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MANUAL ON HOW DIGITAL SKILLS CAN HELP YOUTH DEVELOPMENT



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1 INTRODUCTION

In today’s rapidly changing world, digital skills have become essential for full participation in society. For included youth—those facing social, economic, educational, or geographic barriers—digital literacy offers a gateway to opportunity, connection, and empowerment. This manual was designed specifically to address the needs of these young people, equipping them with the tools to thrive in the digital age and actively engage in learning, work, and community life.

Digital literacy goes far beyond learning how to use a computer. It includes the ability to find and evaluate information online, communicate responsibly, manage digital identities, stay safe in virtual environments, and use digital tools creatively and confidently. These competencies are not only vital for education and employment but also for personal expression and civic engagement. As such, digital inclusion is a powerful equalizer, enabling all youth—regardless of background—to access knowledge, share their voice, and shape their future.

This manual introduces the core concepts and practical applications of digital literacy in six key areas: digital communication, project management, software proficiency, cybersecurity, youth development, and mentoring. Each section combines theory with real-world guidance, tips, and activities, ensuring learners build not just technical know-how but also the critical thinking and self-confidence needed to navigate digital spaces effectively.

By supporting included youth to become digitally literate, this manual contributes to building a more inclusive, skilled, and resilient generation. Whether used in classrooms, workshops, or community programs, it offers a comprehensive resource to help young people unlock their full potential in an increasingly digital world.

Ultimately, this manual aims to promote equal access to digital opportunities and foster a culture of lifelong learning. As youth gain confidence and competence through the knowledge shared here, they are empowered to make meaningful contributions to their communities, advocate for themselves, and actively shape the digital future.

2 DIGITAL LITERACY

2.1 Introduction:

Digital Literacy is defined by Cornell University (2009) as a combination of the skills or competencies in finding, comprehending, evaluating, utilizing, sharing, and creating digital content using technology and the internet. Moreover, Digital Literacy is the ability of individuals and communities to understand and use digital technologies for meaningful actions within life situations. Simply it is the ability to access the computer/mobile/internet for our day-to-day activities and being connected with others through the internet. Digital Literacy is those capabilities which fit an individual for living, learning and working in a digital society. (JISC, 2015).

The concept of digital literacy only started to gain attention in the last decade. Initially digital literacy was viewed primarily as the functional skills and competencies that people needed to use computers and the Internet. However, in the last decade this has been expanded to consider the broader capacity needed to participate in a digital environment. UNESCO (2011) views digital literacy as a life skill that not only increases employability but serves as a catalyst that “enables the acquisition of other important life skills” (p. 1).

The importance of digital literacy was further reinforced during the COVID-19 pandemic, as educators of all levels across the world had to adapt their teaching and learn new teaching methods in a short amount of time. This influenced teachers’ and students’ mental health.

2.2 Theory

The term “Digital Literacy” was coined by Paul Glistner in 1997 and it came from the discussions of the following concepts:

- Visual literacy
- Technological literacy
- Computer literacy
- Information literacy

Visual literacy - when images and non-verbal symbols try to capture the knowledge.

Technological literacy - the ability to use technology in addressing a need.

Computer literacy - an individual have knowledge and ability to use computers.

Information literacy – the ability of finding, evaluating, using and sharing of information.

Different terms common to Digital Literacy that YOU must know:

Media Literacy – it is one’s ability to critically read information or content and utilizes multimedia in creatively producing communication

Information Literacy – it is one’s ability to recognize when information is needed and to locate, evaluate and use effectively the needed information.

ICT Literacy – is the ability to use tools of information and communication technology to define one's information problem clearly.

Communication and Collaboration – • these are one’s capabilities in being able to participate in the digital networks in the teaching and learning context.

Identity Management – being able to understand how to ensure safety and security in managing online identity.

Learning Skills – these are ways of knowing how to study and learn in a technology – enriched environment, this knows how to utilize technology in addressing the need to learn efficiently.

The objective of digital literacy is to impart basic ICT skills relevant to the needs of the students, which would enable them to use IT and related applications to participate actively in the democratic process and further enhance opportunities for their livelihood. The persons shall be able to access information, knowledge and skill through the use of digital devices.

Aspects of Digital Literacy:

1. **The Power of Internet:** We may call the internet a window to the world. Its users may reap uncountable benefits through constructive & ethical use of the internet. Users are being added every moment which creates a pool, may or may not be knowing each other but having access to know each other in different social sites has become a trend not only among youth & children but frequently one must have seen older

people searching their old school friends, primary class teacher in social sites. This has fostered the social relationship & family bondage. Power of the Internet is unlimited and beyond imagination so one can reap the benefits of e-governance in a real sense through the internet.

2. **Use of Emails:** Registered letters, speed post, telegrams days are gone. Now in this digital era, physical delivery of the communication seems to be outdated. Emails are quick, reliable and easy ways of sending & receiving information. It has become part and parcel of the communication process. Every person may have an email account for taking different benefits schemes and seamless fast communication.
3. **Uses of Apps:** Specific customer centric applications for specific work had stepped us in the world of computer application, popular as apps. Apps are generally sequential computer programs that make a specific task more users friendly & used for a specific category of work. Now apps are commonly used by everyone every day. Remembering the long syntax of the website, app is easier. By downloading the various useful apps, the life of workers may be easier.
4. **Uses of Browser:** Browser is the main component to access the world of information through the internet. Internet Explorer, Mozilla Firefox and Google Chrome are famous browsers. Different types of browsers are enabled with different technology to cater the specific needs of the users. It depends on users to choose the right browser for specific function.
5. **Uses of Government apps.** Presently government is more emphasizing for digital governance through various extensive uses of different operation specific apps. People have to learn the use of these customer friendly apps for taking direct benefits of different government schemes and program and credit of the subsidy money/benefits directly in their respective accounts through Direct Benefit Transfer(DBT)

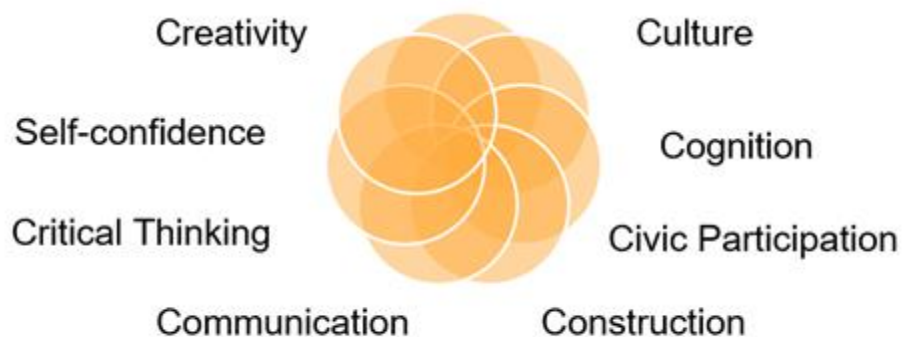
-
6. Uses of Payment Interface. There are apps that let you make simple, quick & easy payment transactions. Users can make instant bank to bank payments and pay & collect money using just mobile.

 7. Ethical Uses of Internet. Since the internet allows us to access the entire world at a time, we should be very careful while using it. Videos, photos & other text information harmful to anyone should not be aired. We have to always keep in mind that any things good or bad uploaded/aired will be accessible to a large segment of the populace & what will be its next consequences.

 8. Threats of Cyber Security. Keeping our system & data safe & secure stands as the biggest challenge before us. Attackers sitting thousands of miles away from us may harm us through cyber-attacks. So we must be extra careful towards possible cyber-attacks. We should not share our user id/password or PIN with anyone.

There was created a model that provides a holistic approach to digital literacy on how to use technology. The eight elements of digital literacy are based on the work of Doug Belshaw, an educational researcher and digital literacy expert. In his doctoral thesis and subsequent book, *The Essential Elements of Digital Literacies* (2012), Belshaw outlines these dimensions as essential for understanding and participating in the digital world.

Belshaw identified these elements through research and observation of how people interact with digital technologies. His work emphasizes that digital literacy isn't just a single skill but rather a combination of interconnected skills, knowledge, and attitudes.



Digital literacy encompasses a range of skills essential for effectively navigating and utilizing digital technologies. Here are eight core elements of digital literacy:

1. **Cultural** - Understanding how different digital environments (social media, work platforms, etc.) have unique norms, values, and contexts. This includes knowing *how to engage appropriately in these settings*.
2. **Cognitive** - Developing *critical thinking skills* to evaluate, analyze, and interpret digital information, especially for problem-solving and informed decision-making.
3. **Constructive** - Being able to *create or produce digital content*, not just consume it. This includes skills in writing, multimedia creation and digital collaboration.
4. **Communicative** - Knowing how to *communicate effectively through digital platforms*, including understanding tone, medium, and audience-specific language.
5. **Confidence** - Having the *self-assurance to use and explore new digital tools and platforms*, which helps in adapting to the rapidly changing digital landscape.
6. **Creative** - *Employing creativity in using digital tools*, such as exploring new software for innovative purposes or using existing tools in unique ways.
7. **Critical** - *Developing a critical approach toward digital content*, such as questioning the reliability, intent, and sources of online information and being aware of potential biases or misinformation.
8. **Civic** - Understanding *the impact of digital actions on society*, including responsible use, digital etiquette, and contributing positively to online communities.

Mastering these elements fosters well-rounded digital literacy, preparing young people to participate thoughtfully and responsibly in the digital world.

Digital Citizenship means an individual accepts and appreciates their responsibility for their content as well as their actions using technology such as internet, smart mobile phones and other digital media. Comprehension of the nine elements of digital citizenship will make technology safer and more helpful for children and adults, alike.

9 Elements of Digital Citizenship



2.3 How to apply:

Education

Digital literacy in the classroom:

- Vlog-s – Some teachers are turning classroom blogs into video blogs or vlogs. Video blogs have many uses in the educational world, from showcasing student projects to making lessons available outside the classroom.
- Wiki – it is simply a collaborative website created and edited by more than one user. Students can edit them quickly; make suggestions and works with older operating systems, so teachers do not have to worry about upgrading to the latest technology.
- Podcasts – It is a type of digital media recorded by students and uploaded to syndication or streaming services like iTunes. A podcast is a program made available in digital format for download over the Internet.

Science

Technology uses science to solve problems, and science uses technology to make new discoveries.

By far the biggest connection is what we've touched on already: technology is the application of science. In fact, throughout history science has paved the way for all kinds of amazing advances in our society.

During the agricultural revolution, the way humans lived changed forever. From being hunter gatherers who roamed the land, we started to settle down in one place. Why? Because we gained the scientific know-how necessary to grow crops. Suddenly, we didn't need to be on the move all the time. We could create more than enough food to feed our families where we were. Soon our shelters stopped being rudimentary and easy to take apart and became permanent structures and buildings. Thus, as farming technology improved, building technology improved as well; and as we became able to create an excess of food, fewer people had to spend time actually producing food, and we gained the extra time needed to expand our knowledge even more quickly.

Culture

Digital approaches are having a huge impact on our societies. The internet enables people to connect with any part of the world and to create shared experiences, online content and a sense of belonging.

Young people are able to make friends with a much larger, culturally diverse set of people. They are using apps to sing, perform, make friends, share interests and socialize with people from across the world.

They keep up-to-date with each other, share their own youth-led language or slang, and participate in a global community of memes and social commentary. For younger children, they might be part of a kids club or watch programs on kids TV online that are available worldwide.

It has become an integral part of their lives and, increasingly, the most popular way to communicate with each other. Children and teens may have more in common with those

from other countries due to the interconnectedness of the internet that allows them to share similar experiences.

Communication

The most significant way that technology has helped communication involves how people can now communicate live no matter where they go.

Not only can you call someone on the phone for a regular voice chat, but you can take advantage of live video chat apps and conferencing software that can handle meetings with your personal contacts, business colleagues or peers from school. With these tools, you can also share documents and other media items during your conversation.

Business

Technology has important effects on business operations. No matter the size of your enterprise, technology has both tangible and intangible benefits that will help you make money and produce the results your customers demand.

Technological infrastructure affects the culture, efficiency and relationships of a business. The world is changing around us in unexpected ways. While there have certainly been a number of things that we could do without technology has also brought about plenty of good. The powerful, transformative impact is clearly seen in the world of business, with small businesses enjoying the good and the bad effects of technology.

Health

It could be argued that of all the ways technology has improved the lives of humans across the globe, none are as important as the technological advances in medicine. From the invention of X-ray machines to advances in surgical practices, technology has made us healthier and increased life expectancies. As we move further into the 21st century, we continue to develop technologies that cure illnesses and improve our quality of life.

Clinical Care:

-
- ❑ **Telemedicine / Tele-Health Systems** – this system refers to methods of advancing healthcare based on telecommunications technologies. It is a remote exchange of data between an individual and health care professionals, e.g. monitoring of heart failure.

 - ❑ **Wearable Technology** - The wearable medical device market is growing quickly. These devices collect data, which helps doctors and patients alike monitor and assess the health of the wearer. Example Smart jewellery. This can include smart rings, wristbands, watches and pins, Body-mounted sensors, Fitness trackers, Smart clothing, augmented reality (AR) headsets, VR headsets, AI hearing aids.

 - ❑ **Information systems** bring many potential benefits for health, especially the prevention and treatment.

Activity no1:

Search for references to yourself on the Internet by looking up your name using your preferred search engine. What do you have to type in to find the “real you” and not either someone else with the same name or a one-dimensional representation of you? Is this an accurate representation of who you are, what your interests are, what you find interesting, and what you share with others online?

Once you’ve reviewed your search results, have a look at this TedX talk “[What Do Your Digital Footprints Say About You?](#)” by digital education and social media expert Nicola Osbourne.

2.4 Additional reading materials for ongoing learning and support:

- *BBC Learning English Course* – What is Digital Literacy - https://www.youtube.com/watch?v=_LElWqXi7Ag

- *GPB Education* – Digital Citizenship - https://www.youtube.com/watch?v=yfZN4_gP5kQ

- *Kaspersky* – 11 Internet Safety Tips for Your Online Security - <https://www.youtube.com/watch?v=aO858HyFbKI>

3 ONLINE COMMUNICATION

3.1 Introduction



Source: freepik.com

Online communication has become an essential aspect of modern life, transforming how people interact, work, and share information. With the advent of the internet and digital technologies, communication no longer relies solely on traditional face-to-face encounters or phone calls. Instead, individuals and organizations now engage through a variety of online platforms, including social media, emails, video conferencing, messaging apps, and forums. This shift has not only made communication more accessible and efficient but has also reshaped social interactions, business practices, and even cultural norms. The ability to connect instantly with people across the globe has led to a more interconnected world, where geographic boundaries and time zones are no longer significant obstacles. As online communication continues to evolve, it brings both opportunities and challenges, ranging from issues of privacy and security to the impact of digital interactions on personal relationships and professional dynamics. Understanding the dynamics of online communication is crucial in navigating this digital age effectively (Mandiberg, 2012).

3.2 Theory

This section provides a framework for understanding how communication takes place online and the impact of digital platforms on human interaction.

Media Richness Theory (Daft & Lengel, 1986) suggests that different communication mediums vary in their ability to transmit information and handle ambiguity. Rich media (such as video calls) are better at conveying complex messages, while lean media (like text messages or emails) are more suited to straightforward, unambiguous communication. The

rapid development of online tools, including video conferencing, chatbots, and collaborative platforms, exemplifies how technological advancements have made online communication more flexible and efficient.

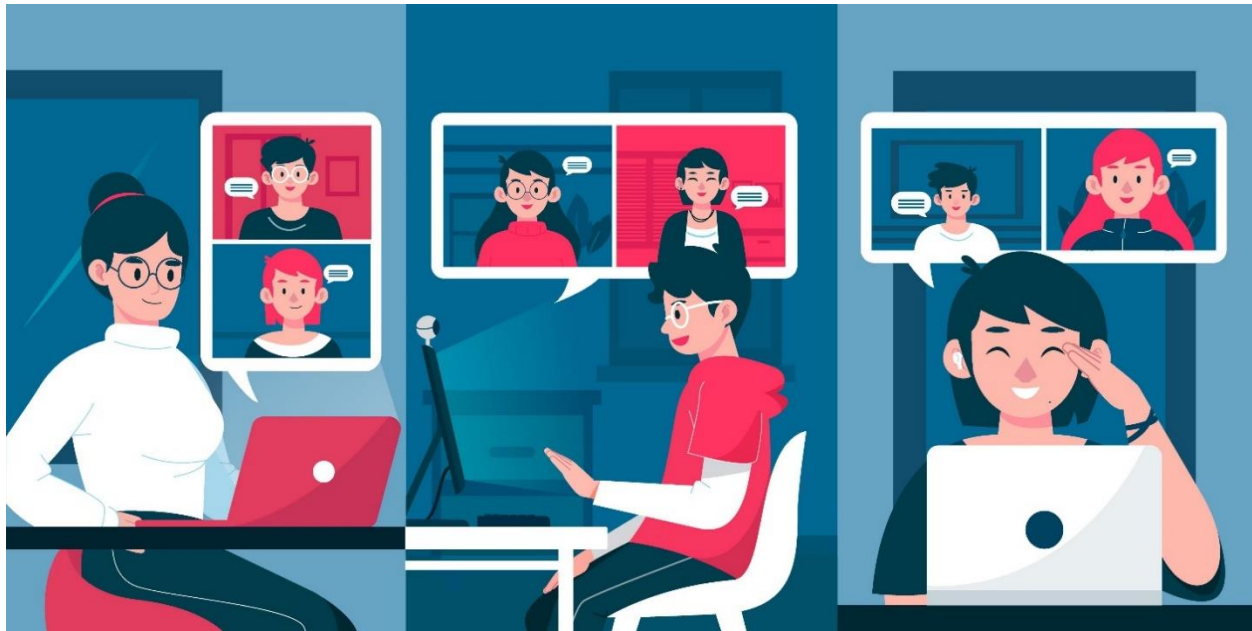
Another important concept is ***Social Information Processing Theory*** (Walther, 1992), which addresses how people form relationships and convey emotions in online environments. Walther argued that while face-to-face communication allows for instant emotional cues through body language and tone of voice, online communication compensates for these cues by allowing individuals to develop a sense of connection over time. With repeated exchanges, users adapt their communication styles, sometimes using emoticons or carefully constructed language to express emotions. This theory suggests that online relationships can be as meaningful as offline ones.

The Networked Communication Theory (Castells, 2009) further explores the impact of digital spaces on human interaction, emphasizing the role of social networks in online communication. Castells argues that the internet has shifted communication from traditional hierarchical structures to decentralized, networked systems. Social media platforms like Facebook, Twitter, and LinkedIn facilitate widespread communication that transcends geographical boundaries and traditional power structures, allowing individuals to connect, share, and collaborate on a global scale. This networked form of communication promotes greater inclusivity but also creates challenges related to privacy and information overload.

Additionally, ***Uses and Gratifications Theory*** (Katz, Blumler, & Gurevitch, 1973) provides valuable insights into why people engage in online communication. This theory suggests that individuals actively choose communication channels based on their personal needs, such as information seeking, entertainment, social interaction, or self-expression. In the context of online communication, social media users may engage with platforms to fulfill a variety of needs, from staying informed about current events to maintaining social relationships and expressing personal opinions. The rise of user-generated content on platforms like YouTube and Instagram illustrates the theory's relevance in explaining how individuals use online communication tools to meet diverse social and emotional needs.

Lastly, the ***Social Construction of Technology Theory*** (Bijker, Hughes, & Pinch, 1987) highlights the interaction between people and technology in shaping communication practices. According to this theory, the design and use of technology are not neutral but are

influenced by social, political, and cultural factors. As new forms of online communication emerge, such as live streaming or virtual reality interactions, users, developers, and policymakers collectively influence how these technologies evolve and are integrated into daily life.



Source: freepik.com

3.3 How to apply

In today's digital age, effective online communication is an essential skill that can help individuals and organizations succeed in both personal and professional interactions. This section will explore several practical tips and tricks for applying online communication in diverse settings, with examples from real-world usage.

1. Choosing the Right Communication Tool for the Task

A critical first step in online communication is selecting the appropriate platform based on the task at hand. Rich media, such as video conferencing, are ideal for complex discussions requiring feedback, emotional context, or non-verbal cues. Leaner media, such as email or instant messaging, are better suited for simpler tasks such as information sharing or coordination.

For example, if a company needs to brainstorm ideas for a new product, a video meeting on platforms like [Zoom](#) or [Google Meet](#) allows team members to interact face-to-face, share

visual materials, and discuss ideas in real time. This approach provides immediate feedback and ensures that all participants understand each other’s viewpoints. However, for less complex communication—like sharing a report update or confirming an appointment—email or messaging platforms like **Slack** or **Microsoft Teams** are more efficient and less time-consuming.

Practical Tip:

- ✓ Before initiating any conversation, assess the task and consider whether it demands real-time, nuanced interaction (rich media) or whether it can be communicated via asynchronous, simpler communication (lean media). This will help optimize the communication process and improve efficiency.

2. Effective Writing for Clarity and Tone

The absence of non-verbal cues in online communication often makes written messages vulnerable to misinterpretation. To avoid confusion, it's crucial to craft clear, concise, and well-structured messages. Properly structuring your message can significantly enhance understanding and reduce ambiguity.

For instance, when sending an email or text message, it’s important to begin with a clear subject line or opening statement, followed by concise body text. Bulleted or numbered lists can help break down complex information into digestible chunks. Additionally, adjusting your tone according to the context is essential. In formal communication, maintaining a professional tone is critical, while in informal settings (such as personal messaging or social media), a more relaxed and conversational tone may be appropriate.

Practical Tip:

- ✓ Use “subject” lines in emails that summarize the content, and ensure the tone matches the context.
- ✓ When in doubt, end on the side of politeness and clarity. For example, instead of writing, “Need this by Friday,” consider saying, “*Could you kindly provide this by Friday?*” This slight adjustment can make a significant difference in how the message is perceived.
- ✓ When possible use professional apps like **Outlook**.

3. Building and Managing Online Identity

Online identity management has become a crucial part of personal and professional communication. In the digital era, how individuals present themselves online can have a

lasting impact on their reputation and relationships. Social media, professional networking sites, and even online forums allow users to curate their identities, ensuring they are aligned with both their personal values and professional goals.

For instance, [LinkedIn](#) is a powerful tool for building professional identity. Regularly updating your profile, sharing relevant content, and engaging with others in your field can enhance your online presence and expand your network. On the other hand, platforms like Instagram or Facebook are more personal, and individuals should ensure their posts are aligned with the image they wish to project.

Practical Tip:

- ✓ Regularly update your online profiles to reflect your current roles, accomplishments, and interests.
- ✓ Maintain consistency across platforms, ensuring that your personal and professional profiles complement each other.
- ✓ Be mindful of the content you post or share, particularly on social media, as it contributes to your digital footprint.

4. Active Listening and Prompt Feedback

In online communication, especially in professional settings, it is essential to practice active listening and provide timely feedback. In written communication, this can be achieved by paraphrasing or summarizing key points in your responses. In video or voice-based communication, non-verbal feedback (nodding, eye contact) plays a crucial role in showing that you are actively listening.

For example, in a Zoom meeting, make an effort to acknowledge others' points by saying, *"I see your point about the timeline, and I think we should consider..."* This helps the speaker feel heard and encourages a collaborative exchange. In text-based communication, active listening can be demonstrated by acknowledging the previous message and responding thoughtfully.

Practical Tip:

- ✓ To improve active listening in online meetings, use tools like the chat feature to share comments or ask questions, ensuring everyone's voice is heard.
- ✓ In asynchronous communication (e.g., email), ask open-ended questions that invite further clarification or discussion. For example, instead of writing, "Got it, I'll do that," say, *"I understand your concern. Could you clarify if you want me to revise the entire document or just the first section?"*

5. Navigating Miscommunication and Conflict

One of the challenges of online communication is the potential for miscommunication. The lack of non-verbal cues can lead to misunderstandings or escalation of conflicts. In online communication, especially in text-based exchanges, it is important to be aware of how tone can escalate or de-escalate conflicts.

For instance, if a misunderstanding arises in a team chat or email exchange, instead of responding defensively, it's better to clarify your message with a collaborative mindset. A response such as, *"I think I misunderstood your comment, and I'd like to discuss this further to make sure we're aligned,"* invites open conversation and resolves the conflict without escalating tensions.

Practical Tip:

- ✓ In case of conflict, take a moment to pause before responding. Re-read the message and consider how your response might be perceived.
- ✓ If necessary, suggest moving the conversation to a more personal communication channel (such as a video call) to prevent further misunderstandings.

6. Ensuring Privacy and Security

Security and privacy are paramount when engaging in online communication. As cyber threats and data breaches continue to rise, it's crucial to be mindful of the platforms and tools you use. For example, if you are sharing sensitive information over email, consider using encrypted email services such as [ProtonMail](#). When participating in online meetings, use password protection and waiting rooms in tools like Zoom to prevent unauthorized access. Additionally, make sure to verify the authenticity of messages before opening attachments or clicking on links, as these could lead to phishing attacks.

Practical Tip:

- ✓ Always use strong, unique passwords for your online accounts, enable two-factor authentication (2FA) where possible, and be cautious about sharing sensitive information on unsecured platforms.

7. Improving online communication in higher education and online learning

Learner–tutor interaction refers to two-way communication between online learners and tutors and the latter's efforts to encourage and motivate the former. Students interact with tutors when they need clarification on a variety of issues, such as the course content, their

study obligations, deadlines or even how to use digital tools or systems. Since most online learners experience high levels of stress, tutors often emphasise the need for students to communicate with them in a timely manner and also seek cooperation opportunities with peers (Ragusa, 2017; Vlachopoulos & Makri, 2019).

Practical Tips:

- ✓ *Timely feedback* and immediacy which tutors provide to their students is crucial.
- ✓ *Instant messaging* improves the quality of interactions, making tutors available for prompt feedback and allowing students to ask additional questions with ease.
- ✓ Given the significant potential for feelings of loneliness and isolation to arise in distance education, interaction through *discussion forums* helps students feel more connected.
- ✓ Tutors should provide *support* and establish a *sense of community* in online courses.
- ✓ Tutors should entice *peer communication* through interactive and collaborative projects by using synchronous and asynchronous tools.

Mastering online communication is vital in the modern world. By applying effective strategies such as choosing the right platform, writing clearly, managing online identities, practicing active listening, resolving conflicts constructively, and ensuring privacy and security, individuals and organizations can enhance their digital interactions.

3.4 Additional reading materials for ongoing learning and support



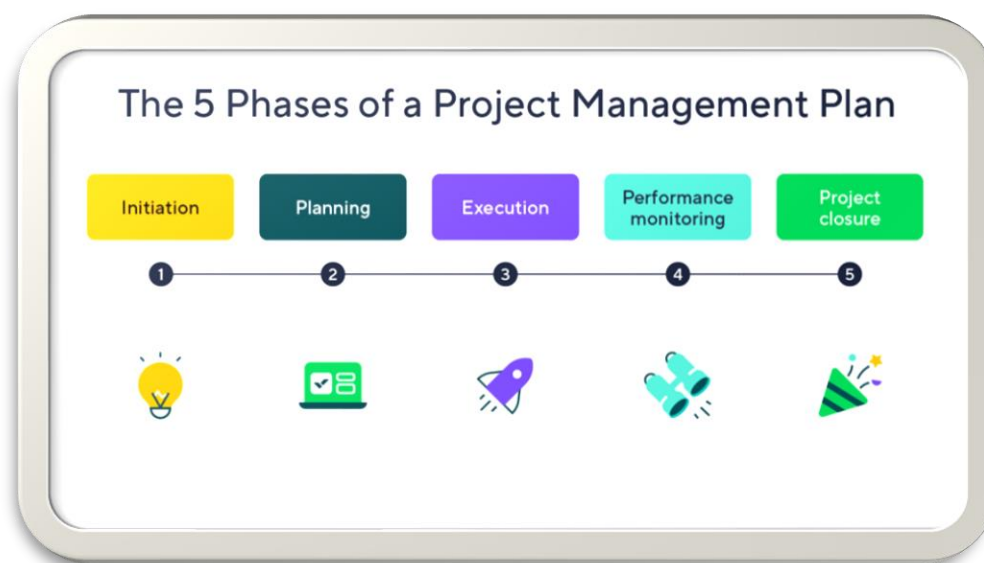
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4 DIGITAL PROJECT MANAGEMENT

4.1 Introduction

Digital Project Management (DPM) is a specialized field that focuses on managing projects in the digital space, such as website development, software implementation, app creation, and digital marketing campaigns. In today's fast-paced, technology-driven world, DPM plays a critical role in ensuring the successful execution of projects that rely on digital tools and platforms. Unlike traditional project management, DPM requires a deep understanding of both technical processes and the agile methodologies that drive innovation in the digital realm. Digital project managers oversee the planning, execution, and delivery of projects, ensuring that they align with business goals, stay within budget, and meet deadlines. They collaborate with cross-functional teams, including developers, designers, content creators, and marketers, to coordinate efforts and overcome challenges. A key component of DPM is adaptability—managing the complexities of rapidly evolving technologies, shifting client requirements, and unexpected obstacles. Furthermore, DPM often involves leveraging various digital tools for project tracking, communication, and collaboration, enhancing efficiency and visibility throughout the project lifecycle. As organizations continue to embrace digital transformation, the role of the digital project manager is becoming increasingly essential to delivering successful, innovative solutions that meet the needs of both businesses and end-users.



Practical advice on using digital tools for project management

Using digital tools effectively for project management can significantly enhance efficiency, collaboration, and organization. Here are some practical tips:

- 1. Choose the Right Tools:** Select tools that align with your project's needs—whether it's task management (e.g., Trello, Asana), time tracking (e.g., Toggl), or communication (e.g., Slack, Microsoft Teams). A tool that offers a variety of functionalities is often the best choice to centralize your work.
- 2. Set Clear Objectives and Deadlines:** Use project management software to set clear goals, deadlines, and milestones. Tools like Monday.com allow you to visualize tasks and track progress, ensuring everyone stays on the same page.
- 3. Leverage Collaboration Features:** Use shared documents, real-time editing, and feedback features (Google Docs, Notion) to streamline team collaboration and communication.
- 4. Automate Repetitive Tasks:** Use automation features in tools like Zapier or Microsoft Power Automate to reduce manual tasks and improve workflow efficiency.
- 5. Regularly Review and Adjust:** Stay agile by regularly reviewing project progress and adapting your plans using digital tools' tracking and reporting features.

4.2 Theory

A key theory in **Digital Project Management (DPM)** is the "**Agile-Driven Adaptation Theory**," which suggests that the success of digital projects lies in the ability to adapt to rapid changes, evolving technologies, and the need for continuous collaboration. Unlike traditional project management, which often follows a linear, waterfall approach, digital project management is inherently iterative and flexible, making it especially suited for fast-paced digital environments where scope, tools, and priorities can shift frequently.

According to this theory, digital project management thrives on the principles of agile methodologies—such as Scrum and Kanban—which prioritize flexibility, transparency, and customer feedback. The core premise is that digital projects, especially those involving software development or digital transformation, cannot always follow a predefined path. Instead, they must be managed through cycles of planning, execution, review, and

refinement, allowing project teams to quickly adapt to new requirements or unforeseen challenges.

Another key component of the Agile-Driven Adaptation Theory is the **collaborative ecosystem**. In digital projects, team members often come from diverse disciplines—design, development, marketing, and analytics—requiring frequent communication and collaboration. This theory posits that fostering a strong, communicative, and cross-functional team is crucial for success.

Ultimately, the theory suggests that digital project managers need to embrace flexibility, foster open communication, and leverage iterative processes to drive continuous improvement. As technology and client needs evolve rapidly, project management must also evolve, making adaptability and iterative delivery the foundation of successful digital projects.

4.3 How to

Running a digital project effectively requires a combination of strong leadership, clear processes, and the use of the right tools. Here's a step-by-step approach to managing a digital project:

- 1. Define the Project Scope and Objectives:** Before anything else, ensure that you clearly understand the project's goals, deliverables, and timelines. Work closely with stakeholders to define the project's scope and align on key outcomes. Setting specific, measurable, achievable, relevant, and time-bound (SMART) goals is crucial at this stage.
- 2. Assemble Your Team:** Digital projects often involve diverse skill sets, so assemble a cross-functional team that includes developers, designers, content creators, and marketers. Assign roles and responsibilities clearly from the start to avoid confusion.
- 3. Use Project Management Tools:** Leverage digital project management tools like Asana, Jira, or Trello to organize tasks, set deadlines, and monitor progress. These tools help keep everything in one place and provide visibility to the entire team.
- 4. Create a Workflow and Timeline:** Break the project into smaller, manageable tasks and create a project timeline. Use agile or waterfall methodologies depending on the project's nature, but always prioritize flexibility and adaptability.

5. **Communicate Regularly:** Frequent communication is key to avoiding misunderstandings and ensuring everyone stays aligned. Use messaging tools like Slack or Microsoft Teams, and schedule regular check-ins or stand-ups to track progress and address issues quickly.

6. **Monitor and Adjust:** Track key metrics like progress, budget, and resource utilization. Be ready to adjust timelines or resources as needed to keep the project on track.

7. **Deliver and Evaluate:** Upon completion, deliver the project to the client or stakeholders. Afterward, conduct a retrospective to identify lessons learned and areas for improvement in future projects.

4.4 Additional reading materials for ongoing learning and support

For ongoing learning and support in digital project management, a range of resources can help you deepen your knowledge, stay updated on industry trends, and refine your project management skills.

Books:

1. **"Digital Project Management: The Complete Step-by-Step Guide to a Successful Launch"** by Taylor Olson – A comprehensive guide that covers the fundamentals of managing digital projects, including budgeting, timelines, and team coordination.

2. **"Scrum: The Art of Doing Twice the Work in Half the Time"** by Jeff Sutherland – This book introduces the Scrum methodology, which is widely used in digital project management, particularly in agile environments.

3. **"The Phoenix Project: A Novel About IT, DevOps, and Helping Your Business Win"** by Gene Kim, Kevin Behr, and George Spafford – Though framed as a novel, this book offers valuable insights into IT and project management, especially in digital transformation and DevOps contexts.

Online Platforms:

1. **Coursera** – Offers courses like "Digital Project Management" and "Agile Project Management" that cover the latest trends and tools used in managing digital projects.

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2. **LinkedIn Learning** – Provides a variety of courses on digital project management, from beginner to advanced levels, focusing on agile methodologies, collaboration tools, and leadership skills.
 3. **edX** – Features courses such as "Project Management for Beginners" and "Managing Digital Transformation," offering practical guidance for handling digital projects.

Websites and Blogs:

1. **ProjectManagement.com** – A hub for project managers that provides articles, webinars, and resources on topics ranging from agile project management to risk management in digital projects.
2. **PMI (Project Management Institute)** – Offers tools, certifications, and research on best practices in digital and traditional project management. Their blog is an excellent resource for insights into the evolving field of digital project management.

These resources will help you stay up-to-date on methodologies, tools, and strategies, ensuring you continue to thrive in the dynamic field of digital project management.

5 SOFTWARE PROFICIENCY

5.1 Introduction

The process of becoming proficient in software can be challenging, especially for novices who are just starting out. However, with the right guidance, resources, and support, anyone can **develop the skills and knowledge** needed to become proficient in software. To find out how it can be done, we need to explore various aspects of software proficiency, including the challenges of learning new software and the benefits of becoming proficient in software. There are 4 steps to be done:

- ❑ **Having a growth mindset** - By embracing a growth mindset, we can overcome obstacles and setbacks and continue to improve our skills and knowledge.
- ❑ **the role of Information Technology Qualification (ITQ) in supporting learners** – it provides a range of resources and training opportunities that can help learners develop the skills and knowledge needed to become proficient in software. (*Online courses, workshops, one-on-one coaching, etc*)
- ❑ **personal benefits**: enhance *your problem-solving skills* which can lead to *increased job satisfaction and financial rewards*;
- ❑ **ongoing process**: by embracing this mindset and continuing to seek out *new learning opportunities*, you can stay up-to-date with the latest trends and developments in software and continue to grow and develop your skills over time.

5.2 Theory

In today's digital world, proficiency in software usage has become an essential skill for everyone. From students to professionals, everyone is expected to have a certain level of knowledge in various software programs. For instance, proficiency in Microsoft Office Suite is now a requirement for many job positions. Similarly, graphic designers and video editors need to have expertise in Adobe Photoshop, Illustrator, and Premiere Pro. In addition, *software proficiency* has become a necessity for remote working and distance learning. With the increasing reliance on technology, it is crucial to have a solid understanding of *software applications* to ensure productivity, efficiency, and success.

To attain *software proficiency*, a person needs to have a clear understanding of the software's features, functions, and capabilities. This includes knowing how to navigate *the software interface*, *understanding the different menus and commands*, and *learning how to use the software's tools*. Additionally, it is essential to understand the software's purpose and how it can be applied to different tasks and projects.

It is important to examine how software proficiency can benefit individuals and organizations, discuss the challenges faced by beginners, and provide insights on how to navigate software proficiency effectively.

1. **The Benefits of Software Proficiency:**

- Increased productivity and efficiency
- Improved job prospects and career growth
- Enhanced creativity and innovation
- Better communication and collaboration within teams
- Cost-saving and time-saving benefits for organizations

2. **Challenges Faced by Beginners:**

- Overwhelming software interfaces
- Complex terminology and jargon
- Difficulty in understanding features and functions
- No clear understanding of the software's purpose and application

3. **Navigating Software Proficiency Effectively:**

- Taking online courses and tutorials
- Seeking help from experts and peers
- Practicing regularly and experimenting with different features
- Breaking down complex *tasks* into smaller, manageable steps
- Learning from mistakes and seeking feedback

For example, a graphic designer who is proficient in Adobe Photoshop can create visually appealing designs in less time, resulting in increased productivity and creativity. Similarly, a project manager who is proficient in Microsoft Excel can easily manage and analyze data, resulting in better decision-making and cost-saving for the organization.

Software proficiency is an essential skill that can benefit individuals and organizations in various ways. By understanding the software's features, functions, and purpose, and by adopting effective learning strategies, anyone can navigate *software proficiency* and become a pro.

When it comes to building *software proficiency*, we all have to start somewhere. Whether you are a novice who is just getting started, or a seasoned professional who is looking to expand your skill set, there are always challenges that you will need to overcome. In fact, the challenges that you face will likely be different depending on your level of experience, the software that you are working with, and the specific goals that you are trying to achieve. Some common challenges that people face when building software proficiency include:

1. **Learning the basics:** For many people, the biggest challenge in building software proficiency is simply learning the basics. This can include things like understanding the user interface, navigating menus and toolbars, and figuring out how to perform basic tasks. One way to overcome this challenge is to start with tutorials or online courses that cover the basics of the software.

2. **Keeping up with updates:** Software is constantly changing, with new updates and features being released all the time. This can make it difficult to keep up with changes to the software and ensure that you are using the latest and greatest features. To overcome this challenge, it is important to stay up-to-date with the latest news and updates from the software provider.

3. **Dealing with complexity:** Some software can be quite complex, with a steep learning curve that can be difficult to overcome. This is especially true for software that is designed for specific professional fields, such as graphic design or video editing. To overcome this challenge, it can be helpful to break down complex tasks into smaller, more manageable steps.

4. **Finding time to practice:** Building software proficiency takes time and practice, but finding time to practice can be a challenge for many people. This is especially true for those who are trying to balance work, family, and other commitments. To overcome this challenge, it can be helpful to set aside dedicated time each day or week to practice using the software.

5. **Troubleshooting issues:** No matter how proficient you become with software, there will always be issues that arise from time to time. This can include everything from software bugs to hardware issues. To overcome this challenge, it is important to have a troubleshooting plan in place and to know where to turn for help when you need it.

Building software proficiency can be a challenging but rewarding process. By understanding the common challenges that people face and developing strategies to overcome them, you can build the skills and knowledge that you need to become software pro.

5.3 How to apply

When it comes to software proficiency, there are several frameworks that can be used to measure an individual's skills and knowledge. One of the most popular and widely recognized frameworks is the ITQ Framework. The ITQ Framework is a comprehensive set of standards that is designed to provide a clear and concise method for assessing an individual's proficiency in various software applications. The framework is divided into several levels, each of which corresponds to a specific set of skills and knowledge. The levels range from basic to advanced and cover a wide range of software applications, including word processing, spreadsheets, databases, and graphic design.

To understand the ITQ Framework in more detail, here are some key points to consider:

- Levels of proficiency:** The ITQ Framework is divided into five levels, with each level corresponding to a specific set of skills and knowledge. The levels are as follows: Entry Level, Level 1, Level 2, Level 3, and Level 4. Each level builds upon the skills and knowledge gained in *the previous level*, with *Level 4* being the most advanced.
- Skill areas:** The ITQ Framework covers a wide range of skill areas, including word processing, spreadsheets, databases, desktop publishing, presentations, and graphic design. Each level focuses on a specific set of skills and knowledge related to these areas.
- Assessment:** The ITQ Framework provides a standardized method for assessing an individual's proficiency in various software applications. The assessment process involves a series of tasks and assignments that are designed to test the individual's skills and knowledge in each level.
- Benefits:** The ITQ Framework provides several benefits to both individuals and organizations. For individuals, the framework provides a clear and concise method for measuring their proficiency in various software applications. This can help them identify areas where they need to improve and develop a plan for enhancing their skills. For organizations, the framework provides a standardized method for assessing the skills and knowledge of their employees, which can help them identify areas where training is needed and improve overall productivity.
- Examples:** To illustrate the ITQ Framework in action, consider the following examples. An individual at Level 1 should be able to create basic spreadsheets and use basic formulas in Excel. An individual at Level 3 should be able to create complex databases and use advanced features in Access. An individual at Level 4 should be able to create professional-quality graphic designs using Adobe Photoshop or Illustrator.

Overall, the ITQ Framework is a valuable tool for measuring software proficiency. By understanding the levels and skills covered by the framework, individuals and organizations

can develop a clear plan for improving their skills and knowledge in various software applications.

The European e-Competence Framework (e-CF)¹ aims at standardizing the ICT professionals' competencies within the European Union. It has 40 reference competencies and five e-CF areas (PLAN – BUILD – RUN – ENABLE – MANAGE). The European e-Competence Framework (e-CF) was established as a tool to support mutual understanding and provide transparency of language through the articulation of competences required and deployed by ICT professionals (including both practitioners and managers).

5.4 Additional reading materials for ongoing learning and support:

- European E-Competences Framework 3.0 (2014) -
https://www.aicanet.it/documents/10776/141330/European-e-Competence-Framework-3.0_CEN_CWA_16234-1_2014.pdf/408848f2-a045-4c88-999f-1d7280d12ee8
- Online course 'European e-competence Framework for SMEs' -
<https://www.digitalsme.eu/online-course-european-e-competence-framework-for-smes/>
- 11 Basic Computers Skills You need to know: A beginners' Guide -
<https://blog.udemy.com/basic-computer-skills>

¹ https://www.aicanet.it/documents/10776/141330/European-e-Competence-Framework-3.0_CEN_CWA_16234-1_2014.pdf/408848f2-a045-4c88-999f-1d7280d12ee8

6 CYBERSECURITY AWARENESS

6.1 Introduction

As technology continues to permeate every aspect of daily life, young people are among the most frequent users of digital platforms. However, with increased online engagement comes heightened exposure to cyber threats such as identity theft, cyberbullying, and phishing attacks. Cybersecurity awareness among youth has therefore become a critical focus in educating the next generation on how to navigate the digital world safely. Adolescents, who are often more adept at using technology but less informed about potential online dangers, are especially vulnerable to cyber risks (Johnson & Roberts, 2021). Research suggests that the majority of cyberattacks targeting young people are a result of their insufficient understanding of cybersecurity practices and their tendency to engage in risky online behavior (Keller & Thompson, 2020). Studies have shown that young people often overlook basic security measures, due to a lack of awareness and education (Sharma, 2022). As digital natives, they may assume that the internet is inherently safe, which heightens their susceptibility to online threats. Raising cybersecurity awareness among youth is not only essential for individual protection but also for building a safer online community. By incorporating cybersecurity education into school curricula and offering accessible online resources, young people can be equipped with the skills needed to safeguard their personal information and navigate the internet responsibly.



Source: freepic.com

6.2 Theory

Cybersecurity theory is an evolving field that encompasses a range of approaches, from technological measures to behavioural aspects, aimed at safeguarding individuals, organizations, and society against digital threats. The theory of cybersecurity, particularly in the context of youth, recognizes that technological solutions alone are not sufficient to mitigate risks; instead, comprehensive education and behavioural change are essential. Understanding the theory of cybersecurity, especially in relation to youth, involves exploring the intersection of knowledge, behaviour, technology, and the socio-cultural influences that shape how young people engage with digital environments.

Social Cognitive Theory and Cybersecurity Awareness in Youth

The Social Cognitive Theory (SCT), proposed by Albert Bandura, provides a framework for understanding how youth can develop cybersecurity awareness and engage in safe online behaviours. SCT emphasizes the role of observational learning, imitation, and modelling in behaviour acquisition. According to Bandura (1986), individuals, particularly youth, learn by observing the behaviours of others and imitating these actions, especially when those behaviours are reinforced or praised. In the context of cybersecurity, youth often learn security practices from peers, family members, or educators. Therefore, modelling secure online behaviours and providing positive reinforcement can be powerful tools in fostering a culture of cybersecurity awareness. Bandura's concept of self-efficacy, the belief in one's ability to execute behaviours to achieve desired outcomes, is also essential in cybersecurity education for youth. Youth must feel confident that they can protect their personal data, recognize phishing schemes, and respond appropriately to suspicious online activity. According to Bandura, self-efficacy influences how individuals approach tasks, how much effort they put into them, and how persistent they are in overcoming challenges. For young people to adopt secure online behaviours, they must believe they are capable of identifying and avoiding potential risks. This belief can be developed through education that provides them with both the knowledge and practical skills to feel capable in managing their online security.

The Protection Motivation Theory (PMT) and Cybersecurity Behaviour

Another important theory that can be applied to understanding cybersecurity awareness among youth is the Protection Motivation Theory (PMT), developed by Rogers (1975). The PMT suggests that individuals take protective actions based on their assessment of a threat's severity, their perceived vulnerability to the threat, the perceived benefits of protective actions, and the costs or barriers associated with taking those actions. When applied to youth and cybersecurity, the PMT suggests that young people are more likely to engage in safe online behaviours if they perceive the threats (e.g., identity theft, cyberbullying, or online harassment) as severe, recognize their vulnerability to these threats, and understand the benefits of taking protective actions, such as using privacy settings, applying software

updates, or avoiding risky online behaviours. The PMT also highlights that, for youth, cybersecurity education should focus not just on raising awareness of cyber threats but also on motivating young individuals to act. For example, when youth understand the severe consequences of sharing personal information with strangers online or the risks of downloading unverified apps, they are more likely to adopt protective behaviours like strengthening their privacy settings or using strong passwords.

The **Theory of Planned Behavior** (TPB) (Ajzen, 1991) also informs cybersecurity awareness efforts by suggesting that behavior is influenced by an individual's attitudes, subjective norms, and perceived control over the behavior. In the cybersecurity context, the theory implies that promoting positive attitudes toward security practices, shaping norms that prioritize online safety, and enhancing individuals' perceptions of their ability to implement security measures (e.g., strong password practices or recognizing phishing attempts) can lead to better adherence to cybersecurity protocols. For example, cybersecurity awareness campaigns that focus on demonstrating the ease and importance of secure practices, such as regular software updates or multi-factor authentication, are more likely to influence individuals' intentions to adopt these behaviors.

6.3 How to apply

According to a report by Johnson and Roberts (2021), many youths are more likely to engage in risky digital behaviour because they do not understand the long-term consequences of cyber threats such as identity theft or data breaches. Educating youth about cybersecurity and teaching them the best practices is vital to mitigate these risks. This section discusses practical tips and tricks that young individuals can use to protect themselves online, along with examples of how these practices can be implemented.



Source: freepic.com

1. Use Strong, Unique Passwords

One of the most fundamental yet often overlooked practices in cybersecurity is the use of strong passwords. Many young users tend to use simple passwords, such as their names, birth dates, or easy-to-guess sequences like "12345." However, these types of passwords are highly vulnerable to hacking attempts. A strong password typically includes a mix of uppercase and lowercase letters, numbers, and special characters. Additionally, using a different password for each online account ensures that if one password is compromised, the others remain secure.

Practical Tip:

- ✓ Use a password manager to generate and store complex, unique passwords for each account.
- ✓ Many password managers, such as [LastPass](#) and [Dashlane](#), are free and easy to use, and they help young users avoid the risk of password reuse.
- ✓ For example, a strong password for an email account could look like "C7r!tD9wL@p."

2. Enable Two-Factor Authentication (2FA)

Two-factor authentication (2FA) is one of the most effective ways to add an extra layer of security to online accounts. By requiring both a password and an additional form of verification, such as a code sent to a phone or an authentication app, 2FA makes it significantly harder for cybercriminals to access accounts.

Practical Tip:

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- ✓ Enable 2FA on all accounts that offer it, particularly social media accounts, email, and gaming platforms.
 - ✓ Platforms like **Instagram**, **Facebook**, and **Gmail** offer 2FA as a free feature.
 - ✓ Enabling this feature ensures that even if someone knows your password, they will still need the second factor to gain access to your account (Sharma, 2022).

3. Be Cautious About Personal Information

One of the most common cybersecurity risks young people face is oversharing personal information online. Many youth freely share their location, date of birth, or other personal details on social media platforms, without realizing that this can expose them to identity theft or cyberbullying. Cybercriminals can use publicly available personal information to impersonate the individual, trick them into revealing more sensitive data, or commit fraud. Limiting access to personal information reduces the chances of falling victim to online scams or harassment (Keller & Thompson, 2020).

Practical Tip:

- ✓ Be mindful of what you post online.
- ✓ Adjust privacy settings on social media platforms.
- ✓ On platforms like **Instagram**, **TikTok**, and **Facebook**, users can restrict who sees their posts, who can comment, and who can send direct messages.

4. Recognize and Avoid Phishing Scams

Phishing attacks, in which cybercriminals impersonate legitimate institutions to steal personal information, are one of the most prevalent threats online. These scams are often disguised as emails, messages, or pop-up ads that ask users to click a link and provide sensitive information, such as passwords or credit card numbers.

Practical Tip:

- ✓ Be trained to recognize phishing attempts by being skeptical of unsolicited messages that ask for personal information. A common example would be *an email from a "bank"* requesting account details. Before clicking any link or downloading any attachments, youth should carefully check the sender's email address and ensure it matches the official address of the institution.
- ✓ Hovering over links without clicking on them can reveal whether they lead to legitimate websites.

5. Regular Software Updates

Keeping software, operating systems, and applications up-to-date is an essential cybersecurity practice. Updates often contain security patches that address vulnerabilities that could be exploited by hackers. Many young people tend to postpone or ignore software updates, which can leave their devices susceptible to attacks.

Practical Tip:

- ✓ Turn on automatic updates for their devices, operating systems, and apps.
- ✓ On both **Android** and **iOS** devices, users can enable automatic app updates in the settings. This ensures that their software remains secure without having to remember to manually update them.

6. Use Secure Wi-Fi Networks

Public Wi-Fi networks, such as those found in coffee shops or libraries, are convenient but can also expose users to cyberattacks. Cybercriminals often set up fake Wi-Fi hotspots with names similar to legitimate networks, allowing them to intercept data sent by users who connect to them.

Practical Tip:

- ✓ Avoid connecting to unsecured Wi-Fi networks, especially when accessing sensitive accounts or entering passwords.
- ✓ If you must use public Wi-Fi, using a **Virtual Private Network (VPN)** is a good practice. A VPN encrypts internet traffic, ensuring that data remains secure even on untrusted networks.

7. Be Aware of Cyberbullying and Online Harassment

Cyberbullying is a serious issue among youth, with devastating emotional and psychological consequences. It often occurs on social media platforms, gaming forums, or messaging apps. Understanding how to protect against and report cyberbullying is essential for young people.

Practical Tip:

- ✓ Be educated to use privacy settings to limit who can contact you or comment on your posts.
- ✓ Many platforms also provide tools to report and block users who engage in cyberbullying.
- ✓ On Instagram, users can restrict certain accounts without notifying them, preventing bullying behaviour without causing further conflict.

-
- ✓ Always and immediately report cyberbullying to trusted adults, such as parents, teachers, or school counsellors in order to ensure not only your safety and well-being, but also that of your friends and family members.

8. Educate About Digital Footprint

A digital footprint refers to the trail of data left behind by a person’s online activities. Youth should understand that everything they post online—whether on social media, forums, or blogs—can remain accessible to others, even if deleted later.

Practical Tip:

- ✓ Think before posting or sharing content. Once something is posted online, it is often impossible to completely remove it.
- ✓ A strong digital footprint can help build a positive online reputation, while a careless one can lead to unwanted consequences in the future, including college admissions or job opportunities.

Cybersecurity is a vital skill for today’s youth to develop in order to navigate the digital world safely. By implementing best practices such as using strong, unique passwords, enabling two-factor authentication, being cautious about sharing personal information, recognizing phishing scams, and keeping software updated, young people can significantly reduce their exposure to cyber threats. Furthermore, educating youth about the risks of cyberbullying, the importance of managing their digital footprint, and using secure Wi-Fi networks is essential in fostering a safer online environment. As technology continues to evolve, ongoing education and vigilance will ensure that youth are better equipped to protect themselves in the digital world.

6.4 Additional reading materials for ongoing learning and support



designed by  freepik

1. "Cybersecurity for Kids: Protecting Your Digital Life" by the Federal Trade Commission (FTC), <https://consumer.ftc.gov/identity-theft-and-online-security/protecting-kids-online>
2. "Youth and Digital Privacy: Understanding the Risks and Protections" by the Cyberbullying Research Center; <https://cyberbullying.org/>
3. Zhu, C., Huang, S., Evans, R., & Zhang, W. (2021). Cyberbullying among adolescents and children: a comprehensive review of the global situation, risk factors, and preventive measures. *Frontiers in public health*, 9, 634909.

7 YOUTH DEVELOPMENT PRINCIPLES

7.1 Introduction

An exploration of key principles and practices in youth development

Youth development principles provide a foundational framework aimed at guiding the holistic growth and empowerment of young people. These principles are rooted in a strengths-based approach that acknowledges and builds on the unique assets and capabilities of each individual. Central to youth development is the understanding that young people flourish when they are nurtured within safe, supportive, and inclusive environments. By fostering positive relationships with mentors, peers, and the wider community, youth are encouraged to develop self-confidence, resilience, and a strong sense of identity.

A key aspect of youth development is creating opportunities for meaningful participation and engagement. This means that young people are not merely passive recipients of support but active contributors who have a voice in shaping programs and decisions that affect their lives. Through involvement in leadership roles, collaborative projects, and decision-making processes, youth learn critical skills such as problem-solving, communication, and teamwork. Such experiences not only enhance their personal development but also inspire them to contribute positively to society.

Furthermore, youth development principles emphasize the importance of fostering life skills and competencies that prepare young people for the challenges and opportunities of adulthood. Programs guided by these principles often focus on areas such as academic support, social-emotional learning, career readiness, and community service. This comprehensive approach ensures that youth are equipped to handle adversity, pursue their goals, and develop a lifelong commitment to learning and growth.

Ultimately, youth development principles serve as a roadmap for cultivating environments where young people can thrive and achieve their fullest potential. By prioritizing safety, supportive relationships, skill-building, and active participation, these principles guide the creation of programs and initiatives that empower youth to become confident, capable, and engaged members of their communities. This approach not only benefits the individual but strengthens the social fabric by fostering a generation of empowered, proactive, and resilient leaders.

7.2 Theory

Youth development principles are grounded in theoretical frameworks that emphasize the holistic growth and empowerment of young people. These principles are often informed by positive youth development (PYD) theory, which focuses on nurturing the inherent strengths and potential within youth rather than merely addressing deficits. At the heart of PYD theory is the belief that all young people have the capacity for growth and success when provided with the right support and opportunities.

A core aspect of youth development theory is the importance of creating environments that are safe, supportive, and inclusive. Developmental systems theory highlights that youth are influenced by various contexts, such as families, schools, and communities. Therefore, fostering a sense of belonging and safety across these environments is essential for their well-being and positive development. This aligns with Bronfenbrenner's ecological systems theory, which underscores the interplay between individuals and their surroundings.

Youth development principles also incorporate social learning theories, which posit that young people learn through observation, modeling, and interaction. Mentorship plays a significant role in this context, as trusted mentors provide guidance, model positive behavior, and offer reinforcement. This helps youth build resilience, self-confidence, and social-emotional competencies.

Another theoretical component is the concept of youth agency, which is central to developmental theories emphasizing autonomy and empowerment. Programs that integrate youth voice and leadership tap into self-determination theory, which asserts that autonomy, competence, and relatedness are key to intrinsic motivation. When young people are involved in decision-making processes and leadership roles, they develop critical thinking, problem-solving, and collaborative skills, reinforcing their sense of control and ownership over their development.

The application of these theories often involves experiential learning, where youth engage in real-world activities that allow them to practice and develop new skills. This is informed by constructivist learning theories, which advocate for active, hands-on learning as a means of fostering deeper understanding and retention. Through opportunities such as internships, community projects, and volunteerism, youth translate theoretical knowledge into practice, preparing them for future challenges and roles in society.

Evaluation and continuous feedback loops are also crucial to youth development theory. This practice reflects principles from systems thinking, which emphasizes adaptive strategies and continuous improvement. By assessing outcomes and gathering feedback,

programs can refine their approaches to better meet the needs of youth and maintain effectiveness.

In summary, youth development principles are informed by a blend of theories that include PYD, ecological systems theory, social learning, and self-determination. Together, these frameworks underscore the importance of supportive environments, mentorship, youth participation, skill-building, and ongoing evaluation. When effectively applied, these principles help young people develop resilience, competence, and a strong sense of agency, enabling them to thrive and contribute positively to their communities.

7.3 How to apply

Applying youth development principles involves strategic and multifaceted actions that create nurturing environments and impactful opportunities for young people to flourish. This process begins with establishing safe, supportive, and inclusive spaces where youth feel valued and respected. Organizations and communities can foster such environments by implementing policies that ensure physical and emotional safety, promote cultural competence, and uphold zero tolerance for discrimination. Creating a positive atmosphere helps young people develop a sense of trust and belonging, which is essential for their growth.

Mentorship is a cornerstone of effective youth development application. Engaging committed mentors who can build strong, trusting relationships with youth is crucial for fostering resilience, self-confidence, and motivation. Mentors should be trained to use active listening, provide constructive and empathetic feedback, and encourage youth to take initiative in their personal development. By modeling positive behaviors and offering consistent support, mentors become reliable guides who help youth navigate challenges and celebrate achievements.

To truly apply youth development principles, programs must integrate youth voice and leadership into their core operations. This means involving young people in decision-making

processes that impact their lives, such as serving on youth advisory boards, participating in participatory planning sessions, or contributing to program design and evaluation. When youth are empowered to express their ideas and perspectives, they build critical skills in leadership, problem-solving, and collaboration. This sense of agency reinforces their self-efficacy and encourages active participation in their development.

Skill-building and experiential learning are also fundamental in the application of youth development principles. Programs should include workshops, training sessions, and

projects that focus on academic achievement, career readiness, and social-emotional learning. Activities that simulate real-world challenges, such as internships, apprenticeships, or hands-on community projects, enable youth to apply learned skills in practical settings. Additionally, offering opportunities for community service and civic engagement nurtures a sense of social responsibility and belonging, inspiring youth to contribute positively to society.

Continuous monitoring and evaluation are essential for ensuring that youth development programs remain effective and impactful. Collecting regular feedback from youth participants and stakeholders, as well as assessing measurable outcomes, helps program leaders refine strategies and maintain relevance. Evaluations highlight successful practices and identify areas for improvement, leading to more adaptive and responsive programs.

Furthermore, partnerships with families, schools, and community organizations strengthen the application of youth development principles. Collaborative efforts ensure that youth receive consistent support across various aspects of their lives, reinforcing lessons learned and promoting cohesive growth. These partnerships can involve joint workshops, resource sharing, and coordinated support systems to address the diverse needs of youth.

By integrating safe and supportive environments, mentorship, youth leadership, skill-building, continuous evaluation, and strong partnerships, youth development principles can be effectively applied to maximize the potential of young people. This holistic and strategic approach equips youth to overcome challenges, embrace opportunities, and grow into confident, resilient, and engaged members of their communities. The collective impact of these efforts benefits not only the individuals involved but also enriches the community by fostering a generation of capable, proactive, and socially responsible leaders.

7.4 Additional reading materials for ongoing learning and support

1. Books and Academic Texts:

- *Positive Youth Development: Theory, Research, and Applications* edited by Richard M. Lerner provides a comprehensive exploration of PYD theory and its practical applications.
- *The Ecology of Human Development* by Urie Bronfenbrenner offers foundational insights into ecological systems theory and its relevance to youth development.
- *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness* by Richard M. Ryan and Edward L. Deci delves into the importance of autonomy, competence, and relatedness.

2. Research Articles and Journals:

- Articles from the *Journal of Youth Development* cover empirical studies, reviews, and practical guidance related to youth programs and best practices.
- *Child Development* journal includes peer-reviewed articles that span a range of theories impacting youth development.

3. Online Resources and Organizations:

- The *Search Institute* website provides research-based insights and resources focused on developmental relationships and asset-building strategies.
- The *Center for the Study of Social Policy* (CSSP) offers practical tools and frameworks to create youth-friendly environments.
- The *Youth.gov* portal contains comprehensive information and toolkits on youth engagement, mentorship, and program development.

4. Workshops and Professional Development:

- Organizations like the *National Youth Development Agency* and *4-H* provide workshops, webinars, and courses designed to equip practitioners with the skills to apply youth development principles effectively.
- Professional conferences, such as the *American Youth Policy Forum*, provide networking opportunities and up-to-date discussions on youth development policy and practices.

5. Community-Based Initiatives and Case Studies:

- Reviewing case studies from successful programs such as *Big Brothers Big Sisters* or *Boys & Girls Clubs of America* can offer insights into real-world application and best practices.
- Engaging with local community centers and non-profits that publish reports on their outcomes and lessons learned can also provide valuable perspectives.

These resources will support continuous learning and help deepen understanding and practical implementation of youth development principles. They empower educators, practitioners, and policymakers to create more effective and impactful youth development strategies.

8 MENTORING AND GUIDANCE

8.1 Introduction

Mentoring is a concept that has a long history. One of the earliest examples is the relationship between Socrates and his pupil Plato. A less profound example might be the relationship between the comic characters, Batman and Robin.

The contexts in which mentoring occurs have varied including; education, for example, using older pupils as mentors for younger ones; sports; music; literature; and, importantly for this study, work with troubled young people.

Mentoring is not a strictly defined term and included in the definition of mentoring are the following: a relationship usually between an older and younger person, a relationship which is based on acceptance and support, a relationship which aims to assist and foster the potential of the younger partner, which avoids attempts to minimize the unhelpful aspects of a power differential, is relatively long-term as opposed to temporary, is non-expert or overtly therapeutic in that change is a hoped for outcome, but is regarded as a desired by-product of the relationship rather than the relationship being shaped by pre-defined goals for change. An alternative definition of mentoring is far more restrictive. Business mentors and mentors as encouraged by some schools often aim for very clear and specific outcomes, such as encouraging an up-and coming executive to achieve the next stage in their career development, or maintaining a pupil's interest in school through to external examinations.

An important aspect of mentoring is that it offers the opportunity to have positive role models; it has therapeutic as well as practical outcomes; it can foster resilience. The relationship between mentor and mentee could foster self-esteem and build a reservoir of success and positive experience that the young person could refer back to when faced by inevitable problems in their lives.

8.2 Theory

Mentoring is time-proven strategy that can help young people of all circumstances achieve their potential. Mentors are caring individuals who, along with parents or guardians, provide young people with support, counsel, friendship, reinforcement and a constructive example. But mentoring is not a one-size-fits-all proposition. Every young person who would benefit from a mentoring relationship has individual needs. Effective mentoring programs offer enough flexibility to help meet each mentee's personal needs, yet allow mentoring relationships to flourish within a safe structure.

The most significant predictor of positive mentoring results is whether mentors and mentees share a close, trusting relationship. Such relationships do not just happen. They need ongoing support and monitoring, particularly during the early stages, to ensure that the relationships do not terminate prematurely. When the tool of change is a close relationship—as is the case with mentoring—everyone should proceed with care.

There are four program practices that are essential for strong and effective mentoring relationships as follows:

- Conducting reasonably intensive screening of potential mentors;
- Making matches based on interests that both the mentor and the mentee share;
- Providing an intensive training for mentors;
- Offering post-match training and support.

But there are other ways mentors can sustain effective mentoring relationships:

- Maintain a steady presence in the mentee’s life. That means showing up for scheduled meetings or, when that is not possible, telling the mentee in advance, in order to avoid any disappointment. A phone call, e-mail or fax can help when a face-to-face meeting isn’t possible.
- Focus on the mentee’s needs—not the mentor’s own wants and needs. Mentors should look to improve the mentee’s prospects while respecting the young person’s life circumstances and perspective. This includes not trying to transform the mentee or impose the mentor’s own values on the mentee.
- Pay attention to the mentee’s need for fun.
- Get to know the mentee’s family without getting over involved. Mentors need to understand that they are not substitutes for parents. • Seek out and use the help and support of mentoring program staff.

THE FIVE TYPES OF MENTORING

1. **Traditional One-to-One Mentoring.** One-to-one mentoring places one adult in a relationship with one youth. At a minimum, the mentor and mentee should meet regularly at least four hours per month for at least a year. There are exceptions—such as in school-based mentoring, which coincides with the school year—and other types of special mentoring initiatives.
2. **Group Mentoring.** Group mentoring involves one adult mentor forming a relationship with a group of up to four young people. The mentor assumes the role of leader and makes a commitment to meet regularly with the group over a long period of time. Some group mentoring activities may be intended as teaching exercises, while others may simply be for fun.

3. **Team Mentoring.** Team mentoring involves several adults working with small groups of young people, with an adult-to-youth ratio no greater than one to four.
4. **Peer Mentoring.** Peer mentoring provides an opportunity for a caring youth to develop a guiding, teaching relationship with a younger person. Usually the mentoring program specifies activities that are curriculum-based. For example, a high school student might tutor an elementary school student in reading or engage in other skill-building activities on site. These youth mentors serve as positive role models. They require ongoing support and close supervision. Usually in a peer mentoring relationship, the mentor and the mentee meet frequently over the course of a semester or an entire school year.
5. **E-mentoring** (also known as online mentoring or tele-mentoring). E-mentoring connects one adult with one youth. The pair communicates via the Internet at least once a week over a period of six months to a year. Some programs arrange two or three face-to-face meetings, one of which is a kickoff event. Often the mentor serves as a guide or advisor in school- or career-related areas; for example, helping the mentee complete a school project or discussing future education and career options.

4 STEPS TO APPLY A MENTORING PROGRAM

1. **Program Design and Planning.** This is the first—and the key—element in building your program, because the design is the blueprint you will follow to carry out all other aspects of the program.

When you have completed the design and planning, you will have made the following decisions:

- The youth population you will serve, the type of mentoring your program will offer and the nature of the mentoring sessions;
- The types of individuals you will recruit as mentors (e.g., senior citizens, corporate employees, college students);
- Your program goals and expected outcomes for mentors, mentees and sponsoring organizations;
- When and how often mentors and mentees will meet;
- How long you expect mentoring matches to endure;
- The purposes of your mentoring program (e.g., socialization, academic support, job/career guidance);
- The setting of your mentoring program (e.g., faith-based site, community organization, school/university, workplace);
- The program's stakeholders;
- How to promote your program;

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- The best way to evaluate the progress and success of your program;
 - A protocol to ensure that your program staffs regularly contact mentors and mentees to discuss how their relationships are going.
2. **Program Management.** Ensuring that your mentoring program is well managed is crucial. A well-managed program promotes accuracy and efficiency; establishes credibility; and enables you to gauge progress effectively and identify areas that need improvement. You will build a solid plan for managing your program if you follow one that includes the following elements:
- An advisory group;
 - A comprehensive system for managing program information;
 - A resource development plan that allows for diversified fundraising;
 - A system to monitor the program;
 - Strategies for staff development;
 - Strong pro-mentoring advocacy efforts in both the public and private sectors;
 - Effective public relations and communications efforts.
3. **Program Operations.** Efficient, consistent everyday operations are important to the success of any mentoring program. How well the people involved in your program fulfill their responsibilities can mean the difference between chaos and stability, confusion and clear-cut expectations, motivation and passivity:
- Recruiting mentors, mentees and other volunteers;
 - Screening potential mentors and mentees;
 - Providing orientation and training for mentors, mentees and parents/caregivers; • Matching mentors and mentees;
 - Bringing mentors and mentees together for activities and sessions that fall within established program parameters;
 - Supporting, supervising and monitoring mentoring relationships;
 - Recognizing the contributions of all program participants; and
 - Helping mentors and mentees reach closure.
4. **Program Evaluation.** Ongoing quality improvement is a hallmark of effective mentoring programs. How well you serve young people depends on how accurately you assess your program's success and identify areas that need improvement.
- A plan to measure your program process accurately;
 - A process for measuring whether expected outcomes have occurred;
 - A process that reflects on evaluation findings and disseminates them to appropriate parties.

The most successful mentoring strategies are rooted in **genuine care, patience, and adaptability**. Regular communication, mutual respect, and a focus on the mentee's unique journey ensure a lasting, positive impact.

8.3 How to apply

A mentoring activity is the provision of personal support, assistance, encouragement and inspiration to young people during and following a program, particularly at a time of transition usually and over a sustained period of time.

4 STEPS to BUILD a MENTORING PROGRAM

a. **CREATE a MENTORING AGREEMENT**. Set out the 'rules' for the mentoring relationship.

b. **SET the GOALS of the PROGRAM**. Supporting a young person to set their own goals is a vital part of a mentoring relationship. The goals identified should be a mixture of short term and longer-term goals. They could also focus on soft skills such as motivation and confidence, as well as more tangible hard results such as achieving employment. Goals may change after each month, if new goals are identified or amended. Goals set should be SMART (Specific, Measurable, Achievable, Realistic and Time-Specific).

c. **DESIGN a PERSONAL DEVELOPMENT PLAN**. It is designed to be completed by parties, the mentees and the mentors at agreed stages. This document allows the mentor and young person the opportunity to:

- Reflect on progress which has been made since the previous meeting
- Record any actions which come out of the meeting
- Add further comments (you may wish to highlight any important developments or concerns you have)
- Highlight any positive outcomes or steps taken by the mentee since their last report
- It also offers the opportunity for the mentor and young person to reflect on any improvement in 'soft skills' such as communication or confidence.

It includes a *1st report* what should be completed on the second or third mentoring session. Also, there is a *2nd report* – an intermediary one: this should be completed after several meetings to allow for reflection. A *final report* to end the relationship if development is no longer happening or a positive outcome has been achieved.

The PDL allows the mentor and young person the opportunity to:

- Reflect on progress which has been made since the previous meeting

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- Record any actions which come out of the meeting
 - Add further comments (you may wish to highlight any important developments or concerns you have)
 - Highlight any positive outcomes or steps taken by the mentee since their last report
 - It also offers the opportunity for the mentor and young person to reflect on any improvement in 'soft skills' such as communication or confidence.

Reports allow mentors to identify themes around the support our young people need in this kind of relationship, which can impact the training they provide and the resources that each organization / school / center develop. On a more practical level, reports enable mentors to track the impact that a mentoring relationship is having on a young person.

The *impacts of not reporting* can be far reaching and may lead to:

- The Trust not knowing the current status of each of our young people – are they being effectively supported or not?
- The increased likelihood that our young people's businesses will fail because they have not been given timely and appropriate support (applicable to the Enterprise Program only)
- program and volunteer staff being rendered ineffectual through lack of information and therefore unable to provide full support to our young people
- An inability to achieve an improvement in our performance year on year
- A significantly reduced ability to bid for funding due to the lack of supporting evidence
- Serious implications with funding if we are unable to demonstrate positive outcomes with clients through mentor contact
- The effectiveness of the mentor process being impossible to assess

d. CELEBRATING AND ENDING A MENTORING RELATION

All mentoring relationships have to come to an end eventually.

For business mentors and young people, the expected duration is around two years with an optional third year. For other mentors and young people, the expected duration is six months with an optional further six months.

As a mentoring relationship comes to an end, mentors and young people should prepare themselves accordingly, with careful plans to allow a winding down process. It is at this point that having established professional boundaries will serve both mentors and young people well.

As a mentor, if you and the young person feel that they still need some support, you may wish to use your last meetings together to direct them to The Trust or other bodies that can provide ongoing support.

- **Acknowledge** – acknowledge the change early and discuss it together.
- **Prepare** – review the goals that you have been working towards and discuss what you hope to achieve before the mentoring relationship ends. Set up additional sources of support if required.
- **Recognize achievements** – endings are a great way of defining and celebrating the achievements of the relationship. Mentor reports and record sheets can be used to look back at how the young person has progressed.
- **Celebrate your achievements** – think about nominating young people for the Celebrate Success Awards.
- **Review and evaluate** – identify the lessons that have been learned and what’s changed over the period of your mentoring relationship. Review the Personal Development Plan (if you have used one) to measure the progress that the young person has made.
- **Future friendship** – you may wish to stay in contact with each other on your own behalf. This would not be within the terms of program or the volunteer role and is your own personal choice.

8.4 Additional reading materials for ongoing learning and support

- Mentor Canada, 2023, *TipSheet*, <https://mentorcanada.ca/sites/default/files/2023-12/MM2024%20Tipsheet.pdf>
- Oscar Prieto-Flores & Jordi Freu, 2021, *Mentoring children and young people for social inclusion*;
https://www.google.ro/books/edition/Mentoring_Children_and_Young_People_for/Kp3yDwAAQBAJ?hl=en&gbpv=1&dq=Strategies+of+mentoring+young+people+pdf&pg=PT41&printsec=frontcover
- Torie Weiston-Serdan, 2017, *Critical Mentoring*,
https://www.google.ro/books/edition/Critical_Mentoring/qhHJEAAAQBAJ?hl=en&gbpv=1&dq=Strategies+of+mentoring+young+people+pdf&printsec=frontcover
- David L. DuBois & Michael J. Karcher, 2014, *Handbook of Youth Mentoring*,
https://www.google.ro/books/edition/Handbook_of_Youth_Mentoring/Ust1AwAAQBAJ?hl=en&gbpv=1&dq=Strategies+of+mentoring+young+people+pdf&printsec=frontcover

9 CAREER DEVELOPMENT

9.1 Introduction



Source: freepik.com

Career development is the process through which individuals explore, establish, and advance in their professional lives. It involves a series of activities and decisions that align one's skills, interests, and values with opportunities in the labour market. As work environments continue to evolve due to technological advances, globalization, and shifting economic landscapes, career development has become increasingly important in helping individuals navigate these changes.

In the modern world, career development also incorporates concepts of lifelong learning, adaptability, and resilience, reflecting the need to continuously update skills and adapt to changing job markets. Therefore, career development is not just a linear progression but an ongoing, dynamic process shaped by both external influences and personal choices. For youth, career development takes on a particularly important role as they transition from education to the workforce, navigating decisions that will impact their futures.

9.2 Theory

One of the most influential theories in career development is Donald Super's ***Life-Span, Life-Space theory***, which emphasizes that career development is a continuous, dynamic process occurring over the course of an individual's life. Super (1990) posited that career development is not limited to the period of formal education but unfolds across various stages of life. These stages include growth, exploration, establishment, maintenance, and disengagement. Super's model suggests that individuals go through different phases of self-concept development, which then influence their career decisions. For youth, the "growth"

and "exploration" stages are particularly pertinent. During the growth stage (which typically occurs during childhood and adolescence), youth develop self-concept, skills, and understanding of their interests and abilities. As they enter the exploration stage in their teenage years, they begin to actively investigate various career options through education, internships, and part-time work, often guided by their emerging self-concept. This phase is particularly critical, as it is during this time that youth begin to make early decisions about their career interests and explore possible paths in greater depth. Super's theory underscores the importance of these early experiences, as they can influence career choices well into adulthood.

John L. Holland's *Theory of Career Choice* (1997) provides another lens for understanding career development, particularly in how individuals align their interests and personalities with suitable work environments. According to Holland, people tend to fit into six personality types: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional (RIASEC). Each of these types corresponds to a particular work environment that values and fosters certain traits. Holland's theory suggests that youth, as they mature, should seek careers that align with their personality types to achieve job satisfaction and success. For example, a youth who demonstrates an interest in problem-solving and research may gravitate toward careers in science or technology (Investigative). On the other hand, a youth who enjoys helping others and engaging in community-building might be more inclined to pursue a career in education or healthcare (Social). Holland's theory highlights the importance of self-awareness for youth as they explore career options. By identifying their RIASEC personality type early, young individuals can make informed decisions about which careers best match their strengths and interests, thus setting them on a path toward greater career satisfaction and success. Holland's model is also useful in career counseling for youth, guiding them toward occupations where they are likely to thrive both personally and professionally.

The Social Cognitive Career Theory (SCCT)

The Social Cognitive Career Theory (SCCT), developed by Lent, Brown, and Hackett (1994), builds on Albert Bandura's Social Cognitive Theory and emphasizes the role of self-efficacy, outcome expectations, and personal goals in career development. SCCT argues that career choices and achievements are influenced by cognitive factors such as one's beliefs in their abilities (self-efficacy) and the expected outcomes of pursuing certain careers. For youth, SCCT is particularly relevant as they are often in the early stages of forming their career paths and may not yet have a clear sense of their abilities in a professional context. The theory posits that youth are more likely to engage in career exploration and pursue certain paths

when they believe they have the ability to succeed in those areas. Additionally, SCCT suggests that environmental factors, such as family, teachers, peers, and societal expectations, play a significant role in shaping a young person’s career aspirations. For instance, if a teenager is consistently encouraged and supported in pursuing a STEM (science, technology, engineering, and mathematics) career by teachers and parents, their self-efficacy in these areas will likely increase, and they may feel more confident in their ability to pursue a career in these fields. SCCT also emphasizes the role of outcomes; if a young person perceives a positive result—whether it’s financial security, job satisfaction, or societal impact—from a particular career path, they are more likely to pursue it.

Career development theory offers valuable insights into how youth navigate the often complex and evolving journey toward professional fulfilment. By incorporating these theories into career counselling and education, youth can be better equipped to make informed, confident decisions about their future careers.

9.3 How to apply

Career development for youth involves more than just choosing a job or profession. It’s a dynamic and multifaceted process that integrates career exploration, goal setting, educational planning, and professional journey mapping to ensure youth make informed decisions and embark on successful career paths. Understanding these interconnected elements and applying best practices can significantly help youth as they prepare for their professional futures. The process is influenced by self-awareness, societal factors, and available resources, but when approached strategically, it leads to fulfilling career outcomes. This article explores how youth can effectively engage in career development, with practical tips, best practices, and real-world examples.

1. Career Exploration

Career development is the long-term process through which individuals develop skills, interests, and experiences that guide them toward a fulfilling career. For youth, this process often begins in early adolescence and involves both personal exploration and external guidance. Career exploration allows youth to identify potential career options that align with their interests, values, and skills.

a) Exposure to a Variety of Careers

Youth should be encouraged to participate in *internships, volunteering, or shadowing professionals*. For example, a high school student interested in healthcare might shadow a doctor or volunteer at a local hospital to gain insights into the profession.

b) Career Interest Assessments

Tools like Holland's **RIASEC model** (Holland, 1997) or the **Myers-Briggs Type Indicator (MBTI)** help youth assess their interests and match them to potential careers. These tools provide a structured approach to career exploration by matching personality types with corresponding work environments.

Practical Tip:

- ✓ Utilize online platforms like **LinkedIn** or **Indeed** to explore job descriptions, connect with professionals, or learn about various industries.
- ✓ This digital exploration helps youth gain a clearer understanding of career options.

2. Goal Setting

Goal setting is essential in any career development journey, as it gives youth direction and a sense of purpose. Youth are at a pivotal stage where your academic and extracurricular activities must align with your long-term career aspirations. Setting clear, measurable, and achievable goals can help youth stay focused and motivated.

a) SMART Goals

Encourage youth to set SMART goals—*specific, measurable, achievable, relevant, and time-bound*. For instance, if a youth is interested in becoming a software developer, a SMART goal could be: *"Complete an online coding course within the next 3 months to gain basic programming skills."*

b) Short-Term and Long-Term Goals

Help youth break down their career goals into manageable short-term (1-2 years) and long-term (5-10 years) objectives. For example, a short-term goal could be to attend a career exploration seminar, while a long-term goal may involve completing a college degree in engineering.

Practical Tip:

- ✓ Regularly revisit and adjust your goals as you acquire new skills and information.
- ✓ Flexibility is crucial, as interests and circumstances often change over time.

3. Educational Planning for Career Success

Educational planning is an integral component of career development, particularly for youth, as the right educational path sets the foundation for their professional future. You must understand the relationship between your educational choices and career goals. For instance, youth interested in engineering will need to pursue a STEM-focused education, while those interested in the arts may require specialized training in creative fields. According to research by Lapan, Gysbers, and Sun (1997), students who engage in intentional career planning during high school are more likely to make informed decisions about their postsecondary education and career paths.

a) Researching Educational Requirements

Youth should thoroughly research the educational requirements for careers that interest you. If someone is passionate about graphic design, they should understand the necessity of taking courses in art, computer graphics, or digital media.

b) Seeking Mentorship and Advice

High school counsellors and career coaches play a vital role in guiding students through the educational planning process. By speaking to professionals in the desired field, youth can gain insights into the qualifications, certifications, and degrees required.

Practical Tip:

- ✓ Youth should consider the financial and time investment required for different educational paths.
- ✓ Some professions may only require a certificate or associate degree, while others may require extensive graduate studies.

4. Professional Journey Mapping

Professional journey mapping is the process of charting out the career trajectory from the current position to future aspirations. For youth, this involves setting a roadmap that includes the necessary steps to gain skills, experience, and qualifications. Professional journey mapping requires youth to visualize their career path and take actionable steps to make that vision a reality. As they gain more work experience and develop new skills, their journey map will evolve, helping them stay focused on their goals.

a) Identify Key Milestones

Youth should identify major milestones in your professional journey. For example, for a youth pursuing a career in medicine, key milestones could include completing medical school, obtaining residency, and becoming licensed to practice.

b) Build a Network of Support

Connecting with mentors, peers, and professionals in the chosen field is essential for career growth. *Networking* opens up opportunities for internships, job placements, and professional development.

Practical Tip:

- ✓ Use tools like career mapping apps or mind maps to visualize your professional journey.
- ✓ Platforms like [Pathbrite](#) and [MyCareerShines](#) allow youth to create visual roadmaps that help them stay focused on their long-term career goals.

Career development, career exploration, goal setting, educational planning, and professional journey mapping are critical components of a youth’s pathway to success in the workforce. By engaging in these processes early on, youth can better understand their strengths, interests, and the skills they need to cultivate in order to succeed professionally. Practical tips like setting SMART goals, using career interest assessments, and planning educational paths based on career requirements are essential to effective career development. By mapping their professional journey, youth will be equipped to navigate the changing demands of the workforce and ultimately build fulfilling careers. These strategies will not only support youth in achieving their aspirations but also prepare them for the opportunities and challenges in the professional world.

9.4 Additional reading materials for ongoing learning and support



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1. The Myers-Briggs Type Indicator® (MBTI®) assessment,
https://www.mbtionline.com/?utm_source=tmb&utm_medium=mbbrand&utm_campaign=hero
2. Personality Test, Personality™,
https://personality.co/?gclid=CjwKCAiAyJS7BhBiEiwAyS9uNXGY307i35N30hu84OTE4-ql6vwEHkyowVULO6WLnI0oU1bNUHe77hoCyMoQAvD_BwE&utm_source=google&utm_medium=cpc&utm_campaign=21980235338&utm_content=172032043336&utm_term=meyer%20briggs%20personality&matchtype=e&device=c&gad_source=1
3. Akosah-Twumasi, P., Emeto, T. I., Lindsay, D., Tsey, K., & Malau-Aduli, B. S. (2018, July). A systematic review of factors that influence youths career choices—the role of culture. In *Frontiers in education* (Vol. 3, p. 58). Frontiers Media SA.

10 PERSONAL DEVELOPMENT

10.1 Introduction

Focusing on self-awareness, self-esteem, resilience and adaptability

Personal development is the continuous process of self-improvement, driven by intentional efforts to enhance one's skills, knowledge, and overall potential. Rooted in the belief that growth is a lifelong endeavor, personal development encompasses a wide array of practices and principles aimed at nurturing self-awareness, building resilience, and achieving personal and professional goals. This journey is shaped by setting clear objectives, engaging in reflective practices, and fostering habits that promote progress. Influenced by psychological and educational theories, such as Maslow's hierarchy of needs and growth mindset concepts, personal development underscores the importance of motivation and adaptability in overcoming challenges.

At its core, personal development begins with understanding one's values, strengths, and areas for improvement. This self-awareness lays the foundation for setting meaningful goals that align with an individual's aspirations and life purpose. Key practices include time management, mindfulness, and continuous learning through reading, courses, and mentorship. Each step taken toward personal development contributes to greater self-efficacy and a sense of fulfillment.

Moreover, personal development is not a solitary pursuit; it benefits from constructive feedback and collaborative environments that encourage growth. Sharing experiences, seeking support, and engaging with like-minded communities can amplify the positive effects of personal development efforts. It also requires resilience—the ability to recover from setbacks and remain persistent in the face of adversity—a trait bolstered by cultivating a positive mindset and learning from failures.

In a rapidly changing world, personal development ensures that individuals stay adaptable, skilled, and proactive. Whether advancing in a career, enhancing personal relationships, or achieving a state of well-being, personal development is essential for unlocking potential and leading a more purposeful, balanced life. By committing to this path, individuals can transform aspirations into tangible achievements and contribute meaningfully to their own lives and the broader community.



10.2 Theory

Growth Through Awareness and Action

Personal development is a lifelong process of self-improvement in various areas of life, including emotional, mental, physical, and spiritual well-being. It is not just about achieving success or acquiring external validation, but more about cultivating a deep, intrinsic understanding of oneself and the world around us. This growth hinges on the principles of self-awareness, continuous learning, goal-setting, and resilience, which together form the cornerstone of any personal development journey.

At the heart of personal development is **self-awareness**. It is the ability to understand one's thoughts, emotions, motivations, and behaviors. Without this awareness, growth becomes a matter of chance rather than intentional progress. Self-awareness allows individuals to recognize their strengths and weaknesses, understand their desires and fears, and identify patterns in their thoughts and behaviors. This introspection is the first step in taking control of one's life and actively shaping one's future.

Once self-awareness is cultivated, the next essential element is **continuous learning**. Personal development is not a one-time event but an ongoing process. Life is dynamic, and the ability to adapt and evolve is key to growth. Continuous learning involves not only

acquiring new knowledge but also being open to new experiences and perspectives. It can take the form of formal education, reading, travel, or engaging with people who challenge and broaden our thinking. By embracing a growth mindset—the belief that abilities and intelligence can be developed through dedication—individuals unlock their potential to continuously improve themselves.

Goal-setting serves as the map that guides this journey of development. Clear, well-defined goals provide focus and direction. Without goals, personal development may feel aimless or stagnant. The process of setting goals is deeply connected to motivation and accountability, serving as a benchmark for progress. However, goal-setting must be flexible and adaptive. Life is unpredictable, and the path to growth often involves setbacks or unexpected detours. Resilience—the ability to bounce back from failures or difficulties—is a crucial quality to nurture. Resilient individuals understand that setbacks are part of the process, and they use these experiences as learning opportunities, rather than obstacles.

Finally, **taking action** is what turns intention into reality. While self-awareness, learning, and goal-setting are foundational, they are meaningless without consistent effort. Personal development requires a proactive approach, where individuals take tangible steps toward their objectives. This action must be intentional, deliberate, and aligned with one’s core values and purpose.

In summary, personal development is a dynamic, multifaceted process that involves developing self-awareness, committing to lifelong learning, setting meaningful goals, and consistently taking action. It is a journey that is uniquely individual but universally human. At its core, personal development is about realizing one’s potential and creating a life that is not merely lived, but actively shaped by conscious choice.

10.3 How to apply

Applying personal development in daily life requires intentional effort and a commitment to growth. It’s not enough to simply understand the concepts of self-awareness, learning, goal-

setting, and action; these principles must be integrated into everyday practices. Here's how to apply personal development in practical, actionable ways.

1. Cultivate Self-Awareness Through Reflection

Self-awareness is the foundation of personal development. To begin applying it, start by reflecting on your thoughts, behaviors, and emotions. This can be done through journaling, meditation, or simply taking a few minutes each day to check in with yourself. Ask questions like:

- What am I feeling right now?
- Why did I react that way in that situation?
- What patterns can I identify in my actions or decisions?

By regularly reflecting, you become more aware of your strengths and areas for improvement. This awareness will help you make conscious decisions in your day-to-day life and prevent you from falling into autopilot mode.

2. Adopt a Growth Mindset

Applying personal development requires a mindset that sees challenges as opportunities to grow. Adopting a growth mindset means embracing the idea that abilities and intelligence can be developed over time. When faced with a difficult task or failure, instead of thinking "I can't do this," reframe your thoughts to "I can't do this *yet*." This small shift in perspective will encourage you to persevere, learn from mistakes, and approach new challenges with optimism.

3. Set Clear, Achievable Goals

Goal-setting is essential in personal development because it provides direction and focus. To apply this principle, begin by setting both short-term and long-term goals. Use the SMART (Specific, Measurable, Achievable, Relevant, Time-bound) framework to structure your goals effectively. For example, instead of saying "I want to get fit," set a specific goal like, "I will exercise for 30 minutes, four times a week, for the next three months."

Break down long-term goals into smaller, manageable steps. Celebrate small victories along the way to stay motivated. Regularly reassess your goals to ensure they remain relevant and adjust them if necessary.

4. Commit to Lifelong Learning

Personal development thrives on continuous learning. Apply this by seeking opportunities to learn, whether through formal education, self-study, or experiences. Read books, take courses, attend workshops, or engage in discussions with people who challenge your thinking. Make a habit of learning something new each day, even if it's small. Staying

curious and open to new ideas will expand your knowledge base and increase your ability to adapt to change.

5. Take Consistent Action

Ultimately, personal development is about action. Without consistent effort, self-awareness, learning, and goal-setting won't lead to meaningful change. Break your goals down into daily actions that align with your values and vision. Start small, but make sure to take tangible steps each day. Whether it's improving your time management, developing new skills, or working toward a personal goal, the key is to take deliberate action. Over time, these small actions compound to create significant personal growth.

6. Embrace Failure and Resilience

Lastly, applying personal development means accepting that setbacks are inevitable. Failure is not a reflection of your inability but rather an opportunity for growth. When you face obstacles, practice resilience by reflecting on what went wrong, learning from it, and continuing to push forward. Embracing failure as a natural part of the process will build emotional strength and help you stay focused on your long-term goals.

In conclusion, applying personal development is about integrating self-awareness, a growth mindset, goal-setting, continuous learning, action, and resilience into your daily life. By consistently putting these practices into action, you will not only grow as an individual but also unlock the potential to create a life that aligns with your values and aspirations.

10.4 Additional reading materials for ongoing learning and support

For ongoing learning and support in personal development, there are numerous resources that can help you enhance your self-awareness, build new skills, and foster personal growth. Here are some valuable books, courses, and online platforms to guide your journey:

Books:

1. **"Atomic Habits"** by James Clear – A best-selling book that explores the power of small, incremental changes to build good habits and break bad ones. It offers actionable strategies for making lasting personal improvements.
2. **"The 7 Habits of Highly Effective People"** by Stephen R. Covey – A classic in the personal development field, Covey's book provides a framework for building character, managing time, and achieving long-term goals through proactive and principle-centered living.
3. **"Mindset: The New Psychology of Success"** by Carol S. Dweck – Dweck's research on the "growth mindset" reveals how embracing challenges, persistence, and learning from failure can unlock your potential.

Online Platforms:

1. **Coursera** – Offers a wide range of personal development courses, including "The Science of Well-Being" by Yale University, which helps individuals increase their happiness and well-being through evidence-based practices.
2. **LinkedIn Learning** – Provides courses on personal growth topics like time management, communication skills, leadership, and emotional intelligence. Great for professionals looking to improve both personal and career development.
3. **Udemy** – Features various affordable courses on personal development, from building confidence and self-discipline to mastering productivity and goal-setting.

Websites and Blogs:

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1. **Tiny Buddha** (tinybuddha.com) – Offers wisdom and articles on mindfulness, self-care, and personal growth, with practical advice for overcoming life's challenges.
 2. **Zen Habits** ([\[zenhabits.net\]](http://zenhabits.net)) – Focuses on simplicity and mindfulness, offering insights into personal development through intentional living and habit change.

These resources will provide ongoing inspiration, tools, and frameworks to support your personal growth and help you cultivate habits that lead to a fulfilling and successful life.

11 INCLUSIVITY AND DIVERSITY

11.1 Introduction

Europe is by nature a diverse continent, whose history has led diverse populations to live together. Diversity should be valued in all European areas and celebrated a sense of belonging to a shared set of values promoted, as well as respect for the identities of others.

All the associations and youth organizations are representative of the diversity of young people, regardless or because of their reality. This must include the voices and interests of young people from underrepresented groups; this can only contribute to better decision-making and benefit society.

In our days, young people are more diverse than ever. This changing reality creates more educational opportunities than ever before and makes it easier to experience mobility and other experiences abroad. On the other hand, young people continue to face many challenges in various life realities, for example: young people are those with long-term learning, sensory, hidden or physical disabilities, they are young parents, young careers, they are also homeless, refugees, asylum seekers, young migrants, gypsy or roma traveler, they are young people not in education, employment or training (NEET), and they are those with long-term mental health conditions, with learning disabilities or physical health needs.

Young people with fewer opportunities are young people who are at a disadvantage compared to their peers because they face one or more situations and obstacles. These can include, social, economic, linguistic, geographic obstacles, dealing with educational difficulties, cultural differences, having health problems, having a disability, or having limited access to social rights. In certain contexts, these situations or obstacles prevent young people from having effective access to formal and non-formal education, transnational mobility and participation, active citizenship, empowerment, and inclusion in society at large.

11.2 Theory

Diversity is a concept widely used in everyday conversations and policy discourses. It's about empowering people by respecting and appreciating what makes them different. This can be in terms of age, gender, cultural background, language, socio-economic status, disability, sexual orientation, religion, and education, etc. The current perspective on diversity has shifted from celebrating, appreciating or managing diversity, to inclusion and development of an intercultural society. When elaborating on the concept of diversity it is important to acknowledge its intersectionality and the interrelated nature of the different identity aspects. These include and are not limited to: gender, ethnic and cultural background, language, socio-economic status, disability, sexual orientation, religion, age,

geographic location or visa status. These different aspects of a young person's identity can expose them to overlapping forms of discrimination and marginalization, and amplify barriers to inclusion.

Diversity also contains a duality - as it is a state but it also results from movement and exchange. The interaction of diverse identities in turn allows new common identities to develop that will themselves remain in constant evolution due to their contact and interaction with others. Cultural exchange must be encouraged as it has always generated social progress, in terms of intercultural learning and exchange of experiences, ideas and values. Improved interactions between cultures create more understanding and appreciation, which prevents phobia and fear.

Inclusion is a concept used widely in social and educational policy making to express the idea that all people living in a given society (should) have access and participation rights on equal terms. As a process, inclusion seeks to ensure that everyone, regardless of their circumstances and background, has the possibility and means to participate fully in society. When looking at young people and social inclusion, it is concerning that young people in general face many challenges in order to fully participate in society. Therefore, for youth work, inclusion is identifying, understanding and removing barriers that exist to ensure equal participation, representation and belonging. Inclusion is also about ensuring access and participation in activities, programs and decision-making especially for young people with fewer opportunities (including young people with disabilities).

In the EU states members, the principles of inclusion, diversity and equality are part of other laws and strategies. In terms of supporting children and young people these are especially "*children and family law and strategies*", "*law and strategies on social care and services*", "*labour and employment law and strategies*" and "*law and strategies on education*".

In terms of (formal) **education** the EU state members are obliged to create an environment where every child and young people has not only access to education but the education is provided in a way that takes into consideration special educational needs or disability if child or young person has some. But this does not mean the "*total inclusion*" - there are cases when children and young people are educated out of the mainstream educational system if this shows to be better option for them (for catering their special needs), they themselves and their parents agree on it. Some countries like Italy or United Kingdom have developed policy and practice in this area; others like Slovakia have a long way ahead.

In terms of **employment**, young people and inclusion are stressed especially by the implementation of EU's initiative "youth guarantee" as a reaction to high youth unemployment after the global economic crisis in 2008 – Spain, Greece. In this regard we can say that young people are disadvantaged at the labour market because of their low age and working experiences in general, but there are other factors causing disadvantage as for example race and ethnicity, living in rural areas etc.

Family law and laws on social services are based on a philosophy of securing the wellbeing of children, young people, families and other members of society, protection and support of the most vulnerable and disadvantaged ones, therefore they enhance and secure inclusion, diversity and equality.

There are two prevailing approaches concerning inclusion and diversity. The first one is "negative" and aimed at "protection against, from". The second one is "positive" and is aimed at "support of". Within the legislation we can see usually that both approaches coexist along each other and are not conflicting, however, there is more emphasis given to protection than to support of diversity.

We see youth work as a great opportunity to strengthen positive approach in supporting inclusion, diversity and equality.

Country reports also highlighted some specific strategies that are not always common for each of participating country but also contribute to supporting inclusion, diversity and equality in general or specifically aimed at young people. The most commonly reported were strategies of inclusion of Roma ethnic group² (national strategy in Romania), inclusion of (young) refugees, migrants and foreigners^{3/4} (action plan in Cyprus, Croatia), prevention in various areas such as risky behaviour, violence and addiction (Romania, Cyprus, Croatia), supporting students with special (educational) needs⁵ (Romania, Croatia).

National legislations are influenced by the international documents and commitments that all the countries have to follow. One of the main principles of (youth) policy regardless international institution (European Union, Council of Europe, United Nations and UNESCO, World Bank) is inclusion, diversity and equality. This principle is thereafter transposed into national legislation. The most reviewed documents were: the UN ´s Declaration on the rights of the child (1959), the UN ´s Convention on the Rights of Persons with Disabilities (2006), the UNESCO ´s Salamanca Statement (1994), the Council of Europe ´s European Social Charter (1961, 1996) and the EU ´s program Erasmus+ Inclusion and Diversity Strategy in the Field of Youth (2014). In all reports the two documents were highlighted as great contributors to the promotion of inclusion, diversity and equality in general and in the youth field.

The first one is the UN ´s Convention on the Rights of Persons with Disabilities⁶ that helped to foster special national policies and measures towards higher inclusion of persons with

² https://commission.europa.eu/system/files/2022-10/1_1romania_national_roma_strategic_framework_2022_2027.pdf

³ https://migrant-integration.ec.europa.eu/country-governance/governance-migrant-integration-cyprus_en#integration-strategy

⁴ https://migrant-integration.ec.europa.eu/country-governance/governance-migrant-integration-croatia_en#integration-strategy

⁵ <https://anpd.gov.ro/web/wp-content/uploads/2022/12/The-National-Strategy-for-the-Rights-of-Persons-with-Disabilities-An-equitable-Romania-2022-2027.pdf>

⁶ <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-persons-disabilities>

disabilities concerning also children and young people, their education but also participation in social, cultural and sport life of the society. Some countries (Croatia) reported separated national strategies as a consequence of this document.

The second international document mentioned as a great influencer towards higher inclusion, diversity and equality in youth work, projects and activities was the Erasmus+ Inclusion and Diversity Strategy in the Field of Youth⁷. Even though this document does not have legal force and binding nature it is used as a navigator for youth work training and practice and importantly as an instrument for influencing actions planned when applying for financial support from the Erasmus+ program. This document was also valued by the head of organizations and youth workers for its complexity and detailed explanation of various areas of inclusion and possible ways how to enhance or secure them.

11.3 How to apply

In an inclusive youth setting, all young people will feel a sense of belonging, knowing that they matter for who they are, and that they are accepted on their own terms. Inclusion will be “core and seamless” and not an “addition to what we are doing”. At its essence, inclusion involves working from youth work or community principles where the focus is on *empowerment, engagement, upskilling and capacity building, equity, social justice and advocacy*. It is based on values rooted in the principles of **social justice**.

If an organization’s approach is inclusive, diverse, and responsive, it will be evident across all areas from youth work activities to policy and planning. If an organization is inclusive and responsive it is usually evident within a few minutes of entering a youth setting – it is a feeling we get that shines out to us with its intent and commitment. **Honesty, respect, dialogue and grounding our approach** in a human rights framework have been effective in leading organizations toward reconciliation of conflicting demands.

National Youth Council of Ireland identified in the paper “8 Steps to inclusive youth work”⁸ there are identified **8 STEPS** that will guide and accompany any youth worker in his daily work.

STEP1: **Organizational Review**

An organizational review involves undertaking an assessment of the current practice. It allows standing back and taking a strategic approach based on evidence, it helps to build links across the community, and to put the resources in place to engage with, and include, people from different minority and marginalized identities. It allows re-thinking and re-evaluating the approach to inclusion and diversity.

⁷ https://ec.europa.eu/assets/eac/youth/library/reports/inclusion-diversity-strategy_en.pdf

⁸ <https://www.youth.ie/wp-content/uploads/2016/09/8-Steps-to-Inclusive-Youth-Work-NYCI-2nd-Ed.pdf>

An inclusive youth service will work toward having young people, staff, volunteers, and management that reflect the diversity of the communities. It usually involves including young people from minority and marginalized groups in the mainstream youth groups but can equally involve working with, or creating spaces for, single identity groups where requested by the young people from minority groups themselves. An organizational review will collate data on diversity in the community and will explore ways to measure the levels in the youth organization to assess the relative degree of diversity that is present. It will assess what would be most beneficial to the demographic in the community and to consider the needs of young people from minority and marginalized identities not met by other services.

STEP 2: Policy and Guidelines

When the youth work involves new approaches and practices it is important to document it. The best way to do this is by developing a policy or guideline document. This becomes a roadmap that keeps the professional on track, provides a structure that supports the work and a guide when challenges arise. It is connected strongly to practice.

A policy lays out the goals and guiding principles on inclusion along with how they are going to achieve this. It places the work they are doing in a legal context by citing equality and human rights legislation, and how the legislation relates to the work and the responsibilities toward young people from a range of minority or marginalized communities.

Policies are statements of practice; they reflect the practice of the organization and/ or the planned for practice. They have an implementation plan. They should ideally be written in consultation with everyone involved – from Board to youth members. It is crucial that all staff, volunteers, members and their parents/ guardians are aware of the inclusion policy and familiar with its content.

STEP 3: Space and environment

Many youth organizations rent or share spaces, and this may limit how much they can adapt the physical setting, but youth workers often find creative ways to positively affect the spaces they use. Advocating for changes in shared spaces is also beneficial for everyone in the community as whatever is put in place for one group always benefits more people in making it safer and more welcoming. Accessibility is important. Some groups may have accessible buildings for disabled people, but even these may need adaptations to be fully inclusive of an individual's specific needs.

It is important to see the youth spaces not just as rooms and a building, but also as all the people who use the space. A safer space is one where people from minority and marginalized groups feel that it's their space to participate in, to freely contribute and where they do not feel intimidated by majority voices that may prevail. It is a space where difficult issues are discussed and addressed. It is where power dynamics and the effects of our behaviour on others can be examined.

STEP 4: Staff and volunteers

The attitude, commitment and self-awareness of staff and volunteers are core to inclusive youth work. Leadership and support from management is also critical.

Ideally staff and volunteers will come from diverse backgrounds and can relate directly to minority and marginalized young people's own life experiences. It is invaluable to link in, and work with, a trusted adult from a young person's identity group, especially when initial contact is being made. Inclusive practice in an organization can develop naturally as young people from minority and marginalized groups in the community become involved: expertise and understanding amongst staff and volunteers can grow, through experience and applying good youth work practice of listening, learning, responding, and empowering the young people.

All staff and volunteers need to have access to relevant training, support, and supervision. This work will also need to be brought into a policy framework to create an inclusive, diverse, responsive and sustainable service.

STEP 5: Activities and involvement of young people

Meeting young people 'where they are at' presents new considerations when talking about the inclusion of people from diverse identities as activities must be planned and adapted around their varying needs.

Activities need to be culturally and critically responsive. Factors such as gender, religion, sexual orientation, caring responsibilities, culture and language, abilities, special needs, literacy skills and age need to be considered. For example, this could equate to disability access or adaptability; relevance to different learning and reasoning styles; cultural and religious appropriateness; etc.

It is also important to be critically aware when looking for resources to plan our activities – to be wary of 'inclusion' activities that present an 'us and them' approach but assume we are only working with the majority. It needs to adapt activities to take account of the diversity that may be in the room (whether the extent of that diversity is known to us or not).

STEP 6: Resources

Resources come in many forms: time, staff, space, management, money for activities and support for individual needs, training, upskilling. Key to inclusive and responsive practice is ensuring that resources are consistent for the young people from minority and marginalized identities that we work with. This is difficult if inclusion related activities rely on irregular project funding rather than core costs. Devising strategies to maintain a duty of care for young people from minority and marginalized identities after completion of a project is critical to sustain the relationship and keep their trust.

Inclusive youth work is about responding proactively to the specific needs of young people from minority and marginalized identities. This can be done by recognizing, understanding and acknowledging structural and systemic inequalities.

STEP 7: Networking and partnership

The measure of the equality and inclusion practice pivots on how well the organizations collaborate and network with others to ensure that the needs of young people from minority and marginalized identities in our community are met. Inclusive youth work organizations will be open to working with, learning from, and sharing with other organizations. They have to be part of the broader community, not perceived as insular or overly self-sufficient.

Networking and building partnerships are strategic responses and they are in line with the organizational review as they take time to build and develop. Networking for inclusion also involves building relationships with service providers and advocating for the young people from minority and marginalized identities that use their services and often find they are not responsive to their particular needs. This could include services such as health (including mental health), education, employment, and police authorities.

Partnerships involve working in a sustained way over time, often with the initial aim to carry out a specific piece of work together. Ideally partnerships will endure beyond shared projects to become sustained collaborations in building strong inclusive communities. Inclusive organizations will recognize the value and skills they can bring to community building processes and will reach out and connect with others.

Partnerships should be complimentary, built so that each partner can contribute something new and something that they are good at. This ensures that all partners can learn from each other and create successful collaborations as well as strengthen their own capacities. It is important to focus on building trust among partners, as this ensures that long term goals can be achieved. For partnerships to work there will be an alignment of values. It is important to be aware of all partner's core values.

STEP 8: Monitoring and evaluation

Monitoring and evaluation is a three-fold process; an organization monitors and evaluates:

1. How, as an organization, they have created an inclusive, diverse, and responsive practice.
2. How their young people are experiencing and developing inclusive practice.
3. They do a self-awareness evaluation where we critically reflect on their own role, their growth and their influence in creating an inclusive youth space.

Whatever tools the organization uses to evaluate its work, the key to assessing its inclusive youth work is to incorporate questions that put an equity, inclusion and responsive lens on

it. These should be searching and thought provoking. In this way inclusive, diverse and responsive practice becomes a core principle and goal.

All the above information are a framework to develop and report on the inclusive, diverse, and responsive youth work practice. Key to this work is that the organization / youth workers connect with values of inclusion and social justice, they reflect on their practice as youth workers, and explore diverse engagement strategies.

11.4 Additional reading materials for ongoing learning and support

- EU ´s program Erasmus+ Inclusion and Diversity Strategy in the Field of Youth, 2014, https://ec.europa.eu/assets/eac/youth/library/reports/inclusion-diversity-strategy_en.pdf
- United Nations, Declaration of the rights of the child, 1959, <https://cpd.org.rs/wp-content/uploads/2017/11/1959-Declaration-of-the-Rights-of-the-Child.pdf>
- United Nations, Convention on the Rights of Persons with Disabilities, 2006, <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-persons-disabilities>
- Salto Youth, Shaping Inclusion and Diversity, <https://www.salto-youth.net/downloads/4-17-4182/ShapingInclusionDiversity.pdf>

12 DIGITAL JOBS OF THE FUTURE

12.1 Introduction

In today's rapidly evolving job market, digital jobs have become central to the global workforce. The digital transformation, fueled by emerging technologies such as artificial intelligence (AI), machine learning, blockchain, and cloud computing, is reshaping the way businesses operate. According to Brynjolfsson and McAfee (2014), the combination of technological advancements and the growing digital economy has created a surge in demand for tech-savvy professionals. As businesses adapt to the digital age, the demand for specialized roles, such as cybersecurity experts, data scientists, and AI specialists, is expected to intensify in the coming years. One of the major driving forces behind the rise of digital jobs is the increasing reliance on automation and AI to streamline operations, and enhance customer experiences. Automation, in particular, is not only transforming traditional roles but also giving rise to entirely new career paths. Furthermore, the growing importance of remote work and digital collaboration tools, accelerated by the COVID-19 pandemic, has shifted workplace dynamics, creating a need for roles that focus on managing virtual teams and ensuring seamless communication. As digital jobs continue to expand, professionals must equip themselves with the right skills to thrive in an increasingly complex and technology-driven environment.



Source: freepic.com

12.2 Theory

The "digital jobs" are characterized by their reliance on technology, digital tools, and online platforms to perform tasks and solve problems across a wide range of industries. As businesses and industries become increasingly digitized, digital jobs are expected to continue growing, transforming traditional work structures, and introducing new job categories that require specialized skills.

One foundational concept in understanding digital jobs is the idea that they emerge as a response to the digitization of traditional sectors. Brynjolfsson and McAfee (2014), in their seminal work *The Second Machine Age*, argue that we are entering a phase of exponential technological change, where automation and AI are significantly altering the types of tasks performed by humans. While automation displaces certain manual and repetitive jobs, it simultaneously creates opportunities for higher-level positions that involve managing, designing, and optimizing the technologies that automate tasks. Digital jobs, therefore, are not merely about replacing human labor with machines but about enabling individuals to work with and around these new tools. This transformation is seen in fields like AI and machine learning, where professionals are tasked with developing intelligent systems that can augment human decision-making (Chui et al., 2018).

The emergence of digital jobs also relates to the rise of the "*gig economy*" and remote work. According to De Stefano (2016), the gig economy refers to the increasing prevalence of short-term, freelance, and project-based work, often facilitated through digital platforms like Uber, TaskRabbit, or Upwork. This shift towards non-traditional employment models has been accelerated by the growth of the internet, which enables workers to connect with employers and clients from anywhere in the world. This expansion of remote work opportunities has been particularly notable during and after the COVID-19 pandemic, as businesses transitioned to remote or hybrid work models (Choudhury et al., 2020). As a result, digital jobs that can be performed from home or any location, such as virtual assistants, content creators, and digital marketing professionals, are expected to remain in high demand.

A crucial element of the digital jobs theory is the concept of *digital skills and their impact on employability*. The increasing reliance on technology across sectors means that workers must develop a diverse set of digital competencies to remain competitive. According to the World Economic Forum (2020), the future workforce will require both technical skills, such as coding, data analytics, and cybersecurity expertise, and soft skills, such as adaptability,

problem-solving, and collaboration. As more industries move online, the need for professionals who can build and manage digital infrastructure is growing rapidly. Jobs in data science, cloud computing, cybersecurity, and software development are expected to be particularly critical as organizations seek to safeguard their systems, harness data, and drive digital innovation.

As businesses continue to adopt digital technologies, the demand for digital expertise will only grow, presenting both challenges and opportunities for workers and employers alike. Understanding the dynamics of digital jobs and the skills required to succeed in them is critical to navigating the future of work.

12.3 How to apply

The rise of digital technologies is rapidly reshaping the job market, with new roles emerging across various industries. By 2025, many of these digital jobs will be essential for businesses adapting to the digital economy. Below are the top 10 digital jobs expected to grow, along with their descriptions, skills required, and best educational and online course options:

1. AI and Machine Learning Specialist

- **Description:** Develops intelligent algorithms and models that allow machines to learn from data and perform tasks autonomously.
- **Skills Needed:** Programming (Python, R), machine learning algorithms, deep learning, neural networks, data analysis.
- **Best Education:** Master's in Computer Science, Artificial Intelligence, or Data Science.
- **Online Courses:**
 - ✓ [Coursera's AI For Everyone](#) by Andrew Ng
 - ✓ [edX's Machine Learning with Python](#) by IBM

2. Cybersecurity Expert

- **Description:** Protects systems, networks, and data from cyber threats by designing and implementing security measures.
- **Skills Needed:** Network security, firewalls, cryptography, ethical hacking, risk management.

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- **Best Education:** Bachelor's in Cybersecurity, Information Security, or Computer Science.
 - **Online Courses:**
 - ✓ **Coursera's** *Cybersecurity Specialization* by University of Maryland
 - ✓ **Udemy's** *The Complete Cyber Security Course*

3. Cloud Computing Engineer

- **Description:** Designs and manages cloud infrastructure and services for scalability, security, and efficiency.
- **Skills Needed:** Cloud platforms (AWS, Azure, Google Cloud), DevOps, infrastructure as code, virtualization, containerization (Docker, Kubernetes).
- **Best Education:** Bachelor's in Computer Science, Cloud Computing, or Information Systems.
- **Online Courses:**
 - ✓ **Coursera's** *Cloud Computing Specialization* by University of Illinois
 - ✓ **AWS** Certified Solutions Architect by A Cloud Guru

4. Blockchain Developer

- **Description:** Creates decentralized applications (dApps), smart contracts, and blockchain-based solutions for various industries.
- **Skills Needed:** Blockchain protocols (Ethereum, Hyperledger), smart contract programming (Solidity), cryptography, decentralized finance (DeFi).
- **Best Education:** Bachelor's in Computer Science, Software Engineering, or Cryptography.
- **Online Courses:**
 - ✓ **Udacity's** *Blockchain Developer Nanodegree*
 - ✓ **Coursera's** *Blockchain Specialization* by University of California

5. Data Scientist

- **Description:** Analyses complex data sets to extract actionable insights that help businesses make data-driven decisions.

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- **Skills Needed:** Statistics, data analysis, machine learning, Python, SQL, data visualization tools (Tableau, Power BI).
 - **Best Education:** Master's in Data Science, Statistics, or Mathematics.
 - **Online Courses:**
 - ✓ **Coursera's** *Data Science Specialization* by Johns Hopkins University
 - ✓ **edX's** *Data Science for Executives* by Columbia University

6. Digital Marketing Specialist

- **Description:** Plans and executes online marketing campaigns using SEO, SEM, content, and social media marketing.
- **Skills Needed:** SEO, Google Analytics, content strategy, social media management, email marketing, paid ads (Google Ads, Facebook Ads).
- **Best Education:** Bachelor's in Marketing, Communications, or Business.
- **Online Courses:**
 - ✓ **Google's** *Digital Marketing & E-commerce Professional Certificate* on Coursera
 - ✓ **HubSpot Academy's** *Inbound Marketing Certification*

7. UX/UI Designer

- **Description:** Focuses on improving the usability and aesthetics of digital products by designing user interfaces and user experiences.
- **Skills Needed:** Proficiency in design tools (Sketch, Figma, Adobe XD), wireframing, prototyping, user testing, and research.
- **Best Education:** Bachelor's in Graphic Design, Interaction Design, or Human-Computer Interaction.
- **Online Courses:**
 - ✓ **Coursera's** *Google UX Design Certificate*
 - ✓ **Udacity's** *UX Design Nanodegree*

8. E-commerce Manager

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- **Description:** Oversees online retail platforms, managing product listings, marketing campaigns, and customer service to drive sales.
 - **Skills Needed:** E-commerce platforms (Shopify, WooCommerce), customer experience optimization, inventory management, digital marketing.
 - **Best Education:** Bachelor's in Business Administration, Marketing, or E-commerce.
 - **Online Courses:**
 - ✓ **Shopify Academy's** *Ecommerce Marketing Masterclass*
 - ✓ **Coursera's** *E-commerce Essentials* by University of California

9. AI Ethics Specialist

- **Description:** Ensures ethical guidelines are followed in the development and deployment of AI technologies, addressing biases and societal impacts.
- **Skills Needed:** Understanding of AI, machine learning, policy development, data privacy, and ethics frameworks.
- **Best Education:** Master's in AI Ethics, Philosophy, or Data Science.
- **Online Courses:**
 - ✓ **edX's** *AI and Ethics* by University of California
 - ✓ **Coursera's** *Ethics of AI and Big Data* by UC Berkeley

10. Product Manager (Tech)

- **Description:** Oversees the development, launch, and marketing of tech products, collaborating with cross-functional teams.
- **Skills Needed:** Project management, Agile methodologies, market research, communication, product lifecycle management.
- **Best Education:** Bachelor's in Business, Engineering, or Computer Science. MBA for leadership roles.
- **Online Courses:**
 - ✓ **Coursera's** *Digital Product Management* by University of Virginia
 - ✓ **edX's** *Agile Product Management* by UC Berkeley

These roles represent a broad spectrum of skills and industries that will continue to grow as digital technologies advance. By pursuing relevant education and training, professionals can prepare for the evolving digital workforce and secure a strong position in the jobs of the future.

12.4 Additional reading materials for ongoing learning and support



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1. <https://learnwithdexa.com/15-digital-skills-that-will-be-in-high-demand-in-2025/>
2. <https://fourthrev.com/blog-the-top-10-most-in-demand-tech-careers-for-2025/>
3. <https://www.forbes.com/sites/jackkelly/2024/12/17/predictions-for-the-tech-job-market-in-2025/>
4. <https://www.linkedin.com/pulse/hottest-jobs-digital-tech-recruitment-2025-which-ones-keiran-hathorn-jlddc>

13 ACCESSIBILITY CONSIDERATIONS

13.1 Introduction

Accessibility considerations are critical to creating environments—both physical and digital—that are inclusive and equitable for all individuals, regardless of their abilities or disabilities. As society continues to prioritize diversity and inclusion, ensuring accessibility has become not just a legal and ethical responsibility, but also a fundamental aspect of designing experiences, services, and products that cater to the broadest possible audience. Accessibility goes beyond simply meeting regulatory requirements; it is about making sure that people with a range of physical, sensory, and cognitive abilities can interact with, navigate, and derive value from a given environment, whether it's a website, a workplace, or public infrastructure.

The need for accessibility considerations has grown in importance as technology becomes increasingly central to daily life. Digital spaces, in particular, play a significant role in work, education, entertainment, and social interaction. However, without intentional design choices, many digital platforms and tools may unintentionally exclude individuals with disabilities, making it harder for them to engage or access important resources. For example, people with visual impairments may struggle to navigate websites without screen readers, while those with hearing impairments may miss out on important information presented through audio. Similarly, individuals with cognitive disabilities might find it challenging to understand complex language or navigation systems.

Incorporating accessibility into design, whether it's through color contrast, alternative text for images, keyboard navigation, or simplified language, ensures that everyone can have an equal opportunity to participate and benefit from a service, product, or environment. Beyond digital spaces, physical accessibility is equally important. This includes considerations such as wheelchair ramps, accessible signage, and public transport accommodations, which help ensure that physical spaces are usable for individuals with mobility impairments.

Ultimately, accessibility considerations are about fostering inclusivity and ensuring that all people, regardless of their abilities, can lead independent, productive, and fulfilling lives. Whether designing websites, creating content, or planning physical environments, integrating accessibility into every step of the process is crucial for empowering individuals, enhancing user experience, and promoting equality. By embracing accessibility, we not only meet the needs of people with disabilities but also create a more just and compassionate society for everyone.

Guidance on ensuring digital materials are accessible to all, including individuals with disabilities, through accessible formats and technologies

Ensuring digital materials are accessible to all individuals, including those with disabilities, is a fundamental part of creating an inclusive environment. To achieve this, it is essential to adopt practices that make digital content usable for everyone, regardless of their physical or cognitive abilities.

One key strategy is to follow established accessibility guidelines, such as the Web Content Accessibility Guidelines (WCAG), which outline principles for making digital content perceivable, operable, understandable, and robust. These guidelines emphasize the importance of providing alternative text for images, using descriptive links, and ensuring that content is compatible with screen readers and other assistive technologies.

Accessible formats are crucial for inclusive design. This includes using clear and simple language, structuring content with headings and subheadings for easy navigation, and providing captions or transcripts for audio and video materials. Ensuring a high contrast between text and background colors and offering scalable text options helps users with visual impairments.

Technology can further support accessibility efforts. Tools that enable keyboard navigation, voice recognition, and customizable display settings empower users to interact with content in ways that suit their needs. Testing digital materials with various assistive technologies and user groups ensures that accessibility measures are effective.

By prioritizing accessible digital materials, organizations can foster a more inclusive digital landscape where everyone, including individuals with disabilities, can fully engage with and benefit from digital content.

13.2 Theory

Accessibility is a core principle of design, ensuring that digital products and environments are usable by people of all abilities, including those with disabilities. Accessibility considerations go beyond legal requirements; they embody the ethical responsibility to create inclusive experiences that cater to a diverse range of needs. This includes individuals with visual, auditory, motor, or cognitive impairments. The ultimate goal is to remove barriers that hinder equal access to information, services, and opportunities.

At the heart of accessibility is universal design, which aims to make products and environments usable by the widest possible audience, regardless of their physical or cognitive limitations. This approach fosters an inclusive society where everyone can engage with technology, education, and communication tools on an equal footing.

One key area of accessibility is visual impairment. For example, people with low vision or blindness rely on screen readers or Braille displays to access digital content. Therefore, it is crucial for websites and applications to provide text alternatives for images (alt text) and ensure proper color contrast. This allows users to understand the content through auditory means or tactile feedback.

Similarly, individuals with hearing impairments face challenges when audio is the primary mode of communication. Captions, transcriptions, and sign language interpreters are essential in making multimedia content accessible. Providing these tools allows people with hearing loss to access information and participate in conversations, whether in real-time or through pre-recorded material.

Motor disabilities also require thoughtful design. Features like keyboard navigation, voice commands, and touch interfaces that do not rely solely on fine motor skills are critical for users with limited dexterity. Adaptive technologies such as switches or eye-tracking systems can further support individuals with severe mobility impairments, ensuring that they can interact with digital content effectively.

Cognitive accessibility focuses on making information easy to understand and navigate. This includes using simple language, clear layouts, and offering options for users to customize their experience, such as changing font sizes or color schemes. People with cognitive disabilities, such as dyslexia or attention disorders, benefit from these adjustments, as they make content easier to process and comprehend.

Incorporating accessibility considerations into the design process not only benefits individuals with disabilities but also improves the overall user experience. Accessible design often leads to more efficient, user-friendly interfaces that can accommodate diverse preferences and situations. Moreover, prioritizing accessibility fosters social inclusion, ensuring that all individuals, regardless of ability, can participate fully in digital life. This inclusive approach enriches society and aligns with the values of fairness, equality, and respect for human dignity.

13.3 How to apply

If you need to apply for accessibility considerations, whether in the workplace, educational settings, or public services, it's essential to follow a clear and structured process. Here are the steps you can take:

- 1. Identify Your Needs:** Begin by assessing what accommodations are necessary to ensure you can fully participate in your environment. This might include physical modifications (e.g., ramps, elevators), digital access (e.g., screen readers, captioning), or specific support (e.g., sign language interpreters, extra time for exams).
- 2. Review Policies:** Check the organization's or institution's accessibility policies. Many organizations have formal procedures in place for requesting accommodations, which can usually be found on their website or employee/student handbooks.
- 3. Submit a Formal Request:** Draft a request that outlines your accessibility needs clearly. Be specific about the accommodations you need and how they will help you participate effectively. Include any medical or professional documentation if required, and make sure your request is in line with legal standards, such as the Americans with Disabilities Act (ADA) in the U.S.
- 4. Engage in an Interactive Process:** Once your request is submitted, expect a dialogue with the relevant department (HR, student services, etc.). They may need additional information, or you may need to collaborate to find reasonable accommodations that work for both parties.
- 5. Follow Up:** If you don't receive a response or feel the accommodations provided aren't adequate, follow up respectfully and continue advocating for your needs.

Remember that accessibility considerations are your right, and organizations are legally obligated to ensure equal access and opportunities for individuals with disabilities.

13.4 Additional reading materials for ongoing learning and support

For ongoing learning and support about accessibility considerations, there are many valuable resources available to help deepen your understanding and stay up-to-date with best practices. Here are some recommended materials:

1. Books:

- *"Accessibility for Everyone"* by Laura Kalbag – A practical guide that covers web and digital accessibility and is a great starting point for understanding how to create inclusive content.
- *"Designing for Accessibility: A Business Guide to Understanding the Legal and Ethical Requirements for Digital Content"* by Sarah Horton and Whitney Quesenbery – This book focuses on the ethical and business imperatives of accessible design.

2. Websites:

- **W3C Web Accessibility Initiative (WAI)** (www.w3.org/WAI) – This site offers comprehensive guidelines on web accessibility standards, including WCAG (Web Content Accessibility Guidelines), tools, and resources.
- **ADA National Network** (adata.org) – Provides information on the Americans with Disabilities Act (ADA), including resources for businesses and individuals seeking to understand and implement accessibility requirements.

3. Online Courses:

- **Coursera – Web Accessibility by Google:** An introductory course that provides essential knowledge about web accessibility, from a leading tech company's perspective.
- **LinkedIn Learning** – Offers various courses on accessibility in digital media, including courses on creating accessible websites and content for people with disabilities.

4. Blogs and Forums:

-
- **A11y Project** (a11yproject.com) – A community-driven site offering resources, tips, and discussions on making digital content accessible to all users.
 - **Inclusive Design Principles** (inclusivedesignprinciples.org) – Provides principles and resources to create more inclusive designs.

These resources can help you stay informed and continually improve your accessibility knowledge and practices, whether you're designing websites, working in education, or advocating for accessibility rights.

14 INCLUSIVE LEARNING STRATEGIES

14.1 Introduction

Inclusion is a long-term strategy that should not be considered in isolation, but as a trans-disciplinary approach to the organization of educational activities within the entire education system. Inclusion affects all actors in the educational process, including children with disabilities and their parents, students with normal development and their families, teachers and other professionals in the educational space, administration, and additional education structures. The inclusive approach to education is a global trend that is causing significant changes in education systems, educational environments and relationships between participants in the educational process.

14.2 Theory

Inclusive learning encourages and challenges educators to design and apply various instructional strategies to assist the learning processes of all students opines that, when implementing inclusive learning, a strategy must match learning objectives, be informed by continuous evaluation, and eventually respond to student readiness. The challenge is that most curricula are rigid and learning objectives do not accommodate learners experiencing barriers to learning, leaving educators with little or no room to manoeuvre.

Multilevel teaching and curriculum differentiation strategies are acceptable interventions that respond to the various educational needs of students. However, multilevel teaching does not reach the level of all learners experiencing barriers to learning because it is conducted within a policy framework that eventually leaves some learners behind. Therefore, it is known that there is a gap found when teaching learners experiencing barriers to learning. Once the curriculum accommodates the learners, their knowledge, skills, attitudes, and confidence become receptive; hence, it is easier for educators to engage in inclusive learning.

Page et al. (2022)⁹ conducted a study in the Cook Islands and found that after staff received thorough professional development, they could positively impact students with barriers to learning. The study found that instead of following the curriculum, teachers allowed students to learn life skills from one another. According to this study, students with disabilities would teach each other dance, crafts, work, and activities that allowed them to

⁹ <https://doi.org/10.1080/1034912X.2020.1757627>

be recognized by their community. Thus, once inclusive education is implemented effectively, the skills that students learn can restore their sense of belonging. However, the study highlighted the positive strategies in implementing inclusive learning; the social desirability of the participants' responses was noted as an issue, given that pro-social behaviours are highly valued in the Cook Islands. In addition, the study underlined how vital indigenous methods were for implementing inclusive learning but did not show how such methods could effectively assist students experiencing barriers to learning. Given the above study, teachers' competencies, specific abilities, and innovative methods can determine how effectively they can deliver instruction to learners and foster the learning required to implement inclusive education in their classrooms.

Similarly, a study by Brennan et al. (2021)¹⁰ exploring support for inclusive pedagogy in the Republic of Ireland found that educators allowed students to express themselves through their own choices to simulate the lesson. The study found that when students expressed themselves, they comprehended the lesson's content, named differentiation by choice. The methodology employed by the teachers eventually allowed all students to achieve their best abilities as they engaged in their teaching and learning freely, creating a more inclusive learning environment.

According to UNESCO' 2021¹¹ report, inclusive education promotes practices that aim to educate all children together, including those with different types of disabilities.

Implementation of this strategy requires establishing vertical structures within the educational system, as well as promoting the development of horizontal structures. This will allow for the inclusion of children with disabilities, including those with severe disabilities, who were previously considered uneducable. Inclusion starts with early intervention and covers a wide range of social services throughout the educational process. Inclusion in education is only a precondition for inclusion in society. The effectiveness of inclusion depends on the effectiveness of cooperation between educational organizations and social centres.

It is important to note that the introduction of inclusion in the education system should not lead to the reduction or elimination of inclusive education as such. Inclusive education is one of the options for providing educational services to a child with a disability. All children

¹⁰ <https://doi.org/10.1080/13603116.2019.1625452>

¹¹ <https://unesdoc.unesco.org/ark:/48223/pf0000375490/PDF/375490eng.pdf.multi>

with special needs require independence, well-being and participation in society, while each child needs an accessible and developmentally appropriate model of education. The effectiveness of educational inclusion depends on the suitability of the shared learning environment for the child concerned, with the provision of social and life skills being of paramount importance.

It should be noted that the most important condition for the introduction of inclusive education is the transition to variable forms of organizing the educational process (primarily in inclusive schools):

- individual approach and individual educational program for person with special needs;
- ensuring the implementation of a inclusive educational program for person with special needs;
- ensuring certification inclusive educational environments in educational institutions that implement inclusive programs;
- ensuring the implementation of a inclusive educational program for person with special needs;
- creation of opportunities for further education for persons with special needs at the vocational level and higher;
- willingness of educational institutions to provide services to persons with special needs in higher education;
- ensuring future professional integration and jobs for people with special needs after completing their studies;

The literature has found that strategies for implementing inclusive education should shift from the theoretical and traditional methods of the curriculum to a more creative approach, such as role-play and visible and constructive objects that allow students to participate actively in the teaching and learning process¹² (Hankebo, 2018).

¹² https://www.e-iji.net/dosyalar/iji_2018_3_33.pdf

The end result of inclusive education, its qualitative effectiveness, depends on many variables, including the state's social policy, the maturity of society, and the awareness of the need to introduce technical innovations to optimise the full (equal) integration of persons with disabilities into the system of modern social relations and processes, with guaranteed opportunities for their full participation. Awareness of the need for and importance of educational inclusion is one of the aspects of society's inclusion, its harmonious development, and the humanization of social relations.

Today, the problem of the strategy for implementing inclusion is one of the most acute and controversial issues in education. This education is the joint teaching and upbringing of children with disabilities and children without such disabilities. The international community defines inclusive education as the most effective and humane, contributing to the secondary socialisation of children with disabilities and the development of moral and ethical qualities of children without such disabilities. Its concepts and main strategies are based on the idea of children's equal right to access to education.

14.3 How to apply

Forlin and Sin (2017)¹³ suggest that teachers should consider four factors to implement inclusive learning in their classrooms successfully:

- value a different type of learner,
- assist all learners,
- allow learners to work with others
- work on their personal and professional growth

Manea (2013)¹⁴ considers that it is necessary in the implementation of inclusive practices for the teacher to have detailed knowledge on how to achieve the evaluative and diagnostic process of each student, assuming a projective scenario based on identified needs and sufficient determination to implement it, thus responding to school diversity.

¹³ <https://oxfordre.com/education/display/10.1093/acrefore/9780190264093.001.0001/acrefore-9780190264093-e-161>

¹⁴ https://www.researchgate.net/publication/337153557_Practices_of_inclusive_education

UNESCO Guidelines for Inclusion, Ensuring Access to Education for all, 2002¹⁵ are:

1. Inclusion of all children - The value of inclusive education for every student is that he/she can work together with other children, and thus be included. Trainers have a duty to support the explanations for differences and diversity between individuals with arguments, to remove some of the negative attitudes towards others, to generate collaboration and teamwork development, to highlight the potential intellectual and vocational skills of each of the students.

2. Communication - Knowing the importance of communication in teaching, the trainer will ensure that it is conducted within optimal learning parameters of learning, both vertically (teacher-student) and horizontally (student-student). At the same time, access to communication methods will be of a verbal, paraverbal and nonverbal nature, promoting both written and verbal communication. The conditions for effective teaching communication will be followed carefully by each teacher:

- The manifestation of a positive attitude towards the act of communication by valuing the interlocutor or his speech, high self-esteem and sense of competence in the field, tempering egocentric tendencies;
- Support to help anchor verbal and / or nonverbal communication, encouraging unrestrained, spontaneous, free expression;
- Addressing a supportive attitude marked by trust and equality, sincerity and honesty, the openness to a partner, the partner's response to the message, recognition of their thoughts and feelings, of a positive, unconditional interest;
- Generating an empathic attitude, securing, managing interaction and acceptance of each other's presence;
- Responsible, expressive commitment both in a verbal and emotional plan for the transmission of message, and an increase in the effectiveness of communication;
- The ability and agility in influencing and directing communication to achieve the goals set;
- Flexibility and credibility in dealing with a theme (speed and fluency in speech, rich communicational repertoire, adaptability and reliability in playing your part, etc.);

¹⁵ <https://unesdoc.unesco.org/ark:/48223/pf0000140224>

3. Classroom organization - The environment in which learning can positively or negatively influence the process within each student. Therefore, both the formal and non-formal frames of education will be carefully selected, organized and used by the teacher, focusing on the correlation between goals, the organization of the work (individual, frontal, group), curriculum content, addressed teaching strategies (teaching methodology, educational resources) and system evaluation.

4. Lesson planning - Designing lessons will be consistent with the individual and group learning needs of the students. The focus will be on determining the active-participative attitudes of students, namely the individual contribution of each student in their own learning process and its assessment. Using concrete material with translation towards the abstract, highlighting key words and concepts required to develop cognitive organizers, summarization and subsequent analogies, developing and solving worksheets, learning tasks that are elements related to successful teaching design

5. Individual plans - emphasize the importance given by the trainers to individual specifics, age and intellectual peculiarities of each student. Individual plans also emphasize and build a pupil's skills in various curricular areas. Identification of the potential intellect of each student generates access to the right resources, implementing strategies stipulated in the individualized service plan that will lead to achieving academic performance or the best possible result. The evaluative process (formative and summative evaluation, self-evaluation) allows reconsideration of strategies, rebalancing teams of trainers and expectations.

6. Individual support - is claimed by the desideratum of the inclusive school, "a school for all and everyone." The arrangements for individual support are multiple, accessing one or the other depends on problems posed by each trainee. Specialist teachers, the supporting teacher or the itinerant teacher are resource people who can successfully provide individual learning support.

7. Usage of additional means of support - the equipment, technical means that facilitate inclusion and ensure participation in learning activities.

8. Behavioural (control) management - covers such interventions that are focused on undesirable conduct during the activities. Functional analysis of any behaviour will help determine the causes of the undesirable behaviour, its maintenance factors and the consequences of the behaviour in question. Knowing the role of the teacher in the shaping

and formation of behaviour by using "the word", admonition shall respect the following conditions:

- *clear expression, safe and uncompromising*, through the distinction between the desirable and undesirable behavior and at the same time, firm and warm, in terms that leave no room for interpretation;
- *focus on the problem*, in the sense of direct admonition to the student's behavior and not towards his person, other students, teachers and the relationship between him and the class;
- *self control of the voice, of the tone used* in admonition to avoid possible violent threats and control techniques, knowing that this will cause, with a very high probability, negative ripple effect (anger, resentment, restlessness, restlessness, anxiety) or may even generate undesirable behaviors in students that had not developed such behaviors before;
- *argumentation will be minimal, neutral and expressed in positive terms*, meaning that the orders given must not be associated with the personal mood of the teacher, and the wording will be positive without prohibitions and bookmarks while avoiding that an order be doubled by the presentation of the reasoning

9. Teamwork - joint ownership of responsibilities and decisions in relation to the issue of a student or another. The team of trainers is called to serve as a gear interconnected to the reactions of the child with special educational needs. Strategic targets are oriented according to priorities and internal succession that involves solving each of them.

10 Inclusive Teaching Practices:

1. *Ensure your course reflects a diverse society and world.* - Be intentional when selecting your multimedia (images, videos, blogs), required readings, and illustrative examples so that your course site and curriculum reflect diverse people, voices, and viewpoints.
2. *Ensure course media are accessible.* - Making your course media — including videos, images, documents, PowerPoint presentations, and so on — accessible benefits all of your students.
3. *Ensure your syllabus sets the tone for diversity and inclusion.* - An inclusive syllabus includes policies and resources that help ensure all students are supported in their

learning process. Including a diversity statement that explains why diversity and inclusion are important to education helps students understand the importance and relevance of diversity and inclusion.

4. *Use inclusive language* - Students feel acknowledged when we adopt current terminology about various identity groups. Using inclusive language can help build a stronger campus community and further our ability to thrive in an increasingly diverse environment.
5. *Share your gender pronouns.* - Model inclusion and send a message that your course is a safe space for students across the gender spectrum by including your pronouns on your syllabus, on your signature line, and in your LMS profile.
6. *Learn and use students' preferred names.* - Remember that students' preferred names may not always match what is on your course roster.
7. *Engage students in a small group introductions activity.* - During the first week of your course, provide an opportunity for students to learn more about each other, in order to help everyone feel more comfortable and to start developing a sense of belonging and community.
8. *Use an interest survey to connect with students.* - Use an online questionnaire that asks students about their preferred name/ pronouns, work experience, plans for the future, what they are most looking forward to and most concerned about related to your course, to help you connect with them and better meet their learning needs.
9. *Offer inclusive office hours.* - Remove barriers to students meeting with you by offering a variety of times (time of day and length of meeting), formats (e.g. video conference, phone call, text message, email), and structures (e.g. one-on-one and in groups).
10. *Set expectations for valuing diverse viewpoints.* - Engaging students in a discussion about online communication norms and guidelines at the very beginning of a course is an essential step in fostering community and creating a productive learning environment. Decide together on a list of guidelines to help ensure that everyone feels valued and included in the course discussions.

14.4 Additional reading materials for ongoing learning and support

1. Linda Graham, *Inclusive Education for the 21st Century*, 2020,
[https://www.google.ro/books/edition/Inclusive Education for the 21st Century/RIXxDwAAQBAJ?hl=en&gbpv=1](https://www.google.ro/books/edition/Inclusive_Education_for_the_21st_Century/RIXxDwAAQBAJ?hl=en&gbpv=1)
2. British Council, *Toolkit for inclusive teaching strategies*,
<https://americas.britishcouncil.org/sites/default/files/bc-toolkit-en-final.pdf>
3. European Youth Forum, *Diversity and Inclusion Guidelines*, 2018,
<https://www.youthforum.org/files/Diversity20and20inclusion20guidelines.pdf>
4. Everyone Matters Erasmus Plus Project, TRAINING CURRICULUM ON INCLUSION & DIVERSITY IN YOUTH WORK, https://ec.europa.eu/programmes/erasmus-plus/project-result-content/0d770d0c-882d-42c3-a453-0a1a211f9de5/Training_Curriculum_-_Inclusion_and_Diversity_in_Youth_Work.pdf

15 ONLINE LEARNING RESOURCES

15.1 Introduction



Source: freepik.com

In recent years, online learning resources have transformed the educational landscape, providing unprecedented access to knowledge and skills. These resources encompass a wide range of tools, from educational websites and interactive platforms to video lectures, forums, and digital textbooks. The accessibility of these resources has revolutionized the way students, professionals, and lifelong learners engage with education, breaking down geographical, economic, and social barriers. According to Anderson (2008), the shift to online learning offers learners the flexibility to tailor their learning experiences to individual needs, promoting self-paced and personalized education. As the internet continues to expand, new technologies such as Artificial Intelligence (AI) and Virtual Reality (VR) further enhance the learning experience by creating immersive, interactive environments (Johnson et al., 2016). Additionally, platforms such as Coursera, Khan Academy, and edX offer courses from top universities, making high-quality education more accessible than ever before

(Bawa, 2016). As online learning resources continue to evolve, their impact on traditional education and the way knowledge is consumed is undeniable.

15.2 Theory

Online learning resources have introduced new dimensions to education, breaking traditional barriers associated with time, location, and cost. These resources are shaped by several key educational theories that focus on the flexibility, accessibility, and engagement of learners.

Constructivist Learning Theory and Online Learning Resources

One of the foundational educational theories that underpin the development and use of online learning resources is constructivism. This theory, championed by scholars like Piaget (1976) and Vygotsky (1978), posits that learning is an active, student-centered process where learners construct knowledge through interaction with their environment. In this context, online learning resources can be seen as tools that facilitate this active construction of knowledge. Vygotsky's notion of the Zone of Proximal Development (ZPD) is also highly relevant when considering online learning resources. Online environments often incorporate scaffolding techniques such as step-by-step tutorials, hints, and peer interactions through forums and discussion boards that align with Vygotsky's ZPD concept.

Behaviorist Theory and Online Learning Resources

According to behaviorism, learning is a process of responding to stimuli and reinforcement. Online learning platforms that use quizzes, tests, and instant feedback are grounded in this theory. Websites like Duolingo, for instance, employ repetitive exercises, instant feedback, and rewards to motivate users to continue learning and reinforcing behavior patterns. In these environments, learners' responses are shaped and modified through a system of rewards and consequences, thereby facilitating the acquisition of knowledge through practice and reinforcement. Moreover, the use of gamification in online learning resources, such as badges, progress bars, and leaderboards, is influenced by behaviorist principles. These elements provide extrinsic motivation, promoting engagement and persistence in the learning process (Gee, 2003).

Connectivism and Online Learning Resources

In recent years, the theory of connectivism has gained prominence, especially in the context of digital learning environments. Proposed by George Siemens (2005), connectivism argues that knowledge is distributed across networks and that learning is a process of connecting specialized nodes or information sources. In this view, learning is not only a process of individual knowledge acquisition but also involves creating connections with others, including peers, experts, and resources, to construct new understanding. This theory is highly relevant to online learning resources, where learners access diverse digital materials and collaborate with a global network of individuals. Connectivist learning environments are highly social and collaborative, relying on learners' ability to connect and share knowledge through various digital tools.

15.3 How to apply

This section will outline practical tips and tricks on how to apply online learning resources, highlighting specific platforms and tools that can be used to maximize learning efficiency.

1. Establish Clear Learning Goals

Before diving into online learning resources, it is essential to set clear and achievable learning goals. Defining what you hope to achieve will guide your choice of resources and help you maintain focus. According to Garrison (2011), goal-setting is integral to self-regulated learning, especially in online environments where learners have the autonomy to navigate their educational journey.

Practical Tip:

- ✓ Create a learning plan that includes both *short-term and long-term goals*.
- ✓ For example, if you want to learn coding, set an initial goal to complete an introductory course on platforms like [Codecademy](#) or [freeCodeCamp](#). Then, gradually build on that with intermediate or advanced courses.

2. Leverage Multiple Platforms and Resources

Online learning is not confined to a single platform, and one of the main advantages of digital learning is the variety of resources available. By combining different platforms, learners can access different teaching styles, content formats, and interactive features that cater to various learning preferences. A blend of resources such as video tutorials, written content, quizzes, and forums can enhance comprehension and retention.

Practical Tip:

- ✓ Use platforms like **Coursera** or **edX** for structured, university-level courses.
- ✓ Combine the latter with interactive platforms such as **Duolingo** for language learning or **Khan Academy** for supplementary lessons.
- ✓ This multi-platform approach provides well-rounded learning experiences that can cater to different learning styles. For example, you could take a free course in mathematics on Khan Academy, which offers interactive exercises and video explanations, while using edX for more advanced theoretical knowledge.

3. Take Advantage of Interactive Features

One of the major advantages of online learning resources is the ability to engage interactively with content. Interactive elements such as *quizzes*, *peer discussions*, and *simulations* help reinforce learning by providing immediate feedback, guiding learners through their progress, and promoting active participation.

Practical Tip:

- ✓ Platforms like **Quizlet** and **Kahoot!** allow learners to create custom quizzes and engage with peer-generated content, promoting both active recall and spaced repetition.
- ✓ Similarly, on platforms like **Udemy** or **LinkedIn Learning**, many courses include interactive assignments and discussion boards where learners can interact with instructors and peers, thus reinforcing content and providing a deeper level of understanding.

4. Participate in Collaborative Learning

While online learning often provides autonomy, it is equally important to engage in collaborative learning opportunities. *Online forums*, *study groups*, and *collaborative platforms* provide avenues for peer-to-peer learning and problem-solving, which are crucial for reinforcing understanding and expanding perspectives.

Practical Tip:

- ✓ Participate in online forums and discussion groups related to your course. For example, joining *discussion boards* on **Coursera** or **Reddit's learning subreddits** allows learners to engage in peer-driven conversations.

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- ✓ You can also participate in *group projects* on platforms like [Google Docs](#) and [Slack](#), which enable real-time collaboration and communication, making learning a more social and dynamic experience.

5. Create a Consistent Learning Routine

Online learning offers flexibility, but it is important to create a consistent study routine to maintain focus and ensure steady progress. A lack of structure can lead to procrastination or fragmentation of learning efforts, so planning regular study sessions is critical for success.

Practical Tip:

- ✓ Use *time-management tools* like [Trello](#) or [Notion](#) to create weekly schedules and track your progress.
- ✓ Setting specific times each day for learning ensures a disciplined approach to online learning.
- ✓ For instance, set aside 30 minutes every morning to watch a lesson on Duolingo for language practice and another 45 minutes in the afternoon to complete a course module on Udacity.

6. Personalize Learning with Adaptive Learning Tools

With the advancements in technology, many online platforms now use adaptive learning tools powered by *Artificial Intelligence (AI)* to provide personalized learning paths. These platforms adjust the difficulty of the content based on your progress and performance, ensuring that learners are always challenged at the right level.

Practical Tip:

- ✓ Platforms like [Smart Sparrow](#) and [Knewton](#) use adaptive learning to tailor the content and pace according to the learner's needs.
- ✓ [Khan Academy](#) offers a personalized learning dashboard that tracks your progress and suggests topics based on your performance, allowing you to focus on areas where you need improvement.

7. Use Multimedia for Rich Learning Experiences

Integrating multimedia into your learning can enhance engagement and retention. The use of videos, podcasts, infographics, and interactive tools provides a *multi-sensory approach* to education, which can significantly improve understanding, especially for complex topics.

Practical Tip:

- ✓ Incorporate resources such as **YouTube** for educational videos (e.g., **CrashCourse** or **TED-Ed**).
- ✓ Incorporate **Podcasts** for audio-based learning (e.g., **The EdSurge Podcast**).
- ✓ Incorporate platforms like **LinkedIn Learning** that combine video content with written explanations and interactive exercises.
- ✓ For instance, watching a TED-Ed video on the topic of genetics followed by a quiz on **Quizlet** can deepen understanding while catering to various senses.

8. Continuously Evaluate and Reflect on Learning

Self-reflection is an essential part of learning. Evaluating your progress allows you to assess what you've learned, identify areas for improvement, and adjust your learning strategies accordingly. Regular reflection also enhances metacognitive skills, making learners more aware of their strengths and weaknesses.

Practical Tip:

- ✓ At the end of each week or module, take time to reflect on your learning progress.
- ✓ Use tools like **Evernote** or **OneNote** to journal your thoughts, summarize key takeaways, and set new goals.
- ✓ Moreover, completing *self-assessment tests and quizzes* offered by platforms like **Udemy** or **LinkedIn Learning** can help you evaluate your understanding and adjust your learning strategies.

Applying online learning resources effectively involves a strategic approach that includes setting clear goals, utilizing multiple platforms, participating in interactive and collaborative activities, and maintaining consistency.

15.4 Additional reading materials for ongoing learning and support



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I. BUSINESS & MANAGEMENT

1. Coursera Best Business Foundation Courses & Certificates [2025],
<https://www.coursera.org/courses?query=business%20foundation>
2. Harvard Business School Online (HBX) - CORE (Credential of Readiness),
<https://online.hbs.edu/courses/core/>
3. Project Management Professional (PMP)[®] Certification (Udemy),
<https://www.udemy.com/topic/pmp/>
4. MIT OpenCourseWare, <https://ocw.mit.edu/>

II. AI AND DIGITAL SKILLS

1. Coursera, Best AI Courses & Certificates [2025],
https://www.coursera.org/courses?query=artificial%20intelligence&utm_medium=sem&utm_source=gg&utm_campaign=B2C_EMEA_coursera_FTCOF_career-academy_pmax-multiple-audiences-country-multi&campaignid=20858198824&adgroupid=&device=c&keyword=&matchtype=&network=x&devicemodel=&adposition=&creativeid=&hide_mobile_promo&gad_source=1&gclid=CjwKCAiAhP67BhAVEiwA2E_9gzKd3EcZp-WXcdHpEiiXaKGKV-XgWu7-iF4FpvhBOH541bMf2T0i4xoCGgwQAvD_BwE
2. Artificial Intelligence A-Z 2025: Build 7 AI + LLM & ChatGPT,
<https://www.udemy.com/course/artificial-intelligence-az/?srsltid=AfmBOoqtFJ->

[gvoRpEplyhL97Qm3SpTiWrd-08MfVSM4ya33vUCHPyIU&couponCode=NEWYEARCAREER](https://www.elementsofai.com/gvoRpEplyhL97Qm3SpTiWrd-08MfVSM4ya33vUCHPyIU&couponCode=NEWYEARCAREER)

3. Elements of AI (University of Helsinki), <https://www.elementsofai.com/>

III. ART & CREATIVE INDUSTRIES

4. Domestika, https://www.domestika.org/en/plus_offer_landing#EN_EUR
5. Proko, <https://www.proko.com/browse/all/courses>
6. Udemy, <https://www.udemy.com/>
7. Skillshare, <https://www.skillshare.com/en/>

IV. BIOSCIENCES

1. Introduction to Biology: The Secret of Life (edX),
<https://business.edx.org/courses/introduction-to-biology-the-secret-of-life-3>
2. Health and medicine (Khan Academy),
<https://www.khanacademy.org/science/health-and-medicine/human-anatomy-and-physiology>

16 AUTOMATION AND AI SKILLS

16.1 Introduction

In the modern workforce, automation and artificial intelligence (AI) are reshaping industries and driving significant transformations across the global economy. Automation involves using technology to perform tasks that traditionally required human effort, ranging from simple repetitive actions to more complex processes. This allows businesses to improve efficiency, reduce costs, and streamline operations. AI, a subset of automation, takes this a step further by enabling machines to learn from data, make decisions, and adapt to new scenarios with minimal human intervention. AI encompasses technologies such as machine learning, natural language processing, and computer vision, all of which are becoming integral to how organizations operate, innovate, and compete.

As automation and AI technologies continue to advance, the demand for professionals with expertise in these areas is growing rapidly. Industries like healthcare, finance, manufacturing, and retail are increasingly adopting AI-powered tools for tasks ranging from customer service automation to predictive maintenance and supply chain optimization. This trend is creating new opportunities for workers skilled in developing, implementing, and managing AI and automation systems. Professionals with knowledge of machine learning algorithms, robotic process automation (RPA), data analysis, and AI ethics are particularly sought after.

For individuals looking to stay competitive in the digital age, acquiring skills in automation and AI is no longer optional but essential. These technologies are not only transforming specific job roles but also creating entirely new career paths in fields like data science, AI research, and robotics. As AI and automation continue to evolve, the ability to understand and leverage these tools will be crucial for navigating the future workforce, enhancing productivity, and unlocking new potential across industries. Whether you're a beginner or an experienced professional, gaining proficiency in automation and AI is a strategic investment in your career's future.

16.2 Theory

A compelling theory about the future of automation and AI skills is the "Skills Evolution Theory," which posits that the increasing integration of automation and artificial intelligence into the workplace will lead to a dynamic evolution in the types of skills that are in demand.

As machines become more capable of performing repetitive, predictable, and even cognitively complex tasks, human workers will transition from traditional roles

focused on task execution to roles that emphasize creativity, emotional intelligence, problem-solving, and strategic decision-making.

The theory suggests that the skill set required to thrive in this new AI-driven environment will shift toward a hybrid model, where technical proficiency in AI and automation technologies is paired with soft skills that machines cannot replicate. For example, while AI systems may handle data analysis or customer service interactions, human workers will need to focus on higher-level tasks such as interpreting AI outputs, providing empathetic customer care, and making nuanced decisions that require judgment and ethical considerations.

Furthermore, the theory predicts that as automation increases, there will be a greater need for continuous learning and adaptability. With the rapid pace of technological change, workers will need to stay updated on new tools and methodologies, creating a culture of lifelong learning in the workforce. This continuous upskilling process will involve not only technical training in AI, machine learning, and automation but also the development of cognitive flexibility and resilience, as workers adjust to new job roles and responsibilities.

Ultimately, the *Skills Evolution Theory* suggests that while automation and AI will displace certain types of jobs, they will also create opportunities for humans to focus on tasks that require uniquely human capabilities, leading to the rise of new career paths and a more adaptable, future-ready workforce.

16.3 How to apply

Applying for automation and AI skills requires a strategic approach that combines education, hands-on experience, and continuous learning to keep pace with rapidly evolving technologies. Whether you're transitioning into the field or seeking to advance your career, here's a step-by-step guide to gaining expertise in automation and AI:

- 1. Assess Your Current Skills:** Start by evaluating your existing skill set. If you already have a background in software development, data analysis, or engineering, you're in a strong position to dive deeper into AI and automation. If you're starting from scratch, consider

foundational courses in programming, statistics, and data science, as these are critical to understanding AI and automation concepts.

2. Pursue Relevant Education: There are various ways to acquire automation and AI skills. Online platforms like Coursera, edX, and Udacity offer comprehensive courses in machine learning, AI development, and robotic process automation (RPA). Look for certifications in areas like Python programming, machine learning algorithms, or AI deployment. Many universities also offer specialized programs, including master's degrees in artificial intelligence or data science, which provide in-depth theoretical and practical knowledge.

3. Get Hands-On Experience: Practical experience is essential in automation and AI. Experiment with open-source AI tools like TensorFlow, Keras, or Scikit-learn to build your own projects. Platforms like GitHub allow you to collaborate with others and showcase your work. Additionally, gaining experience in industry-specific tools, such as robotic process automation software (e.g., UiPath or Automation Anywhere), can make you more attractive to potential employers.

4. Join the AI and Automation Community: Engaging with online communities, attending industry conferences, or participating in hackathons can help you stay up-to-date on the latest advancements and connect with professionals in the field. Networking with experts can provide valuable insights and potential job opportunities.

5. Apply for Jobs and Internships: Look for entry-level or internship positions that offer exposure to automation and AI. Roles like AI researcher, data analyst, or RPA developer can help you build the practical experience needed to advance to more senior positions in automation and AI.

By combining education, hands-on experience, and networking, you can successfully apply for automation and AI skills and position yourself for a growing and rewarding career in these fields.

16.4 Additional reading materials for ongoing learning and support

To continue learning and staying updated on automation and AI skills, there are a variety of resources that can help you deepen your understanding and refine your expertise.

Books:

1. **"Artificial Intelligence: A Guide for Thinking Humans"** by Melanie Mitchell – A highly readable and comprehensive introduction to AI, exploring its capabilities, limitations, and ethical concerns.
2. **"Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow"** by Aurélien Géron – A practical guide to machine learning using popular Python libraries, ideal for those looking to apply AI concepts to real-world problems.
3. **"Architects of Intelligence"** by Martin Ford – Interviews with AI experts that offer insights into the future of AI and its impact on industries and jobs.

Online Platforms:

1. **Coursera** – Offers courses such as "AI For Everyone" by Andrew Ng, which covers the basics of AI, and "Machine Learning" by Stanford University, an essential course for building a foundation in AI.
2. **edX** – Provides numerous AI-related courses from top universities like MIT, including the "Artificial Intelligence MicroMasters" program, which covers a broad range of AI topics.
3. **Udacity** – Features specialized "Nanodegrees" in AI and machine learning, offering project-based learning and mentorship, perfect for hands-on learners.

Websites and Blogs:

1. **Towards Data Science** (towardsdatascience.com) – A popular blog that covers tutorials, articles, and case studies on AI, machine learning, and automation.
2. **AI Alignment Forum** (ai-alignment.com) – For those interested in AI ethics and the alignment of AI systems with human values, this forum provides in-depth discussions and research.

These resources will help you stay informed and expand your skill set, keeping you at the forefront of developments in AI and automation.

17 DRONES

17.1 Introduction

The integration of technology in the classroom / trainings has become a trend nowadays. The use of technological resources such as mobile devices, digital cameras, social media networks, software applications, the Internet and others types of devices during the lessons became more popular. Thus, the technology nowadays, accessible and ready to use, supports curriculum goals as well as helping students achieve their learning objectives . The integration of ICT in teaching and learning processes requires trainers to acquire a certain level of different skills to handle all the challenges associated with their integration in educational processes.

Drones are flying robots, including unmanned aerial vehicles (UAVs) that can travel thousands of kilometres and small drones that fly in confined spaces. Aerial vehicles carry no operator, fly remotely or autonomously, and may carry lethal or non-lethal payloads. Advances in manufacturing, navigation, remote control capabilities, and energy storage systems have facilitated the development of a variety of drones that can be used in a variety of situations where human presence is difficult, impossible, or dangerous. Flying robots serving purposes including military surveillance, planetary exploration, and search and rescue have received the greatest attention in recent years.

Drone technology is seen as something new to be introduced in the classroom. The integration of drones in education is able to increase students' interest in STEM as well as in innovation. Various benefits can be obtained through the integration of drones in learning, including exposure of the latest technology to students, improving students' thinking skills, hands-on activities and others.

17.2 Theory

Drones include flying, floating, and other devices, including unmanned aerial vehicles (UAVs) that can fly independently along set routes using an onboard computer or follow commands transmitted remotely by a pilot on the ground. Drones can range in size from large military drones to smaller drones. Drones, previously used for military purposes, have started to be used for civilian purposes since the 2000s. Since then, drones have continued to be used in intelligence, aerial surveillance, search and rescue, reconnaissance, and offensive missions as part of the military Internet of things (IoT). Today, drones are used for different purposes such as aerial photography, surveillance, agriculture, entertainment, healthcare, transportation, law enforcement, etc

Drones work much like other modes of air transportation, such as helicopters and airplanes. When the engine is turned on, it starts up, and the propellers rotate to enable flight. The motors spin the propellers and the propellers push against the air molecules downward, which pull the drone upwards. Once the drone is flying, it is able to move forward, back, left, and right by spinning each of the propellers at a different speed. Then, the pilot uses the remote control to direct its flight from the ground.

Drone laws exist to ensure a high level of safety in the skies, especially near sensitive areas like airports. They also aim to address privacy concerns that arise when camera drones fly in residential areas. These include the requirement to keep your drone within sight at all times when airborne.

The use of drones has very recently expanded into educational environments, attracting significant attention. Due to their potential to support student learning, the use of drones is often considered an alternative educational strategy to innovate learning environments. Drones are suitable and can benefit learning activities that include logic and deductive reasoning, debate, geography, advanced math, electronics, and eye hand coordination. Students can also benefit from drone capture-imaging in both speaking and writing classes. This also applies to physical education classes, where students are required to perform exercises.

In their research, Joyce (2017) discussed the conceptual themes for implementing drones in the educational process¹⁶. These procedures referred to safety checks, the creation of a flight plan, the evaluation of the planning, and the quality of the process. Moreover, several aspects were targeted, with an emphasis on the educational process, including the expertise and skills of the teachers in implementing the educational program, taking into account all the risk factors. Drones have many benefits and many applications, allowing them to attract educators to using them in their process of teaching. Forestry, geography, and wildlife biology through remote sensing (refers to the ability of the drone to carry sensors and transmit data of audio-visual input) allow for observations of the environment. This offers educational possibilities to teach data analysis and critical thinking, allowing the learners to analyze data received from outdoor areas not otherwise accessible. It can also provide data for analysis regarding possible feedback following a gym class lesson, allowing the learners to benefit from analytical observation of the whole procedure followed by the instruction of their teachers.

Drones can also be beneficial to learners as tools to aid their process analysis (assembling, following the knowledge of the educator, or coding analysis) to showcase problem-solving, data analysis, and research skills.

¹⁶ <https://doi.org/10.3390/drones4030057>

Analyzing different studies of using the drones in education done in the late years, the different groups of researchers identified some very interesting conclusions:

- Drone programming significantly improved students' learning of spatial visualization and sequencing skills.
- The students that are using drones in their learning experienced greater level of physical, educational and psychological satisfaction.
- The workshops with drones based platforms helped in understanding, elaborating and explaining the content.
- Using drones in the educational process helped established social connections among students, helping them engage more and assisting the educational process.

Many researchers have tried to highlight the importance of choosing the right type of drone to utilize most of their abilities. The specificity of the drone selection for producing the needed outcomes is needed. Depending on the environment of the use, the nature of the task, and the age of the learners the proper selection is needed to enhance learning outcomes. Compact drones have been highly preferable in small places due to their compact size, larger drones offer longer battery life, and drones that have long range seem to fit tasks outside of the classroom. Another aspect that improves the outcomes seems to be the motion capture camera of the drones. Highly capacity cameras capture more in-depth and detailed motion and landscapes. Lastly, the knowledge of the educators as well as the learners is fundamental to securing the transfer of knowledge and the safety that follows the whole process. Educators seem to lack in several cognitive aspects related to drone usage. They need to be highly trained to produce the necessary results.

Drones can be used to help enhance orientation skills, motor skills, and even give students a better understanding of how the world around us works. By far, the greatest advantage of integrating drones in the classroom is the fact that they are incredibly fun and educational. Drones foster intellectual curiosity and creativity. They still maintain the novelty of being new and unfamiliar technology for most people, so they tend to draw attention. The benefits of drone technology, particularly as a part of a STEM curriculum, are well worth the investment while being crucial in preparing students for the future.

The economic benefits of drone technology include:

- Creation and support of 5,500 full time equivalent jobs
- \$14.5 billion increase in GDP over the next 20 years
- Cost savings of \$9.3 billion over the next 20 years, with \$2.95 billion of this in the agriculture, forestry and fisheries industries, \$2.4 billion in mining and \$1.34 billion in construction
- Bringing on the next wave of “jobs you haven’t thought of” as our primary school students of today enter the workforce of 2030

17.3 How to apply

There are several ways drones are being utilized by teachers across the world. Figure 1 shows examples of drone skills that can enrich various educational disciplines

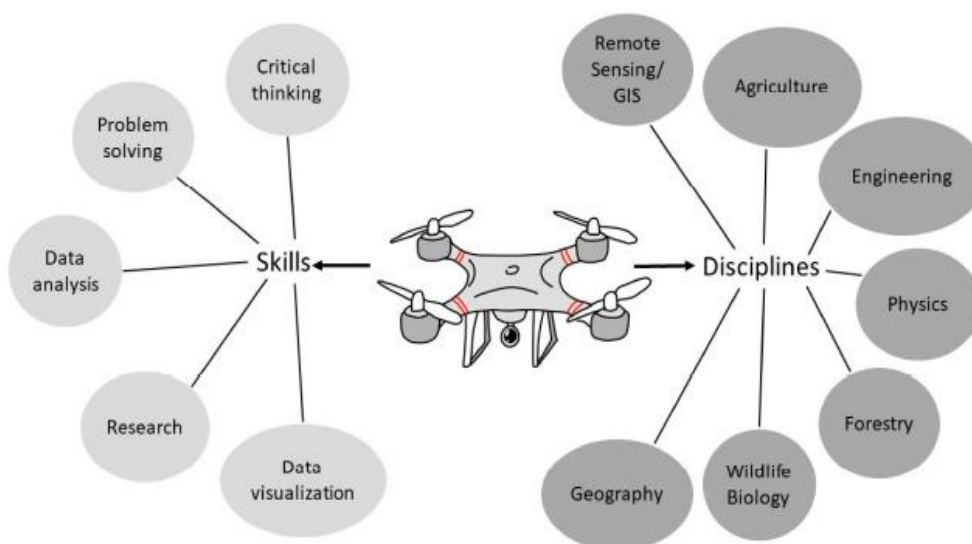


Figure1. Drone skill sets in different educational disciplines¹⁷

Media: Today's students love digital media. Drones have emerged as powerful tools for students looking to explore the world of digital media and photo/video editing. Integrating drones into educational curricula allows students to learn to navigate and control the drone, understand the principles of framing and composition, and discover the unique perspectives that aerial photograph. Moreover, drones provide a real-world platform for students to experiment with various camera settings, lighting conditions, and angles, which are fundamental skills in digital media production. Ultimately, incorporating drones into the learning process empowers students to transform their visions into captivating visual narratives.

Environmental Science: This is another subject today's students find fascinating and one with which drones can be utilized to further learning. Drones have revolutionized environmental education by providing students with an unparalleled perspective of the natural world. Through drone technology, students can witness ecosystems, landscapes, and wildlife from a bird's-eye view.

¹⁷ <https://www.mdpi.com/2227-7102/12/3/224>

Photogrammetry: Drones have emerged as invaluable tools for introducing students to the fascinating world of photogrammetry. This is a technique that involves capturing precise measurements and creating detailed 3D models from aerial imagery. By piloting drones equipped with high-resolution cameras, students can collect a series of overlapping images of a specific area or object. Moreover, they gain an understanding of how this technology is applied in various fields, from urban planning and archaeology to forestry and engineering. This experience empowers them to explore new dimensions in spatial data and opens doors to exciting career opportunities in fields that rely on accurate geospatial information.

Soft Skills: Beyond the academic benefits above, drones can also be the key tools in helping children develop essential social and emotional skills. During planning and executing flight, students also utilize interpersonal soft skills like collaboration, negotiation, and active listening. The ability to work with others, clearly communicate, and remain focused will always come into play. Through team-based projects, students gain abilities such as collaboration, flexibility, self-learning, and empathy.

Coding: Coding is one of the most popular job in this modern age. Learning how to code can be less intimidating if students use drones for hands-on learning experience. Many educators are using drones to engage students into writing programs that allow drones to conduct autonomous flights. Some classrooms are utilizing the popular coding language Python, creating code to pilot their drone around a gymnasium. Some teachers use drones in programming courses, using drones to engage students into writing programs that allow drones to conduct autonomous flights.

Physical Activities: Most children between the ages of 11 and 17 are not as physically active as they should be, many of them suffering of obesity. The desire for sports and spending time outside has been replaced by video games, mobile phones and interactive tablet devices. Teachers can use drones to get the students to base physical activity around interaction with the drone.

Teaching Math: Math has been a challenging subject for most students. Using learning tools such as drones can give a real world application to mathematical problems and equations, helping students realize the great power of this subject. Schools around the world are experimenting with drones to instill basic trigonometry concepts by following the path of different drones.

Teaching Geography: Drones can be programmed to fly autonomously to capture a specific region. They are increasingly being used as a cost-effective way to gather geospatial data. Drones can be used to capture footage and videos of locations students might not normally be able to access. This kind of data relates to creating and reading topographical maps.

Teach Science: There are many creative ways you can use drones to teach science. You can use drones to help them understand cell structure by making a large scale model and then zoom in and out to show individual parts and the larger structure. Laws of physics can also be taught with the help of drones. Options are numerous, and can bring a lot of fun into science classes.

Social Learning: Drones give students glimpses of themselves and their place in the world. This technology could help students visualize themselves as being a part of something greater.

Drones are widely used as great tools in education. They are easy to integrate into every aspect of education and real life. . By incorporating drones into the learning process, students not only develop technical proficiency but also cultivate a deeper appreciation for the transformative potential of photogrammetry in research, design, and analysis.

Considerations for the drones suitable for **elementary schools** include:

- Drones with cameras for kids
- Rechargeable batteries
- Flight mission apps for sub-2kg drones
- Educational coding apps for microdrones
- Time it takes to learn to fly
- Cost of a drone
- Drone app integration
- Level of skill required
- Pre and post-sale support
- Ratio of drones to students

These features and considerations should help the educator decide what drone to buy and use.

Higher Education: University courses can greatly benefit from the introduction of drones. Students from fields as varied as journalism, engineering, botany, humanities, and forestry have started using this technology to enhance their professional training and to add real-world examples to their studies. Drones can be used to teach skills valued in the humanities. For social studies classes, drones can be used to study local geography, cartography, and the history of their communities. The more advanced the course, the more possibilities for drones to take center stage, with the ability to use modern technology to convey complicated physics and calculus concepts.

The most common drones used in education settings fall into two categories: micro drones (under 250 grams) and sub-2 kg drones. A micro drone is usually around \$150-\$300, whereas a decent sub 2kg drone is currently from \$600 to over \$3,000. It is recommended to fly with

the smallest drone possible to achieve the chosen learning outcomes. This reduces the risk profile and the cost of purchase.

17.4 Additional reading materials for ongoing learning and support

- Getting started with drones in your classroom – A teacher’s Guide -
https://shemaps.com/wp-content/uploads/2023/06/eBook_Getting-Started-with-Drones-in-your-Classroom_2023.pdf?srsltid=AfmBOooqtPEo8Dr3U_tgVO76XoXodig2Rf2hL7OvCwr_ahzlFyeQntf55
- Karen Joyce, Classroom Drone Essentials -
<https://youtu.be/6TBmCtxs7YU?si=tf0jwsZVOL6ZMnPw>
- DSLRPros – The best precision Mapping & Surveying drones of 2024 -
<https://youtu.be/uZdUllGB7A4?si=llU5HgPWXSakKEWS>

18 GAMING

18.1 Introduction

Gaming has evolved from a niche pastime into a global cultural and economic phenomenon. From the early days of arcade machines to the immersive experiences offered by modern virtual reality (VR) and cloud gaming, video games have become a major form of entertainment and an integral part of the digital landscape. The gaming industry now rivals other entertainment sectors in size, generating billions of dollars annually (Newzoo, 2023). What once began as simple pixelated games has expanded into intricate virtual worlds, rich with complex storylines, character development, and multiplayer experiences. This transformation is not just technological but social, as gaming communities and platforms (e.g., Twitch, Discord) enable global interaction among players (Cole & Griffiths, 2007). At the same time, gaming has also attracted scholarly attention for its impact on cognitive development, social behavior, and mental health. With the rise of esports and professional gaming, the landscape of competitive entertainment has also undergone a significant change, reflecting the growing professionalization of gaming (Jenny et al., 2017). Thus, gaming is not merely a recreational activity but an important area of study with broad implications for technology, culture, and society.



Source: freepik.com

18.2 Theory

One of the earliest and most influential theories in understanding gaming is **behaviorism**, particularly B.F. Skinner’s operant conditioning model. In the context of gaming, this theory suggests that players are motivated by rewards, whether in the form of points, in-game items, or social recognition (Deterding et al., 2011). The concept of **game mechanics**, which refers to the rules, systems, and structure that govern the behavior of players within a game, is central to this idea. Players are driven by the positive reinforcement of rewards, often fostering a cycle of engagement and progression within the game. Another important theoretical framework comes from **cognitive psychology**. According to this perspective, gaming can serve as a tool for developing cognitive skills such as problem-solving, multitasking, and hand-eye coordination (Green & Bavelier, 2003). Video games, particularly strategy games, have been shown to enhance decision-making skills and the ability to process information rapidly, fostering better multitasking abilities (Boot et al., 2008). Furthermore, games that require critical thinking, such as puzzles or strategy-based games, may promote cognitive flexibility and complex reasoning (Loh & Kanai, 2016). **Recent research** into gaming has focused on both the positive and negative effects of gaming, with scholars exploring the cognitive, social, and psychological impacts that video games have on individuals. Here are the research implications:

1. Cognitive Effects and Skills Development

Recent studies indicate that certain video games, particularly action games, can have a positive effect on cognitive development. For instance, a study by Green and Bavelier (2003) demonstrated that playing action video games could improve visual attention, spatial skills, and the ability to track multiple objects simultaneously. These findings suggest that video games, when played in moderation, may offer benefits in terms of enhancing cognitive abilities, which are critical in many real-world contexts, such as driving, sports, and professional environments. A more recent review by Oei and Patterson (2013) further supports this, highlighting that video games that require strategic thinking and quick decision-making can lead to improvements in working memory and decision-making speed. Additionally, games that require multi-tasking can improve executive functioning, an essential aspect of cognitive control, particularly in young adults.

2. Social and Psychological Impacts

On the social side, video games have been shown to provide both positive and negative outcomes. Socially, video games—especially online multiplayer games—have been found

to foster communities and promote cooperative play (Cole & Griffiths, 2007). Games like World of Warcraft and Fortnite facilitate communication and teamwork among players from diverse geographical locations, promoting the development of friendships and collaboration in digital spaces. Furthermore, video games provide a safe platform for social interaction, allowing individuals to create and maintain relationships without the constraints of time or physical distance. However, the psychological impact of gaming can be more contentious. One of the most significant concerns regarding gaming is its potential to foster addiction. The World Health Organization (WHO) officially recognized gaming disorder as a mental health condition in 2018, defined by symptoms such as impaired control over gaming, prioritization of gaming over other activities, and negative impacts on social, academic, and occupational functioning (WHO, 2018). Research on gaming addiction shows that excessive gaming can lead to negative outcomes, such as social isolation, poor academic performance, and increased anxiety (Kuss & Griffiths, 2012). However, many scholars argue that while gaming addiction is a real concern, it applies primarily to a small subset of players who display extreme behaviors rather than the majority of gamers (Anderson & Dill, 2000).

3. Educational and Therapeutic Uses of Gaming

The application of gaming in education has garnered significant interest in recent years. Serious games, or educational games designed to teach specific concepts, are increasingly being used in classrooms and beyond. Research has shown that games can enhance learning by providing an engaging and interactive experience. For example, studies by Gee (2003) have demonstrated that games can foster deeper learning by allowing players to experiment, make mistakes, and receive immediate feedback in a controlled environment. Games like Minecraft, used in educational settings, teach creativity, problem-solving, and even programming. Moreover, research has explored the therapeutic applications of video games. For instance, gamification in therapy has become a growing area of interest, where game mechanics are integrated into mental health interventions to enhance motivation and engagement. Games like Re-Mission, designed for cancer patients, have shown promise in helping individuals manage treatment adherence and engage more actively with their healthcare (Kato et al., 2008). Video games are also increasingly being used in physical rehabilitation, where players engage in virtual environments that help improve motor skills, mobility, and physical function.

Esports and Competitive Gaming

Esports—the professional competitive gaming sector—has risen in prominence in recent years, with tournaments, streaming platforms, and large audiences becoming central to the gaming landscape. Recent research into esports has examined not only the economic impact but also the psychological effects of professional gaming. A study by Jenny et al. (2017) explored the rise of esports, finding that it had become a major sector within the broader entertainment industry, generating millions of dollars through sponsorships, streaming, and tournaments. Moreover, esports participants often experience heightened stress and mental fatigue due to the intense competition, which has led to the development of mental health support systems tailored for professional gamers (Matias et al., 2023).

In conclusion, gaming is a complex and multifaceted activity that has evolved far beyond its origins as a form of entertainment. Recent research in gaming has shed light on both its potential benefits and risks, ranging from cognitive and social development to concerns about addiction and mental health. As the gaming industry continues to grow and diversify, the need for further research into its effects—both positive and negative—remains critical. Understanding the diverse impacts of gaming is essential not only for gamers themselves but also for policymakers, educators, and mental health professionals to harness the potential of gaming in a responsible and productive manner.

18.3 How to apply

Gaming is not just about entertainment; it has practical applications in various fields such as education, mental health, business, and even physical rehabilitation. The theory behind gaming, particularly in terms of engagement and motivation, can be applied in these areas to enhance learning, improve skills, and promote positive behavior. This application of gaming principles is often referred to as gamification, which involves incorporating game mechanics into non-game contexts. The following sections highlight practical ways in which gaming can be applied in different contexts and provide actionable tips and tricks for effective implementation.

1. Applying Gaming in Education

One of the most significant areas where gaming principles have been successfully applied is in education. Serious games and gamification techniques help increase student engagement, enhance learning outcomes, and foster critical thinking and problem-solving skills.

Practical Tips for Applying Gaming in Education:

- ✓ Incorporate *Points, Badges, and Leaderboards (PBL)*: The use of game mechanics like points, badges, and leaderboards has been shown to increase student motivation and participation. For example, platforms like **Kahoot!** and **Classcraft** use these mechanics to motivate students and provide instant feedback.
- ✓ Use *Educational Games*: Platforms like **Duolingo**, which gamify language learning, or **Minecraft Education Edition**, which allows students to create and explore worlds while learning about history, math, and science. These games make learning enjoyable while fostering collaboration and creativity.
- ✓ Create *Simulations for Real-World Problems*: Simulations allow students to apply theoretical knowledge to practical situations. For instance, **SimCityEDU** teaches urban planning and environmental sustainability by having students design cities while considering social, environmental, and economic factors. Simulations like these make learning interactive and immersive, engaging students through real-world scenarios.

2. Applying Gaming in Mental Health and Therapy

Gaming has therapeutic potential in mental health care, helping individuals manage conditions such as anxiety, depression, and PTSD. Serious games and virtual environments can offer psychological benefits by reducing stress, improving mood, and providing support for cognitive rehabilitation.

Practical Tips for Applying Gaming in Mental Health:

- ✓ Use *Biofeedback Games* for Stress Management: Biofeedback games, such as **Calm** or **Spire**, allow players to monitor their physical responses, such as heart rate and breath rate, to control stress and anxiety. These games provide real-time feedback, encouraging players to practice relaxation techniques and mindfulness.
- ✓ Design *Therapeutic Games for Children*: For children with conditions such as autism spectrum disorder (ASD) or ADHD, games that use visual and auditory stimuli to reinforce positive behaviors can be particularly effective. For instance, **Re-Mission** is a game developed for cancer patients that teaches them about treatment adherence and empowers them to feel in control of their recovery.
- ✓ *Gamify Cognitive Behavioral Therapy (CBT)*: CBT techniques can be integrated into games to help users confront and modify negative thoughts and behaviors. Games like **SPARX**, developed for teenagers with depression, teach coping skills through an

adventure-based platform that encourages users to make positive choices while facing challenges.

3. Applying Gaming in Business and Employee Engagement

Gaming can also be applied in business settings to improve employee engagement, productivity, and motivation. This application of game mechanics is often termed gamified work environments, where employees earn rewards, points, or other incentives for completing tasks or achieving certain goals.

Practical Tips for Applying Gaming in Business:

- ✓ Incorporate *Gamified Learning Platforms*: Businesses can use gamified training platforms to teach new skills, improve employee knowledge, and track progress. For instance, platforms like Coursera for Business and Kahoot! allow employees to complete gamified courses or quizzes, rewarding them for learning new concepts and reinforcing engagement (Werbach & Hunter, 2012).
- ✓ Create *Performance-Based Challenges*: Create challenges or "quests" for employees to achieve specific goals, such as improving sales, customer satisfaction, or productivity. By offering incentives such as points, badges, or even tangible rewards, businesses can encourage employees to stay motivated and work toward common objectives.
- ✓ Use *Leaderboards and Progress Tracking*: Leaderboards can be effective in boosting performance by encouraging healthy competition among employees. Tracking progress over time can help employees visualize their accomplishments and motivate them to continue striving for excellence.

4. Applying Gaming in Physical Rehabilitation

Video games can be applied in physical rehabilitation settings to motivate patients and assist with physical therapy exercises. Gamification helps patients stay engaged with their rehabilitation program, which can lead to better recovery outcomes.

Practical Tips for Applying Gaming in Rehabilitation:

- ✓ Gamify *Physical Therapy*: Virtual reality (VR) and motion-sensing games, such as those available on the [Wii Fit platform](#), have been used in rehabilitation programs to encourage movement and exercise. These games allow patients to complete exercises in a fun and interactive environment, making physical therapy less monotonous.

- ✓ Integrate Gamification into *Pain Management*: Games can also be used to distract patients from pain and improve their overall well-being during rehabilitation. For instance, **SnowWorld**, a VR game for burn victims, helps alleviate pain by immersing patients in a cold, snowy environment, reducing their focus on pain.
- ✓ Virtual reality rehabilitation programs, like **MindMaze**, use VR technology to create rehabilitation exercises that patients can perform while interacting with virtual environments. Studies have shown that these games can accelerate recovery for patients who have experienced strokes or neurological injuries by improving motor function and cognitive skills.

The application of gaming principles extends far beyond entertainment. In education, gaming can foster engagement, promote learning, and enhance critical thinking. In mental health, it provides therapeutic tools that improve coping mechanisms and overall well-being. In the workplace, gamification can boost employee engagement and productivity, while in physical rehabilitation, gaming offers a fun and effective way to recover lost physical function. By leveraging the motivational and immersive qualities of gaming, individuals and organizations can create meaningful experiences that lead to real-world benefits.

18.4 Additional reading materials for ongoing learning and support



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19 EXECUTIVE SUMMARY

This manual represents a comprehensive deliverable aimed at equipping included youth with essential digital skills to support their personal, educational, and professional development. Developed as a practical and inclusive learning resource, the manual covers six core areas: Digital Literacy, Online Communication, Digital Project Management, Software Proficiency, Cybersecurity Awareness, and Youth Development Principles. Each section integrates theoretical frameworks with hands-on guidance, real-life applications, and reflection activities to ensure both engagement and skill acquisition.

Key deliverables include:

- **Digital Literacy:** Foundational knowledge on using digital tools responsibly and confidently, including ethical internet use, accessing government platforms, and navigating digital content.
- **Online Communication:** Strategies and theories that enhance digital interaction, focusing on tone, identity, platform choice, and conflict management in virtual settings.
- **Digital Project Management:** Introduction to agile approaches, planning tools, and collaborative methods that support youth in managing digital initiatives and tasks.
- **Software Proficiency:** Training based on the ITQ and European e-Competence frameworks to develop competency in everyday digital tools used in work and education.
- **Cybersecurity Awareness:** Practical steps to protect personal information online, recognize threats, and promote responsible digital citizenship.
- **Youth Development and Mentoring:** Principles and models that support youth growth, focusing on agency, participation, and the power of supportive mentorship.

This manual has been designed with accessibility, clarity, and relevance in mind, ensuring that included youth not only gain technical knowledge but also develop the confidence and mindset required to participate meaningfully in the digital world. As a key project output, it will support educators, mentors, and youth organizations in fostering digital inclusion, strengthening employability, and promoting lifelong learning.

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