

The impact of ICT on social and ethical behaviour of Zimbabweans: Case of Masvingo Town

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Abstract: Information Communication Technology has brought about a considerable impact on the cultural and social settings of individuals and communities. All individual and societal activities are guided or influenced by technology. The increase in the use of Information Communication Technologies in our societies makes it important to consider social and ethical effects on individuals and societies. The increased amount of information available via the internet has made people proficient in using technology. This resulted in significant concerns over individuals' privacy. The use of Information Communication Technologies has affected society by changing individuals' jobs, education systems, government systems, and social interactions. This paper identified the societal and ethical behaviour changes attributed to the use of Information Communication Technology; ascertained the type of technology responsible for the changes and recommended measures to be taken to curb negative behaviour changes. The researcher used a mixed methodology and administered questionnaires to 130 people and 10 focus groups of 12 people each in Masvingo town. The research showed that Information Communication Technologies brought positive and negative impacts on the social and ethical behaviour of people across all age groups. This is shown through the percentage of respondents from the data gathered. On the positive side, there is improved communication, quick information access, work efficiency, enhanced social connections, remote work, and education. The negative impacts are culture erosion/dilution, increased social isolation and loneliness, and risk of cyber security and privacy. The researcher recommended user education, user accountability, regulation enforcement, implementing user controls, and promoting positive online behaviour.

Keywords: Information Communication Technology, Social behaviour, Ethical behaviour, Information age

1. Introduction

ICT has become a global phenomenon in every contemporary society because of its attendant positive contributions to every sector of the economy (Kayode et al, 2023). Nowadays people are living in an environment where they are heavily dependent on ICTs. This era is described by Olumoye (2013) as the information age due to the ready availability of ICTs. According to the Postal and Telecommunication Regulatory Authority of Zimbabwe (POTRAZ) second-quarter report for 2022, internet penetration stood at 61.3% showing that most people are connected to the internet and this facilitates communication and other services provided by the internet. According to (Kemp, Digital 2024: Global Overview Report, 2024) social media user accounts were more than 5 billion in January 2024.

The global number of people using the internet as of 31 January 2024 stood at 66% (Kemp, Digital 2024; Global Overview Report, 2024). The need for ICTs was mainly observed during the COVID-19 lockdown era. Most Zimbabweans embraced the digital lifestyle since people were not mobile. ICTs were mainly used for entertainment, online broadcasts, online meetings, and even parliament sessions were being done online

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(Chindaro, 2020). The COVID-19 era prompted the worldwide use of ICTs to keep people safe and ensure continuity of life, education and business. This also influenced the change in behaviour of Zimbabweans both in a positive and negative way.

According to a study made by Otulubgu and Ogunobo (2022), the use of Technology has moral concerns. The study highlighted the positive and negative impact of ICT use globally especially in terms of internet use. The study concluded that there is a need to incorporate communication ethics in all studies to educate a larger group of people about ethics on the use of the Internet. Another study by (Khaustova et al., 2024) delves more into the use of ICT for societal development. The study looks at the advantages and threats posed by the use of ICTs in society. Astrom et al. (2022) highlighted that ICTs play a pivotal role in creating and reinforcing disruptions in society and the industry. An article that was based on a library study made by Hamzah et al. (2022) highlighted the benefits and disadvantages brought about by the use of ICTs to human life such as the spread of false news, online game addiction, and pornography. The authors recommended further studies using different methodologies. A study that was done in Malaysia by Gill et al. (2015) looked at the cultural identity preservation dimension of the ethical and social behaviour of people. There is a need to preserve cultural identity when using ICTs. Digital technology can be used to preserve culture and can also erode culture depending on the way in which users of these technologies embrace the digital world. Digital technologies such as ICTs, new media, and the internet play a pivotal role in cultural formation and adaptation. A study by Rajkarnikar and Shrestha (2021) concentrated on understanding how digital technology impacts cultural changes and information dissemination. The conclusion of this study shows that there are new emerging cultures such as e-culture, cyberculture, and many more.

After studying the different studies done by other authors the researcher identified a gap in the type of technology that is responsible for the social and ethical behaviour changes and made recommendations on how to curb negative behaviour changes. This research will be guided by the following conceptual framework: Exploring the impact of social and ethical behaviour. The independent variable is ICT usage (for example internet, mobile devices, social media, and others) and the dependent variable is Social Behaviour (for example patterns of communication, relationships, and social skills) and Ethical behaviour (for example online etiquette, privacy concerns, and cyberbullying).

2. Literature review

This section highlights the information gathered from other research and defines terms as they are used in the research. It provides a background on the understanding of ICT and ICT tools that have an influence on the social and ethical behaviour of people in Zimbabwe.

Information Communication Technology (ICT)

Information Communication Technologies are tools and equipment used for the creation and dissemination of information. Pratt (2019) defines ICT as a framework, tools, and components that support modern computing. This incorporates components for networking, applications, and systems. ICTs enable users/people and firms to interact with the digital world. An ICT system is made up of an internet-enabled domain together with mobile technology using wireless networks. Examples of ICTs used in society are computers, smartphones, telephones, digital televisions and others. The diagram below sums up the most acceptable definition of ICT.



Figure 1: Components of ICT (Awati & Pratt, n.d)

People are now well versed in technology due to the increase in information availability and easy access to ICTs. This made ICTs an important part of people's daily lives and this results in social and ethical behavioural changes. ICTs have an impact on the behaviour of people in a society and this can be positive or negative. Pratt (2019) asserts that ICTs changed how people communicate, learn, work, and live. ICTs evolve to suit the needs of society and result in major shifts/changes in society from personal, face-to-face interactions to digital interactions. This is also known as the digital age. Listed below are the positive and negative effects of ICTs.

Positive

- Offers new tools and new opportunities. More tools are being availed through the use of networking in the area of photography and communication.
- Enhances organizational operations in the areas of communication, security, and information management. This improves customer and supplier intimacy, decision-making, competitive advantage, organizational survival, operational excellence, and establishing new products and new business models.
- Increased access to services. This is accredited more to the use of the internet. The use of the internet provides quick access to information and other services and these are affordable.
- Fast and easy communication.
- Globalisation.

Negative

- Reduced personal interaction. This is observed through working from home using teleconferencing, teams, and online classes. This reduces social interaction resulting in behaviour change.
- Loss of jobs due to the use of Robots for commonly used operations. This leads to adverse economic and/or social consequences. It also affects people's earnings and loss of self-esteem.

New trends in ICT that impacts the society.

Cloud computing

Cloud computing technology makes easy access to applications and communication easier than in the yester years. Access to information can be done from any part of the world through the internet (Anderson & Rainie, 2010). Delvadiya (2023) asserts that Social media applications can also be enhanced by the use of cloud computing in terms of speed and storage thereby providing a memorable experience for users. Social Media networks are no longer text-based but multimedia applications that require more storage and speed of processing to have an impact on the users.

Internet of things

It is a technology that brings people, processes, data, and things together through networked connections to be more relevant and valuable than before. This provides richer experiences and economic opportunities for individuals, countries, and organizations (Ndemo, 2013) changing how people and organizations relate and do business. Security and control are enhanced by the use of I.o.T. I.o.T usage making society's dependence on technology more visible. This impacts society in the fields of health, education, productivity, and day-to-day conveniences. It is making the world smart and responsive (Parteek, 2019).

Ubiquitous computing

Ubiquitous computing power is the basis of an intelligent society (Ubiquitous Computing Power: the Cornerstone of an Intelligent Society, 2020). According to Mike (2010), ubiquitous computing is the practice of embedding information processing and network communication into every day, human environments to continuously provide services, information, and communication. A universe filled with "smart" objects has a great impact on society. The major societal challenge in the ubiquitous computing era is characterized by great dependence on technology, control over information, and protection of privacy resulting from the use of linked devices (Paine, 2017). This kind of technology era increases anxiety and stress coming from interconnected smart devices that track, and send constant notifications and information to the user. Examples of these can be tracking weight, food consumption, health status, movement, and many more.

Social media networks

Social media has brought about a paradigm shift in information dissemination and communication (Madakam, Somayya, Tripathi & Siddharth, 2021). Social media networks are digital technologies that enable

information, ideas, and thought sharing through virtual networks and communities (Dollarhide, 2024). According to DataReportal.com (2024), there are over five billion social media users worldwide. Social media has been credited with facilitating community building and criticized for fueling misinformation and hate speech. Many companies are using social media as a marketing platform. The five most used platforms according to Madakam et al. (2021) are Facebook, YouTube, WhatsApp, Instagram, and WeChat in their order. Social media facilitates the access of information instantly and connecting with friends and relatives in real-time. It makes the globe more interconnected. The bad side of social media is the spread of misinformation causing harmful psychological effects and creating polarisation (Madakam et al., 2021). Use and overuse of social media by teens raises questions about the effects on physical and mental well-being through distraction and disruption of sleep, exposing them to intimidation, gossip spreading, and peer pressure (Mayo-Clinic, 2024). Social media is used as a means of reaching customers in an effective and inexpensive way building the image of its businesses (Sandberg, 2021). According to a study by Jensen et al. (2017) people who receive mindful training avoid phishing attacks better because human beings have a limited capacity to process information as a result they are “cognitively lazy”. Social media easily spread fake news headlines designed to trigger emotional reactions resulting in impulsive reactions for example sharing the news without questioning. These cause serious threats to democracy and can create divisions within society.

Computer games and society

Media has drastically changed in recent years. It has a great impact on how people interact and how society functions (Shukla, 2023). According to tutorialpoint.com (2023), “a game is a type of pointless activity in which the main theme is the gameplay itself”. It has no production. Most parents do not like children to play games since they are time wasters. According to Shukla (2023), media experts say playing violent video games may result in violent behaviour or anti-social conduct in young people. Video games can help children become smarter and develop critical thinking. Multiplayer games can connect people and create virtual communities and friendships resulting in better socialisation globally.

Social Behaviour

Social behaviour is an individual’s activity that changes, modifies, or alters another individual’s act. If an act is influenced by society and also impacts society is called a social act.

Ethical behaviour

Laudon and Laudon (2012) define ethics as “a principle of right or wrong that people, acting as free moral agents, use to make choices to guide their behaviours”.

Related studies

Several studies have looked at the relationship between information communication technology (ICT) and its impact on society. A study by Hamzah et al. (2022) examines civilization and ethics in the use of ICT tools as they are being used in everyday life by all age groups. The spread of false news, pornography and sex, online game addiction, and hacking are the major ICT issues highlighted in the study (Hamzah et al., 2022). The authors of Ethics and Civilization in the Use of ICT (Hamzah et al., 2022) recommend that governments should address ICT abuse to reduce negative implications for individuals and society. ICT should be ethically managed, mastered, and utilized for the good of mankind leading to human civilization. A pilot study on the impact of ICT and New media on society and culture (Rajkanikar & Shrestha, 2021) highlights that culture development is influenced by how individuals interact, interpret information, and converse with each other. The communication process has been changed by the use of ICTs which have the capacity to record, create, process, and misrepresent data in a short space of time (Rajkanikar & Shrestha, 2021). The study concentrated on the role of ICT, new media, and the internet in Nepalese culture and society identifying transformations in their community and culture. Perceptions of Nepalese citizens towards Information Communication Technology and new media were also analyzed but did not address the negative aspects and the ways of curbing such in society. The study concentrated on Nepal. Another study entitled Social media use and Emotional and behavioural outcomes in Adolescence: evidence from British longitudinal data, Economics & Human Biology (McNamee et al, 2021) investigated the link between virtual platform use and emotional behavioural outcomes in adolescence in United Kingdom.

The results obtained showed that extended use of virtual platforms (exceeding four hours/day) is greatly linked with constrained mental health and increased behavioural difficulties and lack of self-value and increased episodes of hyperactivity, inattention and conduct problems. Fewer interactions with virtual platforms (below three hours/day) have an association with positive peer relationships (McNamee et al., 2021). This study concentrated on a specified age group and specific to the United Kingdom. Technology's impact on morality (Kugler, 2022) highlighted that technology can be useful and empower us with important information about the consequences of people's actions through researching the internet. At the same time, new technology can motivate people to make positive decisions and incentivize them to make bad decisions. Technology has a greater influence on how people think and act. Kugler (2022) recommended application developers to ask certain questions before they design applications, for example – what aspect of mankind will be affected by the technology?, what attributes or characteristics are more important to sacrifice?, what ideals do we want to plant?, what attractions do we want to avoid? The answers to such questions will provide a better footing in designing digital devices and applications that have a positive impact on human behaviour (Kugler, 2022). A case study was conducted in 2017 on the ethical and social issues of Information technology at the University of Zabol (Sargolzaei & Nikbakht, 2017). The study identified the ethical and immoral practices that students are doing. The use of the internet has led to the negligence of other important parts of life like sleep, work, and academic achievement. From the research findings, it is recommended to eliminate certain policies like lower cost of internet and free downloads at night. Family controls and monitoring are important to curb the dangers of online addiction. People of all ages should be educated on the dangers of online addiction.

3. Methodology

By adopting a mixed methods approach in examining the impact of ICT on the social and ethical behaviour of Zimbabweans, this section delves into the research design, population and sampling, research instruments, data analysis, and ethical considerations. The main objective of the research was to evaluate the impact of Information Communication Technologies on the social and ethical behaviour of society. The study used a mixed methodology where qualitative and quantitative research methods were used.

Research design: The research used both descriptive and exploratory research designs to explore the effects of ICT on social and ethical behaviours (Borca & Biong, 2015; De Wet, Koekemoer & Nel, 2016). The researcher used a quantitative research method to gather numerical data on the prevalence and nature of ICT use and its impact. The descriptive approach gives an in-depth account of how ICT affects the social and ethical behaviours across the age group strata and its influence in the various areas it is applied such as communication, work, and education. It comprehensively shows the current state of ICT's impact on the society. The researcher also used the qualitative research method to gather information about the understanding of the subject matter being discussed and find out the different ideas and perspectives of people regarding ICTs in society. This exploratory approach seeks to understand the root causes and types of technology responsible for the observed changes and the nuances of these effects particularly in the Masvingo town context.

Study population and sampling: The population consisted of people from different sectors of life and different age groups in Masvingo town. A sample size of 250 respondents was used. A total of 130 structured questionnaires were administered and 10 focus groups with 12 participants each were conducted.

Instruments: Data was collected using self-administered questionnaires for quantitative data collection and a focus group discussion guide for qualitative data collection.

Data analysis: Microsoft Excel was used for descriptive (quantitative) data analysis for data visualization. For qualitative data, thematic analysis was used whereby the researcher identified patterns and extracted themes from data obtained from focus groups.

Ethical considerations: The study followed ethical guidelines by ensuring respondents' confidentiality, and anonymity and ensuring voluntary participation without coercion. Integrity in the research process was upheld responsibly and respectfully.

4. Result and discussion

Understanding of ICT

Questionnaires and focus group discussions were held and the responses given were classified into the following themes.

Table 1: Understanding of ICT

Theme	Discussion
Tools and resources	Most of the responses showed that they consider ICTs as tools and resources used in the process of communication
Information Communication	Several of the responses highlighted that ICTs are used for information and communication
Digital electronics	Some responses showed that ICTs involve digital and electronic technologies

In conclusion, it can be deduced that the respondents are familiar with the term ICT being the tools, resources, and gadgets used to gather and disseminate information. The majority has a basic understanding of the term ICT.

Availability of ICTs

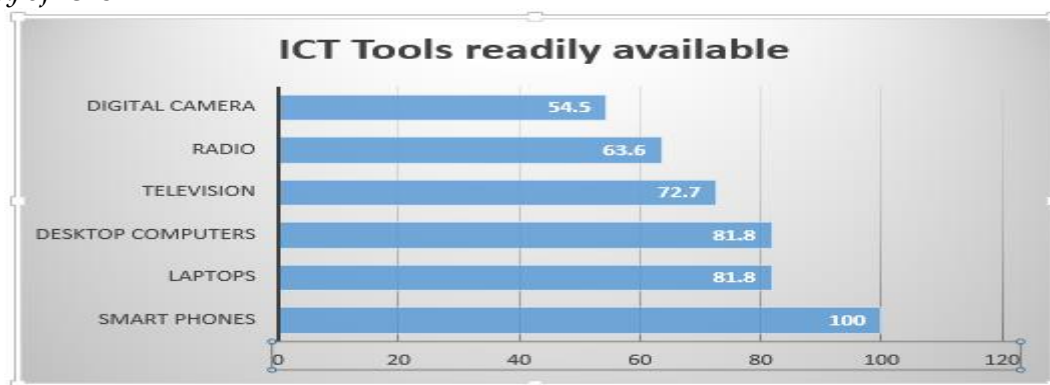


Figure 2: Availability of ICTs

All respondents have smartphones. This shows that smartphones are readily available amongst people in the community, children, students, and academics. This is the major communication tool available. Laptops and desktop computers are most common to students, academics, and office workers. Televisions and radios are mostly available to people in the community. Some respondents use the same device to listen to the radio, watch television, or take pictures. Digital devices are widely spread such that most people can have access to them anytime.

Frequency of use

Most respondents (81.2%) showed that they use their devices always. This shows that the ICTs are well distributed in the society with a few (18.8%) using them regularly.

Use of ICTs

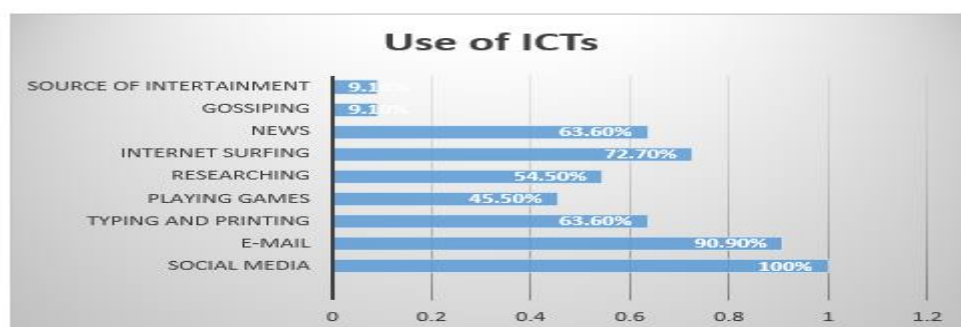


Figure 3: Use of ICTs

The respondents said they use ICTs for different purposes with the majority of the working class and academics using them for e-mails, typing and printing, research, internet connectivity, and news. Some of the respondents use them for gaming and communication especially those in the young ages (25 years and below) A few respondents acknowledged using ICTs for gossip.

Software applications normally used.

Most respondents normally use social media apps. Those in the academia and office personnel usually use the office suite for their work. During leisure time some use music players, gaming, and video players. This shows that the most used ICT devices are those that can connect to social media applications.

Changes brought about by the use of ICTs

According to the responses received the following themes were deduced:

Table 2: Changes brought by the use of ICTs

Theme	Discussion
Communication	There is easier and more efficient communication with family, friends, colleagues, and business partners.
Information access	There has been a greater increase in information access, simplifying research and learning
Efficiency	Almost all respondents highlighted that there is improved efficiency in work, and academic settings through the use of the Internet and online tools
Social connections	ICTs have facilitated new ways of making new friends and building social connections both professionally and personally.
Remote work and education	Some indicated that the use of ICTs facilitates remote work and online learning. It offers great flexibility and access to resources

The responses showed positive impacts of ICTs on the social, work, and academic life of respondents. It showed that ICTs have revolutionized the way people connect, learn, and work by making communication easier, more access to information, and efficient/ improved work processes.

Advantages and Disadvantages of using ICTs

The respondents showed that on the advantage side, ICTs have brought about easy and fast communication and connectivity. This provides a platform to communicate with loved ones across the world. ICTs also brought about increased access to information and educational resources. This also leads to the development of health literacy. Efficiency and productivity at work and providing a paperless environment are other merits of ICT use. It reduces the cost of stationery and storage space. ICT use improved remote work and learning opportunities. It also brought about globalization and cross-cultural exchange that improves how things are done in society.

On the downside, the use of ICTs has introduced society to new cultural behaviours and these are eroding our culture resulting in loss of local identity through dressing and some behaviours. ICT use reduces face-to-face interactions resulting in social isolation and lonely societies. ICT use introduces a risk of cyber security and privacy issues. With the use of ICTs, there is a danger of being hacked or invasion of your privacy. Information overload and misinformation are also a danger to society since people can be exposed to unreliable information and distorted information. ICTs have also brought about a digital divide resulting in unequal access to technology and technological infrastructure across societies. People are often exposed to social pressure and bad time management due to increased use of social media.

This shows that there is a need to manage the use of ICTs in society and at work so that the negative impact of ICT use is minimized.

Use of ICTs have changed people's social and ethical behaviour.

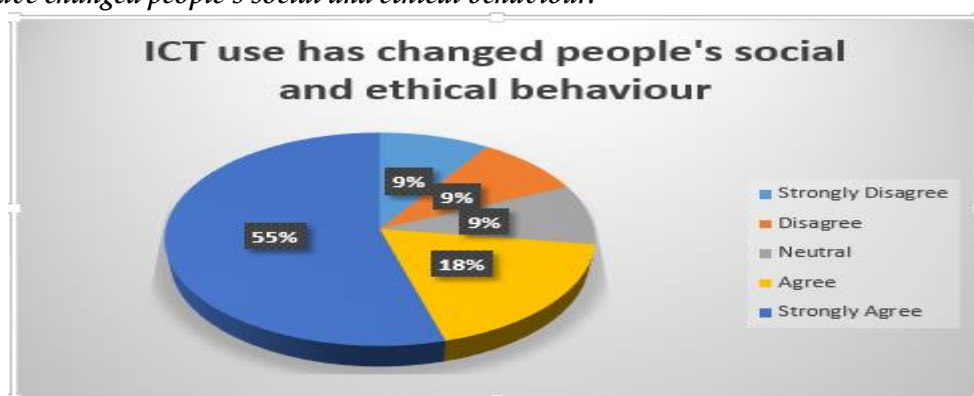


Figure 4: Use of ICTs have changed people's social and ethical behaviour

The majority of the respondents strongly agree that ICTs have an impact on the social and ethical behaviour of the people in a society. The change can be good or bad. According to respondents, bad behaviour has been seen mostly in those below the age of 19(90.9%) and 19-30 (9.1%). Other age groups above 30 years are showing a positive impact of ICT use.

Enhancing positive online behaviour

To enhance good behaviour the following themes were crafted.

Table 3: Enhancing Positive Online Behaviour

Theme	Discussion
Focus on Education	<i>Digital Literacy</i> is of paramount importance i.e. responsible use of technology and digital citizenship. <i>ICT Education</i> is the general knowledge of the use of ICTs to enhance better decision-making.
Promoting Positive Online Behaviour	<i>Campaigns and awareness</i> are needed to promote positive online behaviours and discourage cyberbullying. <i>Parental Controls and monitoring</i> can be used as tools to help manage children’s online activity.
Focus on User Protection	<i>Age-appropriate Access Controls</i> can be used in restricting information access or using age verification to protect users, particularly children, from inappropriate content. <i>Data protection</i> from third-party applications to provide for data privacy.

Overall the responses highlighted the importance of education and user empowerment in promoting good behaviour, in the digital world. It also encourages a safe online environment through age appropriate access and data protection is crucial.

Curbing negative online behaviour

The responses provided offered a range of suggestions that fall under the following key themes:

Table 4: Curbing Negative Online Behaviour

Theme	Discussion
Focus on prevention	<i>Education and awareness</i> was mostly emphasized to promote responsible online behaviour and digital citizenship. This includes educating users about cyberbullying, online safety, and ethical use of technology <i>Technological solutions</i> can be used to filter harmful content and prevent cyberbullying.
Focus on Enforcement	<i>Regulations and policies</i> that are stricter can be used to combat crime <i>Reporting Mechanisms</i> should be availed for reporting abuse of information and bad behaviour.
Focus on User Control	<i>Parental control and Monitoring</i> tools can also be used to manage children’s online activity.

The responses highlighted multifaceted approaches to address bad online behaviours.

Unacceptable online activities

The respondents highlighted several activities and these were grouped into the following themes

Table 5: Unacceptable Online Activities

Theme	Discussion
Harassment and Invasion of Privacy	<i>Cyberbullying and harassment</i> is unacceptable behaviour. This include using ICTs to intimidate, threaten or defame others. <i>Cyber stalking</i> which involves the use of ICTs to persistently harass or monitor someone. <i>Sharing Inappropriate Content</i> like nude pictures, child pornography or illegal content is unacceptable.
Deception and Illegality	<i>Spreading misinformation</i> that is spreading false information. <i>Hacking and Fraud</i> is unacceptable. It exposes users to risk or privacy issues. Academic dishonesty like cheating or plagiarism is unethical.
Hate speech and Harmful content	<i>Hate speech and discrimination</i> perpetuated using ICTs is unacceptable. Users should not glorify violence online. <i>Illegal Activities</i> like drug sales and promoting criminal behaviour.

The activities mentioned above can cause harm to individuals, spread misinformation and violate privacy.

Implications of ICTs on Social and Ethical behaviour in Zimbabweans

The respondents mentioned positive and negative impacts. ICTs have brought about efficient communication and connectivity that facilitates information access and provision of online services leading to increased connection and global awareness. It also brought about improvements in business efficiency and e-commerce platforms. On the negative side, they highlighted cultural erosion, social disconnect, cyber security and ethical issues, the digital divide, and the spread of negative content. Other related research indicated that prolonged exposure to social media for adolescents (i.e. above four hours) is linked with poor emotional health and challenges in behaviour that as decreased self-value and more incidences of hyperactivity, less attention, and conduct problems. Limited use of social media (for instance, below three hours) has some moderate link with positive peer relationships (McNamee et al., 2021). The use of the internet has led to the negligence of other important parts of life like sleep, work, and academic achievement (Sargolzaei & Nikbakht, 2017) these observations concur with the findings of this research.

The overall responses on the implications of ICTs on social and ethical behaviour in Zimbabwe indicate that ICTs offer opportunities for connection, information access, and business growth. Concerns exist regarding cultural erosion, social disconnect, and ethical issues in the online space.

5. Recommendations

The researcher recommends the following to curb negative online behaviour and enhance positive online behaviour:

- User education: there is need for digital literacy and ICT education so that people are aware of the uses of ICTs and also promote responsible online behaviour. Educators and professional bodies should develop curriculum on ethical and professional code of conduct in the information society.
- Focus on enforcement: The government and firms should implement regulations and policies to combat crime. Use of reporting mechanisms should be encouraged so as to combat crime and abuse of online users.
- User controls: Age appropriate access controls should be put in place for example parental controls and monitoring tools. Data protection should be a priority to maintain privacy of online users. Security controls should be put in place.
- 4. Promoting positive online behaviour: campaigns and awareness programs should be put in place to curb cyber bullying, cyber stalking, hacking and fraud, misinformation, hate speech, discrimination, sharing inappropriate content, and illegal activities.
- Accountability: a person should be accountable for everything he/she does online.

6. Conclusion

In conclusion, ICT has brought about societal and ethical changes. The introduction of ICTs improved communication, information access, work efficiency, social connections, and remote work and education. It also brought about easy and fast communication and connectivity. The downside of ICT introduction is the erosion of culture resulting in identity loss through dressing and behaviour, increased social isolation and loneliness in society, and risk of cyber security and privacy issues. Information overload and misinformation are another challenge as also the digital divide and exposure to social pressure and bad time management due to increased use of social media. The research highlighted that most people in all age groups have smartphones which they use for social media applications, e-mails, and internet connectivity. The increased use of smartphones and increased screen time result in people copying other people's behaviour. The use of the internet making a global village causes changes in behaviour because people are mixing and connecting thereby making changes in behaviour. To enhance good behaviour there is a need to focus on educating users, promoting positive behaviour, and focusing on protection. To curb bad behaviour there is a need to focus on prevention (Education awareness, Digital Citizenship, and technological solutions); focus on enforcement (Regulation and policies and Reporting Mechanisms), and focus on user control (parental controls).

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