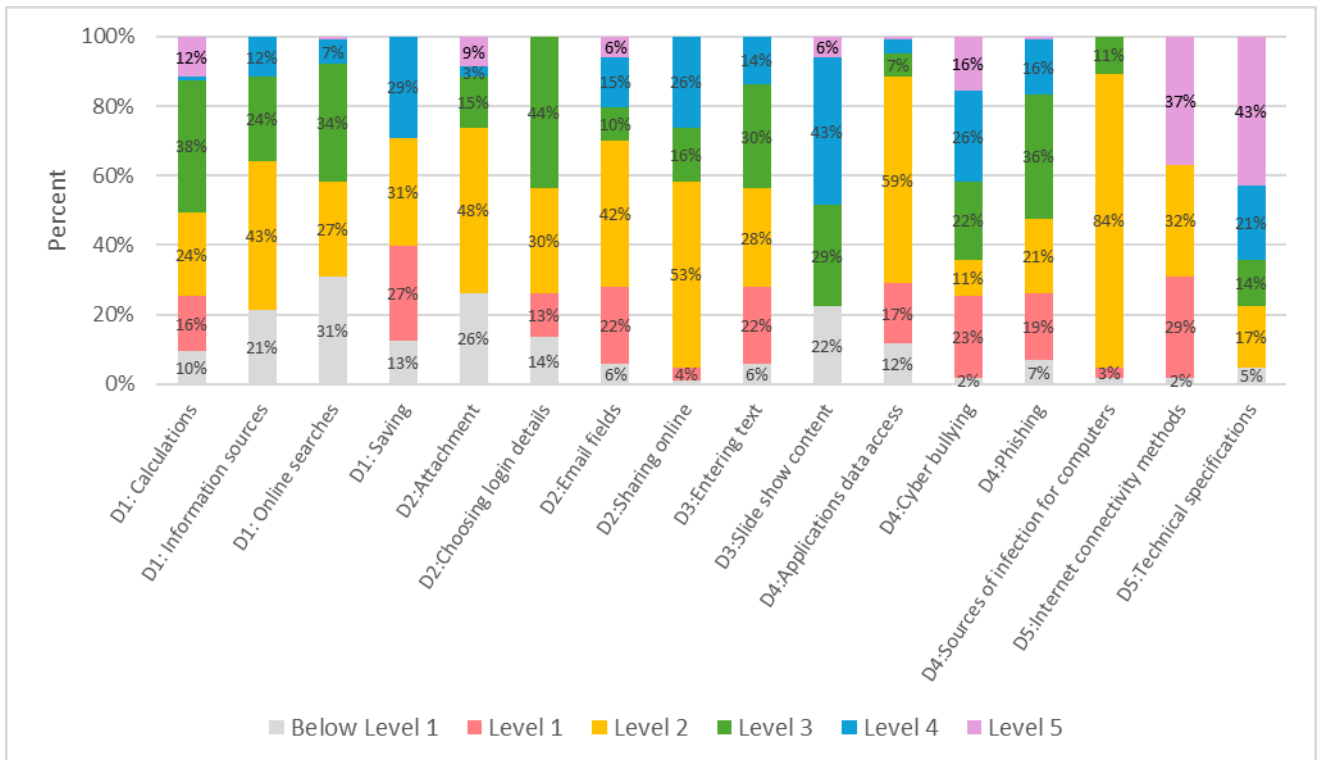


Figure 4. Teacher Distribution by Proficiency Levels across 16 Assessment Topics



The results indicate that, overall, TVET teachers demonstrated the following abilities by competence area:

Competence area 1: Information and Data

- **Saving a document:** Teachers demonstrate beginner-level proficiency in this topic (Level 2.06). Most are able to save a file and use the “save as” function to store it in a specific folder.
- **Using search engines:** Teachers show very beginner-level proficiency in this topic (Level 1.88). Most can locate simple factual information online, but many still require guidance to complete this task.
- **Finding and assessing the source of information:** Teachers demonstrate beginner-level proficiency (2.05). Most are aware that some information sources are not credible or reliable.
- **Completing calculations in a spreadsheet:** Teachers are at a beginner level (2.40). Most can designate a cell by its reference and complete simple calculation formulas.

Competence area 2: Communication and Collaboration

- **Knowing the principle and methods for sharing photos and other documents online:** Teachers are at a beginner level (2.62). Most are familiar with the principle of online sharing and can recognize the share icon on a smartphone.
- **Sending an email using the various fields (To, CC, BCC, subject):** Teachers are at a beginner level (2.22). They can recognize an email interface and send messages by filling in the main fields.
- **Managing your digital identity through the choice of login details** (usernames, email addresses, etc.): Teachers are at a beginner level (2.04). They understand the role of usernames and select email addresses according to context.
- **Recognizing and using attachments:** Teachers show very beginner-level proficiency (1.94). Many require guidance to recognize emails that include attachments.

Competence area 3: Content Creation

- **Entering text:** Teachers are at a beginner level (2.23). Most can type a few words including simple accents and special characters.
- **Slide show content:** Teachers are close to intermediate proficiency (2.87). Many still struggle to navigate and manipulate a slideshow effectively.

Competence area 4: Protection and Security

- **Knowing practices that risk infecting a computer:** Teachers are at a beginner level (2.15). They are familiar with the two most common risks: email attachments and infected media.
- **Identifying phishing:** Teachers are at a beginner level (2.37). Most recognize that emails requesting personal information are phishing and can identify SMS-based schemes (smishing).
- **Recognizing cyber bullying and knowing how to react:** Teachers are close to intermediate proficiency (2.94). They understand what cyberbullying is and can report insulting online posts.
- **Managing access to your data when installing an app:** Teachers show very beginner-level proficiency (1.77). They are aware that granting geolocation access enables tracking and that it only works when the phone is switched on.

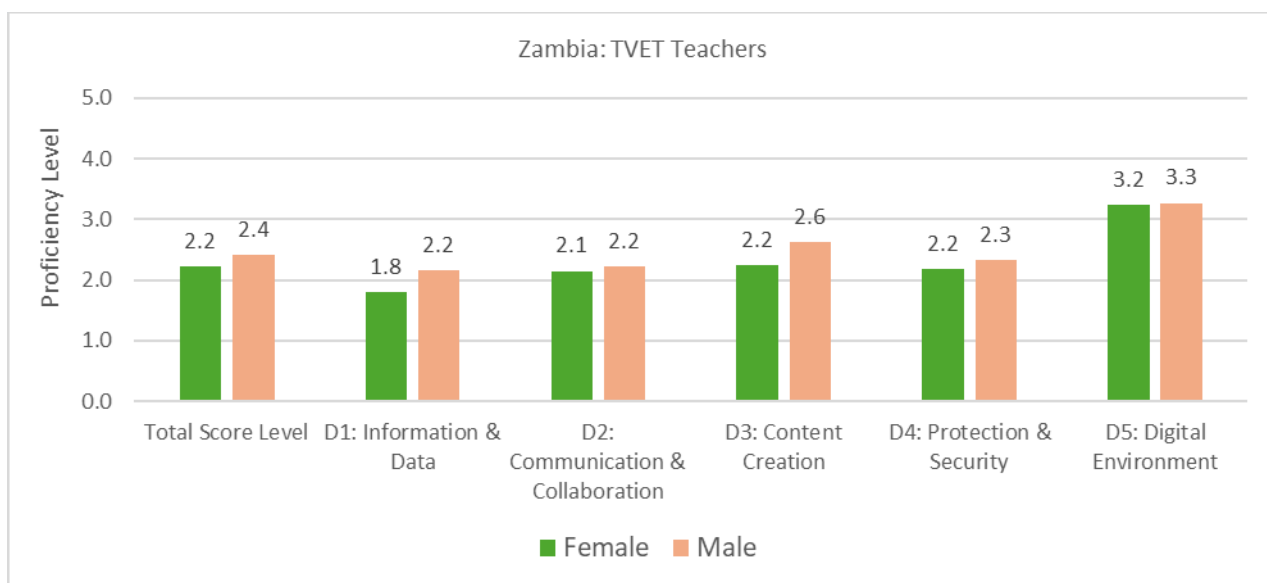
Competence area 5: Digital Environment

- **Knowing the different ways of connecting a computer or smartphone to the internet:** Teachers are at a beginner level (2.77). They are familiar with the most common methods of connecting a computer or smartphone to the internet.
- **Identifying the technical specifications of a computer or smartphone:** Teachers demonstrate intermediate proficiency (3.75). Most can recognize a smartphone and are familiar with the concept of an operating system.

Results by Gender

Although the sample is unbalanced—comprising only 17 female and 86 male teachers—the gender comparison shows broadly similar results across competence areas, with male teachers performing slightly higher (see Figure 5).

Figure 5. Teachers Proficiency in Pix Digital Skills Assessment and Competence Area by Gender

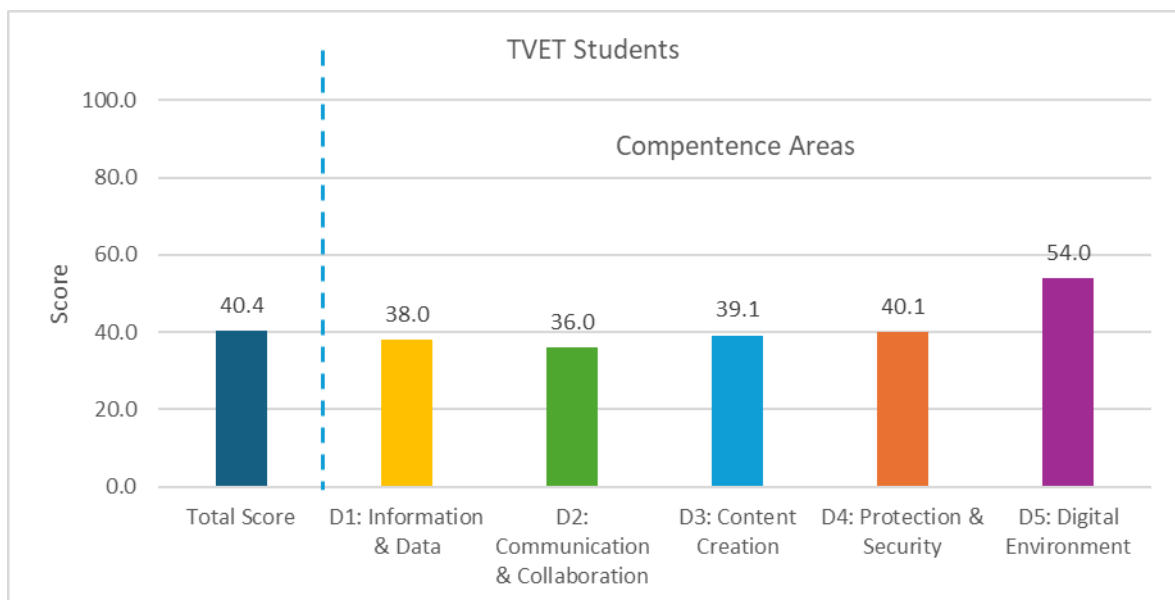


Note. Caution is warranted as the sample is unbalanced: of 103 teachers, only 17 are female. Differences between females and males are not statistically significant in any area.

V. Findings on Students' Digital Skills

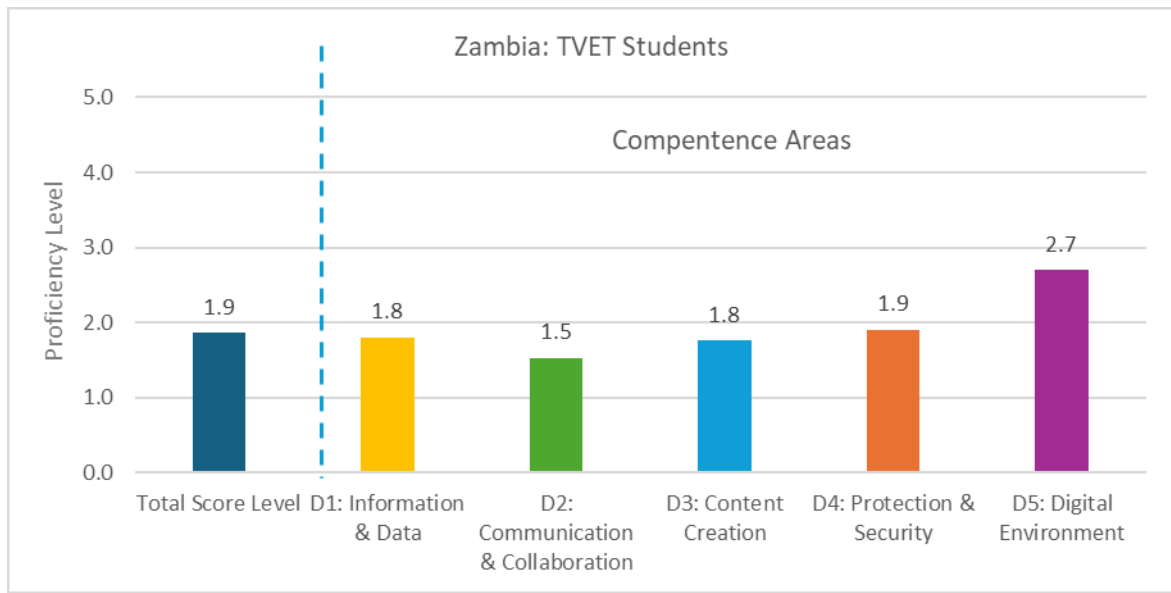
This section presents the results for TVET students, including their overall scores, proficiency levels, and performance disaggregated by competence area, assessment topics, and gender. The findings indicate that students, on average, achieved an overall proficiency score of 1.9, corresponding to Level 1 on the assessment scale. At this level, students demonstrate very beginner skills, with only elementary knowledge of digital tools. They are able to complete simple tasks with guidance, such as navigating device interfaces, visiting websites, or reading and responding to basic messages. Figure 6 illustrates students' performance by overall score and competence area, while Figure 7 presents the corresponding proficiency levels. Detailed topic-level results are provided in Table 1.

Figure 6. Students Performance in the Pix Digital Skills Assessment by Competence Area



The majority of students demonstrated only basic levels of digital proficiency, with very few reaching intermediate levels. Among the 877 students assessed, about 11 percent scored "Below Level 1," including three who obtained a score of zero (indicating either all answers correct or all incorrect). Students at this level can be described as having very limited digital abilities and minimal use of digital resources. Nearly half of students (46 percent) reached Level 1, showing basic digital knowledge and the ability to perform simple tasks with guidance. Another 36 percent achieved Level 2, reflecting beginner skills with solid basic knowledge and the ability to complete simple tasks with only occasional support. Fewer than 8 percent of students attained intermediate proficiency at Levels 3 or 4.

Figure 7. Students Proficiency Levels in the Pix Digital Skills Assessment by Competence Area



For most competence areas, the majority of students are positioned at Level 1. This indicates that they have only very basic skills and rely on guidance to complete simple tasks, such as:

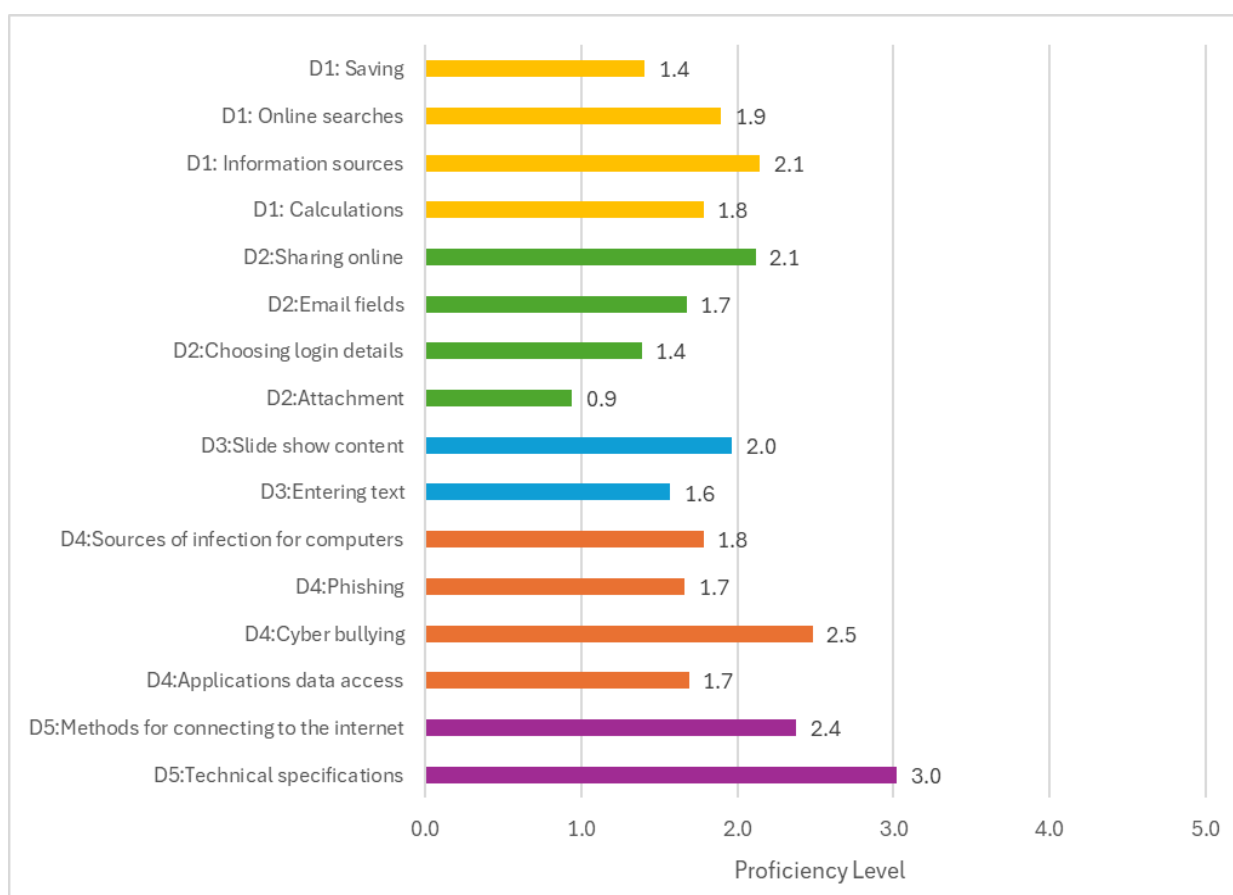
- Find data, information, and content through a simple search in digital environments, navigate between them, detect their credibility and reliability, and complete calculations in a spreadsheet.
- Identify how to organize, store and retrieve data, information and content in a simple way in digital environments.
- Identify appropriate simple communication means for a given context, recognize simple appropriate digital technologies to share data, information and digital content, choose simple digital tools and technologies for collaborative processes, and identify a digital identity.
- Identify ways to create and edit simple content in simple formats.
- Differentiate simple risks and threats in digital environments, select simple ways to protect my personal data and privacy in digital environments, and differentiate simple ways to avoid health-risks and threats to physical and psychological well-being while using digital technologies.

Students showed marginally stronger skills in specific areas, though most still require support for basic tasks. They performed slightly better in recognizing cyberbullying, identifying information sources, and understanding technical specifications, but generally remained dependent on guidance to complete simple activities. Results from Competence Area 5 (Digital Environment) indicate that most students could carry out simple tasks—such as identifying digital devices and different methods of connecting to the internet—with only occasional guidance.

Results by Topic

Figure 8 presents the average proficiency level of TVET students across the 16 assessment topics. Students demonstrated Level 1 proficiency in 9 topics, reflecting very beginner skills with only basic digital knowledge and the ability to perform simple tasks with guidance. They reached Level 2 in 5 topics—such as online sharing and recognizing cyberbullying—indicating a beginner level of skills. Only one topic, technical specifications, reached Level 3, or an intermediate level. By contrast, students scored “Below Level 1” in recognizing and using attachments, highlighting no or very limited ability to complete these types of tasks.

Figure 8. Students Proficiency Levels Across Topics in the Pix Digital Skills Assessment



The results indicate that, overall, TVET students demonstrated the following abilities by competence area:

Competence area 1: Information and data

- **Completing calculations in a spreadsheet:** on average, students have a very beginner level on this topic (proficiency level: 1.8). Most students know how to designate a cell by its reference.
- **Finding and assessing the source of information:** on average, students have a beginner level on this topic (proficiency level: 2.1). The majority of students are aware that some information sources are not credible and reliable.

- **Using search engines:** on average, students have a very beginner level on this topic (proficiency level: 1.9) and know how to find simple and easy-to-find factual information online.
- **Saving a document:** on average, students have a very beginner level on this topic (proficiency level: 1.4): most students know how to save a file.

Competence area 2: Communication and collaboration

- **Knowing the principle and methods for sharing photos** and other documents online: on average, students have a beginner level on this topic (proficiency level: 2.1). Most students are familiar with the principle of sharing online and recognize the share icon on a smartphone.
- **Managing your digital identity through the choice of login details** (usernames, email addresses, etc.): on average, students have a very beginner level on this topic (proficiency level: 1.4). They understand the role of a username.
- **Sending an email using the various fields** (To, CC, BCC, subject): on average, students have a very beginner level on this topic (proficiency level: 1.7): they can visually recognize an email.
- **recognizing and using attachments:** on average, students are not skilled (proficiency level: 0.9) and do not know how to recognize an email including an attachment.

Competence area 3: Content creation

- **Entering text:** on average, students have a very beginner level on this topic (proficiency level: 1.56) and know how to type a few words containing only simple characters.
- **Slide show content:** a majority of students do not know how to navigate in a slideshow and manipulate it (proficiency level: 2).

Competence area 4: Protection and security

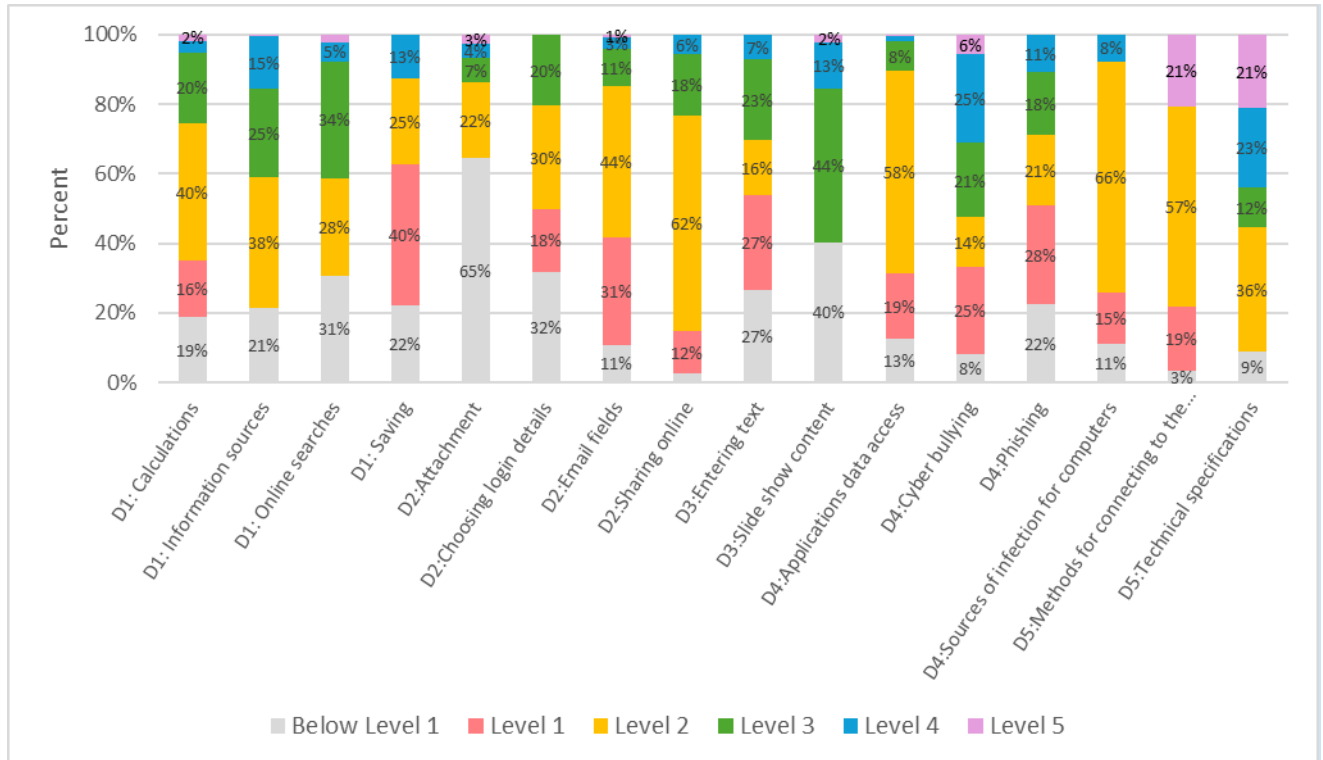
- **Managing access to your data when installing an app:** on average, students have a very beginner level on this topic (proficiency level: 1.7) and are aware of the effects of granting geolocation authorization to a mobile app.
- **Knowing practices that risk infecting a computer:** on average, students have a very beginner level on this topic (proficiency level: 1.8) and are aware that an attachment may contain a risk of infection.
- **Recognizing cyber bullying** and knowing how to react: on average, students have a beginner level on this topic (proficiency level: 2.5): they know what cyberbullying means and are able to report an insulting publication.
- **Identifying phishing:** on average, students have a very beginner level on this topic (proficiency level: 1.7) and know that an email asking for personal information (password, login) is an attempt at phishing.

Competence area 5: Digital environment

- **Identifying the technical specifications of a computer or smartphone:** on average, students have an intermediate level on this topic (proficiency level: 3.02): they can visually recognize a smartphone and are familiar with the term “operating system”.
- **Knowing the different ways of connecting a computer or smartphone to the internet:** on average, students have a beginner level on this topic (proficiency level: 2.4) and know the range of the most common ways of connecting to the internet.

Figure 9 illustrates the distribution of students across proficiency levels for each of the 16 assessment topics. For example, in the topic “Attachment” under Competence Area 2, 65 percent of students scored below Level 1, reflecting no or very limited skills. Overall, the distribution shows that most results cluster between Below Level 1 and Levels 1 and 2, corresponding to very beginner and beginner skill levels. Only a small share of results appears at Levels 3, 4, and 5, which represent intermediate to advanced skills.

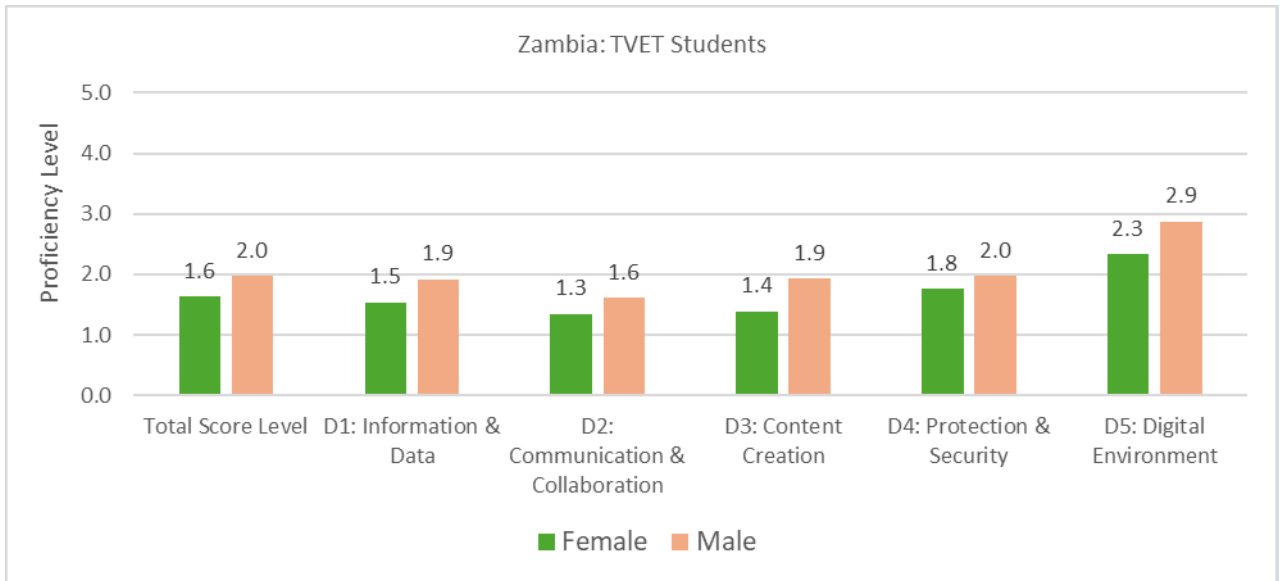
Figure 9. Student Distribution by Proficiency Levels across 16 Assessment Topics



Results by Gender

The distribution of students who took the digital skills assessment is unbalanced, with 69 percent of the 877 participants being male and only 31 percent female. As a result, comparisons across the two groups should be interpreted with caution. Overall, male students achieved slightly higher scores than female students in the total score and across all competence areas. These differences are statistically significant for all measures (see Figure 10).

Figure 10. Student Proficiency in Pix Digital Skills Assessment and Competence Area by Gender

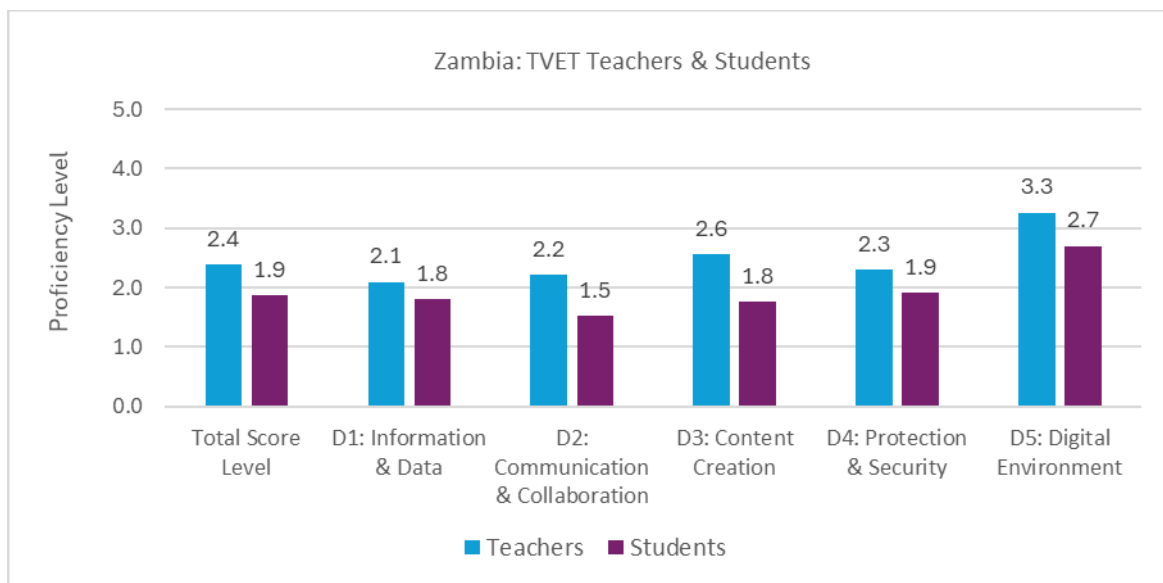


Note. Caution is warranted as the sample is unbalanced: of 877 students only 270 are female. Differences between females and males are statistically significant for total score and the five competence areas.

VI. Comparison of the Results of Teachers and Students

Although teachers and students differ in age and role, this section presents their digital skills results side by side for comparison. Because teachers are expected to support students in developing digital competencies, they are, in principle, expected to demonstrate higher proficiency. Figure 11 shows these results. It is important to note the large difference in sample sizes—103 teachers compared with 877 students—when interpreting the findings. Overall, teachers consistently outperformed students, achieving higher scores in the overall assessment and across all five competence areas. The largest gaps appear in Competence Area 2 (Attachment), Competence Area 4 (Sources of infection for computers), and Competence Area 5 (Methods for connecting to the internet).

Figure 11. Comparative Proficiency Levels of Teachers and Students in Pix Digital Skills Assessment



ICT Access and Use among TVET Teachers and Students

Table 3 summarizes TVET teachers' and students' access to ICT courses, digital infrastructure, and practices.

Table 3. Access to ICT Courses, Digital Infrastructure and Practices of Teachers and Students

| | Teachers | Students |
|--|----------|----------|
| Completed basic ICT course (lasting more than 2 weeks) | 60% | 55% |
| Have electricity more than 12 hrs. | 12% | 14% |
| Have a computer or laptop* | 62% | 16% |
| Own a digital device | 93% | 85% |
| Years of experience using computers (mean) | 12.67 | 4.26 |
| Main purposes of daily digital device use: | | |
| -Play video games | 6% | 13% |
| -Streaming music/videos | 29% | 20% |
| -Social networking (Instagram, TikTok, Facebook, Twitter) | 50% | 32% |
| -Communication (emails, video calls, WhatsApp) | 67% | 40% |
| -Education (study, search, listen, or view information to learn e.g., tutorials, podcasts) | 83% | 85% |
| -Accessing online services (banking, e-commerce, e-Government services) | 43% | 10% |
| -Work | 61% | 4% |
| -I don't use digital devices for daily activities | 4% | 1% |
| Use Artificial Intelligence (AI) Technology | 64% | 66% |

Both groups show some commonalities: just over half of teachers (60 percent) and students (55 percent) report access to a basic ICT course, and access to electricity for 12 or more hours per day is similarly low (12 and 14 percent, respectively). In addition, roughly two-thirds of both groups report using AI tools.

Clear differences emerge in other areas. Teachers are far more likely than students to have access to a computer (62 percent compared with 16 percent). While ownership of personal digital devices is high across both groups, it is slightly higher among teachers (93 percent versus 85 percent). In terms of use, teachers are also more active in applying digital tools to their daily activities, particularly for social networking (50 versus 32 percent), communication through email, WhatsApp, or video calls (67 versus 40 percent), accessing online services (43 versus 10 percent), and work-related tasks (61 percent versus 4 percent).

VII. Discussion and Recommendations for Enhancing Digital Skills

This report presents the results of an online digital skills assessment with students and teachers from 19 TVET institutions in Zambia. The findings provide a snapshot of current digital proficiency levels and highlight important gaps that can inform policy dialogue and future interventions. The 19 institutions were purposefully selected to reflect the diversity of the 464 registered TEVET institutions nationwide. Within them, second-year craft and second- and third-year diploma students were assessed, as these groups should in principle have completed the compulsory first-year ICT module and acquired basic digital skills. By systematically measuring competencies, the assessment establishes a baseline for understanding how prepared TVET teachers and students are to navigate the digital environment. These insights can help guide strategies to strengthen digital programs across the sector.

The results show that the 103 TVET teachers assessed have, on average, a beginner level of digital skills, with a proficiency score of 2.4. While they demonstrate solid basic knowledge across most competence areas, their abilities remain limited to completing simple digital tasks with occasional guidance. Scores are relatively homogeneous across competence areas one to four, with stronger performance in competence area five, particularly in the topic of “Technical specifications.” Teachers generally understand how to use fundamental digital tools and are familiar with common methods of connecting to the internet, suggesting they are more comfortable with technical aspects of digital use. However, they face greater challenges in practical areas such as recognizing email attachments, effectively using search engines, and managing data access when installing applications.

These findings indicate a significant gap: teachers currently have limited digital proficiency to effectively guide students in developing their own digital skills. Strengthening teachers’ competencies to reach intermediate levels (levels 3 and 4) would be important for supporting more meaningful use of digital technology in teaching and learning environments.

The results show that Zambian TVET students remain at a very beginner level of digital skills, with an average proficiency score of 1.9. While they demonstrate some basic knowledge and practical abilities, their skills are limited to completing simple tasks with occasional guidance. Students performed best in topics linked to smartphone use, likely reflecting the local context and common habits of accessing online services. However, the assessment also reveals important weaknesses: many students lack awareness of online safety issues such as phishing and digital infections, despite their frequent online presence.

For students in Zambia, building digital proficiency will require a stepwise approach. Key competence areas and topics should be progressively introduced once basic familiarity with digital devices has been secured (see recommendations below).

Digital Skills Improvement Recommendations for Teachers

The results reveal that teachers will require ongoing training to improve their digital proficiency. Differences observed across competence areas and topics show that teachers are at varying stages of development, underscoring the need for differentiated training programs tailored to their specific skill levels. The following section suggests three different training approaches.

Training Approach 1: For teachers below Level 1

For participants with little or no prior experience using digital tools—those classified as “Below Level 1” by the Pix assessment—the priority is to build fundamental digital skills. This group has not yet reached even a very beginner level, and without targeted support, they risk being excluded from meaningful participation in digitally supported learning and work environments. Training for these individuals should therefore focus on essential tasks such as:

- Starting a device, using its main features (e.g., mouse, keyboard, touchscreen)
- Powering devices on and off, adjusting settings, and managing basic functions.
- Connecting devices to Wi-Fi or other networks and troubleshooting common connectivity problems.
- Navigating the desktop, opening files, and using basic applications such as word processors or calculators.
- Creating and sending emails.
- Conducting simple online searches and evaluating the results.

To be effective, training for this group must be highly practical and delivered in person. Hands-on sessions allow participants to practice repeatedly, develop confidence, and overcome initial fear or hesitation in using technology. Facilitators or instructors play a central role: they should guide participants step by step, offer support, and create opportunities for participants to apply new skills in meaningful contexts. Peer learning is also valuable, as it enables participants to share experiences, troubleshoot common problems together, and gradually build a community of practice.

In addition to direct instruction, training programs should integrate tutorials and simple exercises that reinforce key skills. Examples of tutorials include:

- Email Basics: [Common Email Features](#)
- Typing techniques: [5 Skills to Master](#)
- How does Wi-Fi Work? [Wi-Fi Basics](#)



Training Approach 2: For teachers Levels 1 & 2

Once teachers have acquired fundamental digital skills, they should participate in a more extensive and structured training program. Such a program could combine assessment, guided instruction, and self-paced learning to ensure sustained progress. Guided instruction may involve in-person sessions led by professional trainers or more advanced peers. To complement this, online training modules and tutorials could offer additional flexibility, enabling teachers to practice and strengthen their skills at their own pace. Table 4 presents a list of key topics on which individuals should be trained to reach an intermediate level of digital proficiency.

Pix's microlearning modules provide test-takers with a practical tool to strengthen digital competencies at different levels. They are designed to support both teachers and students in progressing from basic to more advanced skills. Although the modules are currently available only in French, English versions are gradually being introduced. Examples include:

- Beginner level: [Mots de passe sécurisés](#) (safe password)
The goal of this module is to highlight the importance of strong passwords, identify the main risks associated with weak ones, and provide guidance on how to create secure passwords.
- Intermediate level: [Adresse IP publique et vous](#) (public IP address)
This module aims to explain the role of public IP addresses, illustrate what personal information can be revealed by an IPv4 address, and clarify the difference between public and private IP addresses.
- Advanced level: [Chat GPT est-il vraiment neutre](#) (Is Chat GPT really neutral)
The objective of this module is to examine the sources of bias in generative AI systems (Large Language Models), practice generating and analyzing biased outputs, and compare results across different LLMs.

Table 4. Key Training Topics for Reaching Intermediate Digital Skills

| Objective | Topics and description |
|--|---|
| Master the digital skills needed to perform simple Internet searches  | <ul style="list-style-type: none"> • Search engine: Using search engines • Online service: Finding and using an online service (other than a search engine) • Web address (URL): Identifying, using and analyzing a web address (URL) • Image download: Downloading and capturing an image and recreating another |
| Identify clues for assessing the quality of information found on the Internet  | <ul style="list-style-type: none"> • Web page quality: Identify and interpret quality indicators for a webpage • Information source: Finding and assessing the source of information • Image source: Finding and assessing the source of an image • Advertising identification: Interpreting the presence of advertising in search engine results |

| | |
|--|---|
| <p>Acquire the basic notions of file management</p>  | <ul style="list-style-type: none"> • File/Folder: Identifying and locating a file • Save documents • Organize documents: Organizing files in folders and sub-folders • Print documents: Knowing how to print and interpret print settings • Open documents: Finding ways to open all types of files with all types of software |
| <p>Master the common uses of electronic messaging</p>  | <ul style="list-style-type: none"> • Email address: Knowing the structure of an email address • Email fields: Sending an email using the various fields (To, CC, BCC, Subject) • Message status: Viewing an email account, identifying the status of messages and standard folders, understanding and creating message filters • Reply to emails: Viewing, replying and forwarding emails |
| <p>Master the common practices involved in text editing and formatting</p>  | <ul style="list-style-type: none"> • Copy and paste: Copying and pasting text and using different types of paste • Text formatting: Formatting characters in a text (bold, size, color, etc.) • Entering text: Entering text including punctuation and special characters • Paragraph formatting: Defining the alignment and spacing for a text; using paragraph styles |
| <p>Adopt cautious behaviors when surfing the Internet and using your equipment</p>  | <ul style="list-style-type: none"> • Storage: Knowing data storage solutions (removable media and online services) • Spam: Knowing, identifying and avoiding spam emails • Username: Managing your digital identity through the choice of login details (usernames, email addresses, etc.) • Password: Knowing the recommendations for choosing a strong password • Phishing: Identifying phishing • Antivirus software: Knowing the role of antivirus software and the basics of its use • Software installation: Managing the steps for safely installing software |
| <p>Recognize the most common elements of the digital environment</p>  | <ul style="list-style-type: none"> • Browser: Identifying a web browser and search engine, understanding how search engines work • Email address and provider: Knowing the elements required for using an email account (address, email service provider, application) • Word processing software: Knowing word processing tools and associated file formats • Peripherals and components: Knowing the different parts of a computer and smartphone (accessories and components) • Computer ports: Knowing the main ports for computer equipment |

Approach 3: For teachers Level 3+

Teachers who have reached Level 3, or the intermediate level, are ready to take on more complex pedagogical tasks using digital devices. At this stage, individuals can master basic digital tools in both learning and professional settings, carry out well-defined and routine tasks independently, and solve straightforward problems.

For this group, a more specialized assessment could be applied, drawing on a professional framework for teachers and complemented by targeted training modules and certification. Training could focus on pedagogical digital skills, including: teaching and learning (using ICT for planning, guidance, and instruction); evaluation and feedback (developing assessment strategies, analyzing results, and providing feedback); digital content creation (selecting and adapting educational resources); and personalized instruction (differentiating and tailoring learning experiences) (see Chinen, 2025, for more details). However, effective integration of ICT into teaching also depends on key enabling conditions and support. Beyond access to electricity, devices, and connectivity, these include structured guidance, alignment of EdTech with the curriculum, and a strong understanding of student-centered pedagogies that technology often emphasizes ([Chinen, 2025](#)).

Support for Students

To foster digital skills development among TVET students, it is essential to integrate both **digital literacy** and **computing education** into the school system. Together, these two dimensions provide students not only with the ability to use digital tools effectively but also with the knowledge and mindset to create, adapt, and innovate with technology. Digital literacy equips students with practical competencies for everyday life and work, such as navigating online platforms, managing information, communicating safely, and using digital tools responsibly. These skills are critical for employability in almost every sector, from accessing online job platforms to collaborating in digital work environments. Computing education, by contrast, provides a deeper understanding of how digital technologies function. It emphasizes concepts such as algorithms, programming, computational thinking, and the logic of computer systems. Developing these competences enables students to move beyond tool use toward problem-solving, innovation, and even the creation of new technologies. For TVET students, this dual focus ensures they are prepared not only to participate in the digital economy but also to adapt to rapidly changing technological demands in their fields.

The literature highlights that integrating digital competences into the curriculum requires more than exposure—it demands structured opportunities for practice and hands-on application. As with other skills, this process involves defining standards that specify the knowledge and proficiency levels students should achieve, sequencing instruction appropriately, and selecting materials and assessments that measure mastery. Specialized areas, such as cybersecurity and cyber-ethics, may require tailor-made courses to ensure depth of understanding. More detailed instructional approaches for different types of digital skills, as well as student skill frameworks, are discussed in [Angel-Urdinola, Chinen, and Rodon \(2025\)](#).

Also, the success of any digital skills initiative depends on creating an enabling environment, particularly through consistent and reliable access to digital devices and the internet in

schools. With these foundations in place, countries such as Zambia can progressively develop structured programs that leverage online platforms to strengthen digital skills. Table 5 illustrates examples of resources available to support the development of different types of competences.

Table 5. Examples of Level 1 and 2 Tutorials Recommended by the Pix Platform in English from Available Resources on the Internet

| Competence area | Competence | Topic | Tutorial | Link of the tutorial |
|------------------------------------|--|--|---|---|
| 1. Information and data | 1.1 Completing a search and information intelligence | Information sources | How to Spot Fake News | https://www.youtube-nocookie.com/embed/AkwWcHekMdo |
| | | Online searches | Basic Search Strategies | https://www.youtube-nocookie.com/embed/7RIB1CJovTs |
| | 1.2 Data management | Saving | How to Save a File | https://www.wikihow.com/Save-a-File |
| | 1.3. Data processing | Calculations | Calculating With Formulas | https://help.libreoffice.org/7.4/en-US/text/scalc/guide/formulas.html |
| 2. Communication and collaboration | 2.1 Interacting | Email fields | How to Send an Email | https://www.instructables.com/How-to-send-a-email/ |
| | | Attachment | How to Use Attachments | https://support.mozilla.org/en-US/kb/how-use-attachments |
| | 2.2 Sharing and posting | Sharing online | Share files from Google Drive | https://support.google.com/drive/answer/2494822# |
| 3. Content Creation | 3.1 Developing text documents | Slideshow content | How to use a computer keyboard | https://www.computerhope.com/issues/ch001689.htm |
| | | Entering text | Typing Techniques – 5 Skills to Master | https://www.typinglounge.com/typing-techniques |
| 4. Protection and security | 4.1 Securing the digital environment | Phishing | Understanding Spam and Phishing | https://www.youtube-nocookie.com/embed/NI37JI7KnSc |
| | | Sources of infection for computers | How to Avoid Getting a Computer Virus or Worm | https://www.wikihow.com/Avoid-Getting-a-Computer-Virus-or-Worm |
| | 4.2 Protecting personal data and privacy | Applications' data access | Are your smartphone apps spying on you? | https://www.goodhousekeeping.com/uk/consumer-advice/technology/a26625545/are-your-smartphone-apps-spying-on-you/ |
| | 4.3 Protecting health, wellbeing and the environment | Cyber bullying | Cyberbullying and Cyberharassment | https://edu.gcfglobal.org/en/internet-safety-for-kids/cyberbullying-and-cyberharassment/1/ |
| 5. Digital environment | 5.1 Resolving technical problems | Methods for connecting to the internet | What's the Difference Between Wi-Fi Data and Cellular Data? | https://www.verizon.com/articles/verizon-unlimited-plans/whats-the-difference-between-wifi-data-and-cellular-data/ |
| | 5.2 Building a digital environment | Technical specifications | Understanding Smartphone Specs: Key Terms Explained | https://www.consumercellular.com/blog/understanding-smartphone-specs-key-terms-explained/ |

Appendices

Appendix 1: SSA Pix Assessment: Topics Selected for Digital Skills for Africa

Topics in grey are not included in the mobile device version.

Competence Area 1: Information and Data

Competence 1.1: Completing a search and information intelligence

Topics and topics' description

Information sources: Finding and assessing the source of information

Online searches: Using search engines.

Competence 1.2: Data management

Saving: Saving a document

Competence 1.3: Data processing

Calculations: Completing calculations in a spreadsheet

Competence Area 2: Communication and Collaboration

Competence 2.1: Interacting

Email fields: Sending an email using the various fields (To, CC, BCC, subject)

Attachment: Recognizing and using attachments

Competence 2.2: Sharing and posting

Sharing online: Knowing the principles and methods for sharing photos and other documents online

Competence 2.4: Joining the digital world

Choosing login details: Managing your digital identity through the choice of login details (usernames, email addresses, etc.)

Competence Area 3: Content Creation

Competence 3.1: Developing text documents

Slideshow content: Viewing, organizing and documenting the content of a slideshow

Entering text: Entering text including punctuation and special characters

Competence Area 4: Protection and Security

Competence 4.1: Securing the digital environment

Phishing: Identifying phishing

Sources of infection for computers: Knowing practices that risk infecting a computer

Competence 4.2: Protecting personal data and privacy

Applications' data access: Managing access to your data when installing an app

Competence 4.3: Protecting health, wellbeing and the environment

Cyberbullying: recognizing cyberbullying and knowing how to react

Competence Area 5: Digital Environment

Competence 5.1: Resolving technical problems

Connecting a smartphone to the internet: Identifying the different ways of connecting a smartphone to the internet and choosing them based on the context

Competence 5.2: Building a digital environment

Technical specifications: Identifying the technical specifications of a computer or smartphone

Appendix 2: Score Descriptions Shown to Test-takers at the end of the Pix assessment

0 star: Test completed! It appears that digital skills are not your forte but you already have a foot in! As a great beginner, there's so much you can discover in the digital world, this is the opportunity for you to learn new skills and a new gateway to a wide range of knowledge. You can have a look at the "My tutorials" page on your Pix personal profile to develop your skills. You will find resources specifically recommended for you for each digital competence. The whole digital world is waiting for you!

1 star: Test completed! Your results show that you are a beginner in digital skills! Digital tools are a world you've already begun to discover, but there are still many topics you can explore to feel more comfortable. With practice, you will expand your skills in no time. You can have a look at the "My tutorials" page on your Pix personal profile to develop your skills. You will find resources specifically recommended for you for each digital competence.

2 stars: Just a little more effort! Your results show that you're a beginner in digital skills! It means that you have not mastered all topics tested, but that you still have a good grasp and understanding of basic competencies of the digital world. You can have a look at the "My tutorials" page on your Pix personal profile to develop your skills. You will find resources specifically recommended for you for each digital competence.

3 stars: Well done! Your results show that you have reached an independent level in digital skills. You are already quite knowledgeable in many transversal digital skills. You have the basic knowledge to navigate in the digital world, and with more experience, you can obtain a strong level of competence in this field. So keep it up and you will become even more autonomous! You can have a look at the "My tutorials" page on your Pix personal profile to develop your skills. You will find resources specifically recommended for you for each digital competence.

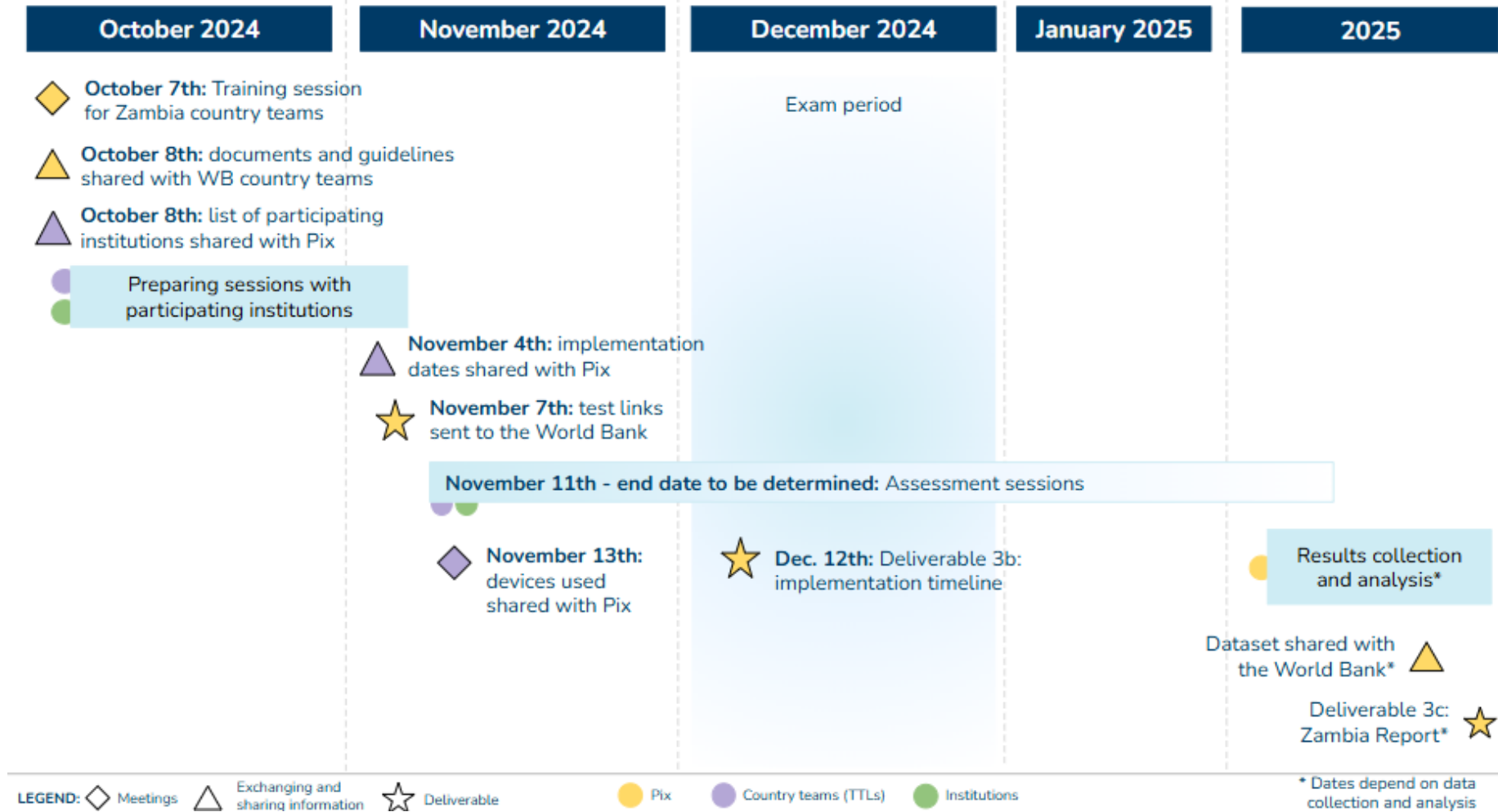
4 stars: Bravo! Your results correspond to an independent level in digital skills! It means that you already have a strong knowledge of how to use digital tools! Certain highly specific skills are still a bit challenging for you, but nothing more practice cannot solve! You can have a look at the "My tutorials" page on your Pix personal profile to develop your skills. You will find resources specifically recommended for you for each digital competence.

5 stars: Congratulations! You have an advanced level of digital skills! You comfortably use most of the day-to-day digital tools and you don't have any problem in most situations. Keep up the good work to become a real expert of the digital world! You can have a look at the "My tutorials" page on your Pix personal profile to develop your skills. You will find resources specifically recommended for you for each digital competence.

Appendix 3: List of Participating TVET Institutions

1. Chikowa Youth Development Centre
2. Isoka Trades Training Institute
3. Kaoma Trades Training Institute
4. Kwambula Trades Training Institute - Kansanshi
5. Livingstone Institute for Business and Engineering Studies (LIBES)
6. Lusaka Business and Technical College (LBTC)
7. Mansa Skills Training Institute
8. Mopani Copper Mines Plc Central Training Centre
9. Nkumbi International College
10. Northern Technical College (NORTEC)
11. Palabana University
12. Solwezi Trades Training Institute
13. St. Mawaggalli trades Training Institute
14. Technical and Vocational Teachers' College (TVTC)
15. Zambia Air Force Technical Training School
16. Zambia Air Service Training Institute
17. Zambia College of Agriculture - Mpika
18. Zambia Institute of Mass Communication Trust (ZAMCOM)
19. ZESCO Training Centre

Appendix 4: Zambia Implementation Timeline





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The team acknowledges the financial support received from the Mastercard Foundation