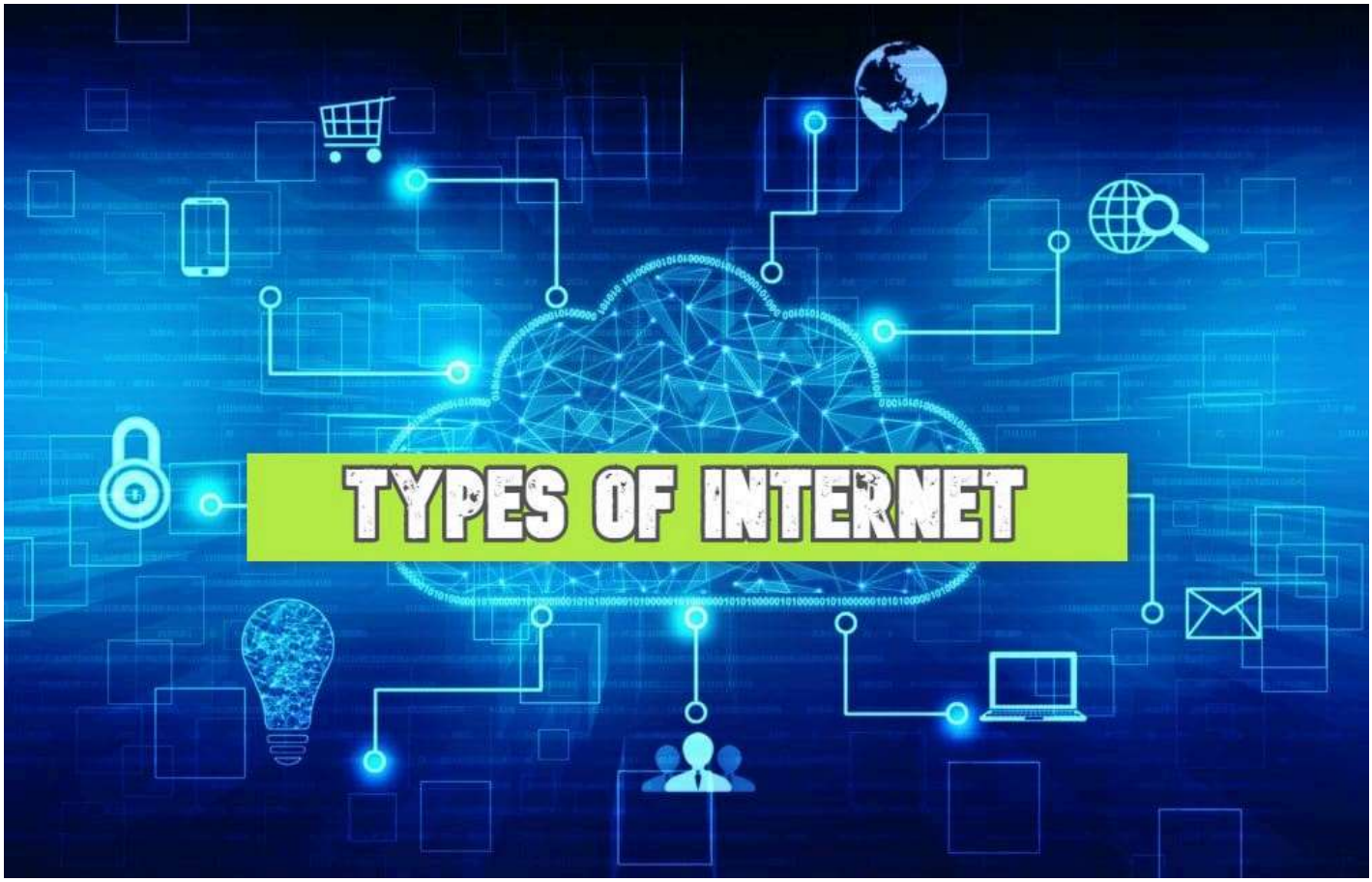


Internet

By using internet users can send and receive messages over a network. Suppose you want to share a picture of yourself with your friends then you can simply upload your picture on the internet and your friends start liking and commenting on the picture. There are plenty of social networking sites on the internet. Some of the popular social networking sites include Facebook, Instagram, Pinterest, Twitter, and WhatsApp. You can create a free account on these sites and start sharing your thoughts over the internet.

Internet uses different rules/standards for **communicating devices** that are known as TCP/IP. **TCP** is a short form of Transfer control protocol while **IP** is a short form of Internet protocol. TCP/IP was introduced in 1970. One feature of the internet is using electronic mail that was first time used in 1980. In 1990 World Wide Web (www) technology is launched. World Wide Web is used to make websites and display images, text, videos, animation on the screen. In 1970 DARPA (Defense advanced research projects agency) developed ARPANET which was used as a WAN to connect computers. Finally, from 1995 to onwards, the internet was accessed worldwide.

Now you may be thinking that how the internet works. Your computer sends/receives signals to/from ISP (Internet service provider). To send and receive signals from ISP we use the modem. The modem is a device which converts digital signal to analogue signal and analogue signal to digital signal. Data in our computer is in digital form and the **medium** we use to transfer data is in analogue form. Different types of medium are used e.g. telephone line, coaxial cable, fiber optics, etc. We use a **modem** as a conversion device between our computer and ISP.

We use different ways to connect to the internet and the ways or types of connecting to the internet are described below.

Types of the internet:-

Dialup connection: It is an old way of connecting to the internet. Dialup connection uses a phone line and is very slow. You can either make a call on the phone or connect to the internet. The connection time is high in dialup connection. The internet speed is also very slow. You cannot do video/audio chat on this type of connection. Also downloading any file is very slow. Nowadays this type of connection is not used.

Leased line: Leased line is a dedicated phone line used to connect to the internet. A leased line is used by big organizations. Some universities still use a leased line for making a connection to the internet.

ISDN (Integrated service digital network): In this type of internet you can connect a computer, fax machine or telephone line to single ISDN. ISDN uses a modem to connect different devices. ISDN is costly than Dialup connection. You can transfer video, audio,

and other data at the same time i.e. you can make a phone call from your telephone and also can use the internet at the same time.

DSL (Digital subscriber line): DSL uses the modem for making an internet connection. It is 10 times faster than a dialup connection. Also, the voice quality of telephone is not affected when you use the internet at the same time.

ADSL (Asymmetric digital subscriber line): It is mostly used type of DSL and in this type of connection, download internet speed is high than upload internet speed. Mostly you use the internet for downloading data. And we upload files less.

SDSL (Symmetric digital subscriber line): This is also a type of DSL but it has almost same download and upload speed.

Cable modem: In this type of network you can connect modem with TV cable and internet.

Wireless or Wi-Fi: Wireless connection is the most common type of internet connection by which you can connect laptops, smartphone, and other digital devices with the internet. The internet speed of Wi-Fi ranges from 5Mbps to 20 Mbps. Wi-Fi uses radio frequency to transfer data.

Broadband: This is a very high-speed internet with a transfer rate of 100Mbps. The internet speed depends upon the cables i.e. coaxial cable or fiber optics. Coaxial cables loss some data during transferring data.

Satellite: In this type of internet you can make a connection with the satellite but it has low internet speed i.e. 513 kbps to 2Mbps

Cellular: This type of internet connection is given by mobile companies to its users. The cellular connection uses 3G (3rd generation) and 4G (4th generation) technologies. 3G gives around 2Mbps speed while 4G gives speed up to 21Mbps

KT0102 Web sites

A **website** (also written as **web site**) is a collection of web pages and related content that is identified by a common domain name and published on at least one web server. Examples of notable websites are Google, Facebook, Amazon, and Wikipedia.

All publicly accessible websites collectively constitute the World Wide Web. There are also private websites that can only be accessed on a private network, such as a company's internal website for its employees.

Websites are typically dedicated to a particular topic or purpose, such as news, education, commerce, entertainment, or social networking. Hyperlinking between web pages guides the navigation of the site, which often starts with a home page.

Users can access websites on a range of devices, including desktops, laptops, tablets, and smartphones. The app used on these devices is called a web browser.

KT0103 Internet service providers

Fastest Internet Providers in South Africa Ranked

Internet and connectivity speed tester Ookla has released its market analysis for South Africa, ranking the country's fastest internet service providers (ISPs).

The analysis only takes into account top providers of internet services in the country, ones which account for 3% or more of total test samples in the market in Q2 – smaller providers are not tested.

All providers are ranked based on their Speed Score, which incorporates a measure of each provider's download and upload speed to rank network performance (90% of the final Speed Score is attributed to download speed and the remaining 10% to upload speed because online experiences are typically more affected by download speed).

Ookla places the most emphasis on the median speeds as those represent what most network providers' customers will experience on a day-to-day basis.

South African ISPs Ranked by Fastest Fixed Broadband Internet Speed:

9. **HeroTel**

Speed Score – 14.76

This South African ISP 'began its journey' in 2014, and since then have become one of the largest fixed wireless internet providers in the country. HeroTel is currently seeking to expand its Fibre offerings with Hero Fibre.

HeroTel offers Fibre-to-home packages from R399 pm for 10Mbps to R1499 pm for 1000Mbps. It is the slowest and lowest-ranked ISP by Ookla, and also the least consistent.

8. **Telkom**

Speed Score – 20.04

A leading ICT services provider, Telkom operates in more than 38 countries across Africa. The company is an ISP staple for South Africa and is 39% state-owned.

Telkom offers a bevvy of internet service packages and options, from LTE to Fibre. Users can get its uncapped Fibre starting at R449 pm for 25Mbps.

7. **rain**

Speed Score – 24.35

rain offers only mobile data to customers in SA. The company was the first in Africa to launch a standalone 5G network, doing so in 2019.

The ISP currently offers many different internet packages including '5G for the Home' models starting at R479 for up to 30Mbps, as well as premium packages for ultra-fast 5G speeds for R699 for the first three months.

6. **MWEB**

Speed Score – 26.87

A South African ISP mainstay since 1997. MWEB offers Fibre coverage, LTE packages, and VoIP as well as internet security options, and more.

Uncapped Fibre options start at R499 pm for 25Mbps up to 1Gbps for R1449 pm via Open Serve and Vumatel, respectively.

5. **Axxess**

Speed Score – 30.02

Axxess provides Fibre-to-the-Home (FTTH) services to South African consumers, offering DSL, LTE, VoIP, and Web Hosting as well.

Depending on the Fibre provider chosen, Axxess offers packages from R395 pm for 5Mbps to R1895 pm for 200Mbps.

4. **Vox Telecom**

Speed Score – 32.63

Vox offers Fibre, DSL, Mobile Data and Fixed LTE for the home, and Wi-Fi, SD-WAN and DSL options for small businesses, amongst others.

Depending on the Fibre provider and the area, customers can gain access to uncapped fibre from around R699 pm for 20Mbps to around R899 for 50Mbps.

3. **Webafrica**

Speed Score – 34.21

Webafrica offers fixed LTE, VoIP, and ADSL services, as well as South Africa's "fastest fibre internet" for home and businesses starting at R399 pm for 25Mbps to R899 for 200Mbps, depending on area and availability.

According to Ookla, Webafrica is the second-most consistent ISP.

2. **Afrihost**

Speed Score – 35.79

An 'award-winning South African broadband, web hosting and telecoms service provider' that offers FTTH, fixed wireless LTE, ADSL, VDSL, Mobile Data, Web Hosting, Cloud Services and more.

Afrihost offers a multitude of Fibre options, with Vumatel, customers can get access from R697 pm for 20Mbps to R2297 pm for 1000Mbps.

1. **Cool Ideas**

Speed Score – 45.76

The fastest ISP in terms of fixed broadband speeds in South Africa, Cool Ideas has consistently ranked amongst the best ISPs in the country. The company also has the lowest mean latency from amongst South Africa's top ISPs, and is the most consistent by a wide margin.

Cool Ideas offers FTTH and Fibre-to-the-Business (FTTB) as well as VoIP phones.

Customers can get Cool Ideas Fibre via Vumatel from R749 pm for 20Mbps to R1099 pm for 100Mbps.

KT0104 Electronic mail

e-mail, in full **electronic mail**, messages transmitted and received by digital computers through a network. An e-mail system allows computer users on a network to send text, graphics, sounds, and animated images to other users.

On most networks, data can be simultaneously sent to a universe of users or to a select group or individual. Network users typically have an electronic mailbox that receives, stores, and manages their correspondence. Recipients can elect to view, print, save, edit, answer, forward, or otherwise react to communications. Many e-mail systems have advanced features that alert users to incoming messages or permit them to employ special privacy features. Large corporations and institutions use e-mail systems as an important communication link between employees and other people allowed on their networks. E-mail is also available on major public online and bulletin board systems, many of which maintain free or low-cost global communication networks.

KT0105 Internet forums

Best & Most Popular Forums, Message Boards & Online Communities

Forums, message boards and online communities have become an essential part of the web sphere. They are the hubs where people can interact, share information, and offer advice while overcoming physical barriers like geographical locations.

Online communities are gaining popularity as more people tend to depend on them more often. However, with the increase in the number of these forums and community sites, it is paramount for us to be able to sieve them and select only the best and most popular sites.

So, I did some research to get the **list of the top 30 forums, message boards and online communities online**, I excluded the big social media websites (social media websites are technically community websites as well, but I chose to focus on forums and message boards instead, since most social media platform need no introduction), and I hope this ranking turns out to be useful to you as it did to me, so enjoy!

1- Reddit

Reddit is a news aggregation website that allows discussions and ratings of web content. Participation is restricted to registered members only. The website allows the member to post content e.g., links, texts, images, and even videos. These posts are then voted on by other members to rank them.

So, Reddit covers a wide range of topics, these are sub-classified communities or "subreddits" which refer to user-created boards usually named in the following format "r/topic" e.g., "r/programming". It was founded in 2005 in the USA, and it has loads of STEM related subreddits, so techies will have their fill of active communities in their domain.

In 2020, it was estimated to have +500 million active users every month. 52 million daily users. With the majority of the users from the USA at around 222 million per month. It has +130,000 super active communities and approximately +2.8 million subreddits in total.

Reddit allows for do-follow links, so you can use it to build your back-links profile, but most subreddits have a strong anti-spam and anti-self promotion stance, so you must provide real value to the communities, not just spam them with your links.

2- Quora.com

Quora.com is an online community that works on the basis of questions and answers. This community was founded in June 2009 by two former Facebook employees.

Currently, Quora has approximately 300 million active users every month with google trends showing it to have an upward trend in its profile. This means the popularity of the site is still growing. On a day, questions asked on the online community can range from 3000 up to 5000.

Most of the questions posted on Quora get responses within 20 to 30 minutes with the questions stated more clearly getting quicker responses. Currently, the online community does not offer do-follow links. It is however one of the best sites currently for content marketing, and a decent source of traffic.

3- GitHub

GitHub is an online code repository host for its members' content. It allows its members who are mostly software developers to share the projects that they are working on. GitHub's membership is approximately constituted of over 65 million software developers who have created over 200 million repositories. Github is now owned by Microsoft

This repository website supports all file types ranging from text to videos. It is a very good option for developers who want to collaborate on projects. It allows members to contribute by suggesting new features, supporting another person's project through coding and so much more.

It is strongly supported by the open-source community where it freely avails a project's source code to the community. Organizations like Google use its services to boost the confidence of other users.

4- Imgur

Imgur is an image-sharing website created in 2009. It began by hosting images and memes that were trending on other websites (namely Reddit). Later on, it enabled the users to host & share their pictures independently of any other social media sites.

Currently, Imgur's online image hosting and sharing site has +150 million users and it hosts over 2 billion images. The posts reach over 250 million people monthly. It uses adverts to cater for its hosting charges and the online site began offering subscriptions for members to enjoy ad-free experiences.

5- StackOverFlow & The Stack Exchange Network

StackOverFlow and StackExchange's network of Q/A websites started as a software developers' forum platform that was created back in 2008. It is a platform where users can ask questions on software development & other STEM related topics, and get answers from other professionals and enthusiasts.

Members can vote on the answers to a question according to the effectiveness of the proposed solution enabling them to be ranked higher. It has over 50 million users, and statistics of 2021 estimate it to have 31 million answers so far for the 21 million questions asked.

StackOverFlow boasts a response time of less than an hour. It offers content over a wide range of programming languages and technologies.

The site offers quality by scanning the questions posted to ensure they are strictly programming-based and very precise. Any ambiguous question or one that might elicit opinion-based responses is marked closed and hence rejected to ensure the site remains effective and objective.

The same principle of StackOverFlow is applied to all Q/A communities of StackExchange, which include communities about mathematics, physics, languages, photography, history & geography, finance & personal finance, gaming...etc

6- Discord

Discord is an online community platform that focuses on real-time communication for gamers. It is an online web platform and app that allows gamers to talk to each other and organize to play games together online. It solves the communication problem between online gamers.

It has gained popularity with +15 million people logging on daily and over +250 million registered users. It is not a forum in the typical sense since all communication happens in real-time.

It has a support page that has the frequently asked questions categorized as per the topics and users can search through those questions and their proposed answers.

7- Medium

Medium is an online publishing platform that hosts over 60 million active monthly users. It was created by a co-founder of Twitter. It works by allowing users to post on this site long articles for their viewers to read.

It allows one to link their medium profile to that of their social media accounts, specifically Facebook and Twitter. This helps them to take advantage of their social media following and gives their followers access to their work easily.

8- Steam

The Steam community is an online forum where gamers can sell and buy games from one another and other items that are used for gaming. It allows for users to offer support to one another and also communicate with the gaming world.

This online community allows for updating of games, in-game voice, and chat functionalities, and others such as friends lists and group lists. This online community hosts around +30 million users.

9- Archive of our Own

Archive of Our Own is a non-profit repository for fan-fiction and other fan-works that have been contributed by users. It was created in 2008. It works by allowing users to create profiles where they can add their work and other content. They can create collections, participate in challenges, import and bookmark other works.

They can also comment and like other people's works. It hosts subgroups within it called fandoms made of groups of members who share the same interests.

Currently, it has about 40 thousand fandoms with over 7 million hosted works. It has over 2. 5 million registered users. Its organization is simple and easy to use.

10- IGN Boards

IGN is an abbreviation for Imagine Games Network and it is a massive community with gaming forums as the main topic, but also entertainment (Anime, Movies, Comic Books...), sports (basketball, baseball, football...), as well as other topics (cooking, cars, dating... etc).

The IGN boards have over 229 million users worldwide. Its YouTube channel has more than 18 million subscribers. Its following is still massive on other social media platforms amassing 44 million followers.

It also supports other custom forums for specific geographical groups and language groups. However, users still complain of the live streams on the site that unnecessarily drain data from users especially with metered connections and the incompatibility issues of the site with several devices & plugins.

KT0106 Digital learning

What is digital learning?

The digital transformation has completely opened up the field of learning possibilities. Our relationship with education and training has changed profoundly and new technologies now allow us to learn anywhere, anywhere and at the pace that suits us best. Major schools such as IPAG have reinvented themselves to meet the new expectations of learners by fully integrating digital learning into their teaching methods a few years ago and by offering a campus totally dedicated to digital training.

Digital learning: definition

Digital learning" is a learning method based on the use of new digital tools to enable learners to learn in a different way, whether it be face-to-face, distance learning (asynchronous or synchronous) or blended learning. It is therefore not simply a question of digitising educational content but of a set of educational methods.

E-learning and Digital Learning: what differences?

Because of the many abuses of language concerning these two terms, there is sometimes a tendency to oppose them or to consider digital learning as a kind of enhanced e-learning. In reality, however, e-learning is only one important pedagogical modality of digital learning, which in turn encompasses all online learning methods and techniques. In other words, digital learning is the digitalisation of the entire learning experience: social learning, virtual meetings with professionals, online exams, networking with alumni, professionalization workshops, etc.

The different teaching methods of digital learning

Beyond e-learning as a means of asynchronous training from one's computer, here is an overview of the main existing teaching methods and solutions for digital learning.

The virtual classroom
Based on the principle of traditional synchronous training, virtual classes allow trainers and learners to be brought together in the same virtual place, for example during a video conference.

Serious games
Organised in various forms (simulation, gamification, etc.), they enable know-how to be learned in a fun and sometimes collective way.

The MOOC (Massive Open Online Course)
The best-known teaching method, it is based on the use of a platform for training through videos, downloadable documents, quizzes, etc.

SPOC (Small Private Online Course)
Similar to the MOOC, this interactive training course has the particularity of being aimed at a smaller group of learners, which encourages interactivity with the trainer and ensures that learners are followed up.

Mobile Learning
As the name suggests, this involves training from your smartphone. A practice particularly suited to the "anytime, anywhere, anyplace" learning experience.

Social Learning (social and collaborative learning)
Based on the exchange and sharing of experience within a group, this more informal and collaborative learning method is also used in a complementary way in the context of hybrid or face-to-face training.

Adaptive learning
This concept refers to the ultra-customisation of certain training courses to adapt to the needs of each learner (specific modules and workshops, adapted training courses, etc.).

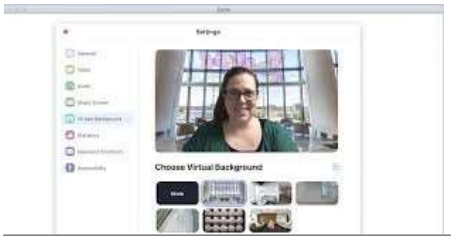
As you will have understood, with digital learning, the learner is not simply a consumer of content (that's e-learning), he or she is an integral part of a promotion and the success of a virtual training course, whether in the context of blended learning or 100% online, depends on the coherence and appropriateness of the combination of all these teaching resources.

What are the advantages of digital learning for online training?

The advantages of digital learning are numerous, particularly for the learner in the context of distance learning. First of all, there is the freedom to learn when you want (in the morning, in the afternoon, in one-hour blocks, etc.), where you want (at home, on the road, in the library, etc.), how you want (on your computer, smartphone, tablet, etc.) and at the pace you want (to go through certain points of the programme more quickly, come back to others, etc.). In other words, digital learning places the learner at the heart of the training and it is the training that adapts to the learner and not the other way round.

KT0107 Virtual communication: virtual meetings, virtual workshops, conferencing, etc.

Definition of Virtual Meeting



Virtual meeting screen

A **virtual meeting** is a gathering of at least two individuals for a discussion that takes place online. It is sometimes referred to as a video conference. Participants can join in from wherever they are (at home or in the park) with an internet connection via a computer