ADAMA SCIENCE AND TECHNOLOGY UNIVERSITY

SPECIAL SCHOOL

ICT ASSIGNMENT

Grade 12th C

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Submitted to: Girma A. **Submission Date: 14/10/2024**

1. **Discuss the influence of inappropriate computer gaming and social media use on students' ability to accomplish higher academic goals**

Excessive gaming and social media use on students' ability to achieve higher academic goals can have significant impact. Over the past decade, the use of the internet and smartphones has grown significantly around the world, leading to more research on internet addiction and its health effects. Certain online activities, such as gaming and social media use, can be particularly concerning, as they may cause addiction-like symptoms. Excessive internet use or internet addiction among young students has been linked to various negative impacts on their mental and physical health, including anxiety, depression, thoughts of self-harm, frequent headaches, and body pain.

Many research has been done on this issue, and one research that was recently carried in Hong Kong states: "The results emphasized that internet gaming and smartphone addiction tend to have negative impact on physical activity, psychological QoL (quality of life), sleep, and academic performance. The findings may be regarded as a direction for health-care providers to develop and evaluate the intervention to treat the specific type of internet/smartphone overuse."

Below are some key ways these activities can affect students' academic performance:

Impact on Academic Performance

Studies have shown a correlation between high levels of gaming and social media use with lower academic performance. The time spent on these activities often comes at the expense of study time and engagement with educational content. Excessive online activities can reduce a student's interest in school, making them less likely to participate in class discussions, ask questions, or seek help when needed.

Sleep Disruption

Many students engage in gaming or social media late into the night, leading to disrupted sleep patterns. This lack of sleep affects their ability to focus during the day and can diminish cognitive function, including memory retention and problem-solving skills. Poor sleep resulting from late-night screen time is known to negatively impact memory consolidation, which is critical for learning new concepts and retaining information.

Time Management Issues

Gaming and social media often consume large amounts of time that could be dedicated to studying or completing assignments. The addictive nature of these activities makes it difficult for students to focus on their academic tasks. The instant gratification and engagement provided by these platforms can lead to procrastination, making it harder for students to meet deadlines and prepare for exams.

Reduced Concentration and Focus

The constant flow of information from social media and fast-paced video games can make it challenging for students to concentrate on complex academic material. The overstimulation from these activities can impair the ability to focus on long-term projects and deeper learning. Excessive engagement with content that is fast-moving and bite-sized (such as short videos or rapid game action) can contribute to a shorter attention span, which negatively affects the ability to concentrate during lectures or long study sessions.

Psychological and Emotional Effects

The pressure to maintain a certain image on social media or the frustration from difficult levels in games can lead to increased stress and anxiety. This emotional toll can detract from a student's motivation to pursue academic success. Exposure to idealized images and lifestyles on social media can impact self-esteem, leading to negative self-perception and reduced confidence in academic abilities.

Social Isolation and Decreased Interpersonal Skills

Time spent in virtual worlds or online interactions can limit real-life social engagement with peers, teachers, and mentors. This can impact the development of crucial communication skills needed for academic success. Students who prioritize gaming or social media may be less likely to participate in group study sessions, where collaborative learning and peer support can enhance understanding of complex topics.

Inappropriate use of gaming and social media can hinder students' ability to achieve their academic goals by consuming valuable time, reducing focus, and negatively affecting mental health and sleep.

2. Discuss the contribution of increased access to digital technologies and social media to cyber bullying practices.

Cyberbullying involves the use of digital technologies to harass or intimidate others. It can occur on social media, messaging apps, gaming platforms, and mobile devices. This behavior is repetitive and aims to frighten, anger, or humiliate the individuals being targeted. Some examples include:

- Sharing false information or posting humiliating photos or videos of someone on social media.
- sharing harmful or threatening messages, images, or videos.
- Pretending to be someone else and sending hurtful messages to others through fake profiles or accounts.

Below are some contributors for increasing cyber bullying:

Ease of Anonymity or Pseudonymity

Social media platforms and online forums allow users to create anonymous accounts, making it easier for individuals to engage in cyberbullying without facing direct consequences. This anonymity often emboldens bullies, as they believe their identity is hidden. The ability to create fake profiles or impersonate others makes it easier for bullies to target individuals while avoiding detection. This can result in more aggressive and harmful behavior, as perpetrators feel less accountable for their actions.

Wider Reach and Instant Communication

With smartphones, tablets, and laptops, digital communication is accessible from anywhere and at any time. This constant connectivity means that victims of cyberbullying can be targeted 24/7, unlike traditional face-to-face bullying, which typically occurs in specific settings like schools. Social media allows content—such as hurtful messages, embarrassing photos, or false rumors—to spread quickly to a large audience, intensifying the negative impact on the victim. A single post or comment can be shared, liked, or retweeted, making it difficult to contain the spread of harmful content.

Low Risk of Immediate Repercussion

The lack of physical interaction in digital spaces can make bullies not understand from the harm they do, reducing the sense of empathy. Additionally, they may feel less concerned about being held accountable, as online abuse can be carried out from a distance. Even when cyberbullying is reported, some platforms may be slow to take action, or the consequences may not be severe enough to deter further bullying behavior. This lack of immediate consequences can encourage repeat offenses.

Lack of Supervision

Many social media and gaming platforms lack adequate monitoring or content regulation, allowing cyberbullying behaviors to go unchecked. Children and teenagers often navigate these spaces without adult supervision, making them more vulnerable to online harassment. Direct messaging features on various platforms provide bullies with a way to target individuals privately. These one-on-one communications are harder for parents, teachers, or moderators to detect, making it more challenging to intervene early.

The widespread availability of digital technologies and social media has made it easier for individuals to engage in cyberbullying. The anonymity, global reach, and lack of supervision inherent in these platforms create an environment where harmful behaviors can thrive. Addressing this issue requires a concerted effort from social media platforms, schools, and families to promote responsible digital behavior and provide support for those affected by cyberbullying.

3. **What sort of new skills are required to get more job opportunities in the current 21st-century work culture and ethics? What can you do to get the required skillsets?**

In recent years have seen a surge in new subjects, scientific disciplines, and technological advancements, many of which have a short lifespan. The skills you learn today may become outdated in just a few years. This shift is also transforming the job market. In the past, obtaining an education often meant working in that field for your entire career, but that is no longer the case.

Necessary foundations, basics and technical skills

These are the foundations for individuals to do their jobs with competence. They provide each individual with the tools to acquire future skills.

Problem-Solving and Critical Thinking: The ability to analyze complex problems and come up with innovative solutions is essential in many industries where challenges arise frequently.

Adaptability: Being open to change and willing to adjust to new situations, technologies, and work environments is crucial in a fast-paced world.

Programming and Coding: Skills in programming languages like Python, Java, and JavaScript are highly sought after in many fields, from software development to data analysis.

Data Analysis and Visualization: Understanding how to collect, analyze, and interpret data is crucial in a data-driven world. Skills in Excel, SQL, Power BI, and tools like Tableau can enhance decision-making.

Artificial Intelligence (AI) and Machine Learning (ML): Knowledge in AI and ML is valuable across sectors, from healthcare to finance, enabling automation and more efficient processes.

Cybersecurity: With increasing data breaches, skills in cybersecurity are critical for protecting information systems and maintaining digital safety.

Remote Work Skills: Managing time, maintaining productivity, and effectively communicating in a remote environment are becoming increasingly necessary as more companies offer flexible work arrangements.

Design Thinking: This approach to problem-solving encourages creative solutions and can be applied in a wide range of fields, including business, design, and product development.

To get the required Skillsets:

1. **Online Courses and Certifications**: Platforms like Coursera, Udemy, edX, and LinkedIn Learning offer courses in programming, data science, project management, and more. Many of these platforms also provide certifications that can be added to your resume.
2. **Attending Workshops and Webinars**: Participating in industry-specific workshops and webinars can keep you updated on the latest trends and tools.

3. **Practical Experience**: Gaining hands-on experience through internships, freelancing, or volunteering can help solidify technical and interpersonal skills.
4. **Networking and Mentorship**: Joining professional networks, attending industry conferences, and seeking out mentors can provide guidance and open doors to new opportunities.
5. **Self-Learning and Practice**: Utilizing free resources like coding practice websites (e.g., LeetCode, Codecademy) or practicing soft skills through public speaking clubs (e.g., Toastmasters) can build confidence and competence.

In conclusion, developing a combination of technical and soft skills, along with maintaining a commitment to continuous learning, is essential for enhancing employability and staying competitive in the evolving 21st-century job market. This approach ensures that individuals can adapt to new challenges and opportunities as they arise, positioning themselves for long-term success.

9. Find out list of jobs that have been made obsolete by advancement of technology like artificial intelligence, and jobs that are being created as a result of advancement of technology. Present your findings to the class with your justifications

In the 21st century technology has shown great improvements that have revolutionized how every task is accomplished. This advancement of technology has significantly impacted the job market with its both cons and pros.

Some examples of jobs that went obsolete (some in the future) as result of technology advancement:

1. **Manufacturing Workers:** Automation has led to the replacement of many manual tasks in manufacturing, such as assembly line work, with robotic systems and AI-controlled machinery.
2. **Retail Cashiers:** Self-checkout kiosks and automated payment systems have reduced the need for human cashiesrs in retail stores, especially for routine transactions.
3. **Data Entry Clerks:** AI-powered software and optical character recognition (OCR) technology have automated data entry tasks, reducing the need for manual data entry clerks.

4. **Telemarketers:** AI-powered chatbots and virtual assistants can handle customer inquiries and sales calls more efficiently than human telemarketers, leading to a decline in this profession.
5. **Bank Tellers:** Automated teller machines (ATMs) and online banking platforms have reduced the demand for human bank tellers by enabling customers to perform transactions independently.
6. **Customer Service Representatives:** AI-powered chatbots and virtual assistants are increasingly used to handle customer inquiries and support requests, reducing the need for human customer service representatives in some cases.
7. **Drivers:** The development of autonomous vehicles and delivery drones has the potential to replace human drivers in industries such as transportation, logistics and ride-hailing services.
8. **Farm Workers:** Agricultural robots equipped with AI and computer vision technology are being used for tasks such as planting, harvesting and crop monitoring, reducing the reliance on human labor in farming.
9. **Warehouse Workers:** Automated guided vehicles (AGVs) and robotic systems are increasingly used in warehouses and fulfillment centers to perform tasks such as picking, packing and sorting, reducing the need for human workers.
10. **Legal Assistants:** AI-powered software can assist lawyers in tasks such as legal research, contract analysis and document review, potentially reducing the demand for human legal assistants and paralegals.
11. **Soldiers:** have seen their roles evolve with the introduction of automation, drones, and cyber warfare, making modern combat more technology-driven and less reliant on physical presence in hostile environments.
12. **Doctors**: advancements like AI, robotic surgery, and 3D printing, improving diagnostic capabilities, treatment precision, and patient care, could replace doctors.

These examples highlight the transformative impact of automation and AI on the workforce, leading to shifts in job roles, skill requirements and employment opportunities across various sectors.

Examples of Jobs Created by Technology:

1. **AI/Machine Learning Engineers**: The rise of AI and automation has created demand for experts to develop, train, and maintain AI systems. AI is being applied in various fields, from healthcare to finance, requiring specialists to adapt these technologies to industry needs.

2. **Cybersecurity Analysts**: With increasing cyber threats, the need to protect data and systems has become more critical. As more transactions and interactions happen online, the risk of cyberattacks grows, requiring skilled analysts to safeguard data.
3. **Data Scientists**: The ability to analyze large datasets is crucial for businesses looking to make data-driven decisions. Data scientists extract valuable insights from data, allowing companies to improve products, understand customer behavior, and optimize operations.
4. **Cloud Computing Specialists**: Businesses are moving their infrastructure to the cloud for scalability and flexibility. Cloud specialists help design, implement, and maintain cloud-based systems, supporting the growing demand for digital transformation.

5. **Robotics Engineers**: Automation in manufacturing and other industries has increased the need for professionals who can design and maintain robots. As industries adopt robots for efficiency, the need for those who can develop and troubleshoot robotic systems has grown.

6. **Digital Marketing Specialists**: With the rise of online platforms, businesses need expertise in reaching audiences through digital channels. As companies compete for attention online, digital marketing professionals help them leverage social media, search engines, and other online tools.

The rapid advancement of technology, especially in areas like artificial intelligence, automation, and digital transformation, has significantly reshaped the job market. While some traditional roles, such as telephone operators, bank tellers, and data entry clerks, have become obsolete due to

increased efficiency and automation, new roles like AI engineers, cybersecurity analysts, and data scientists have emerged to address modern needs. This shift highlights a broader trend where technology replaces repetitive and manual tasks while creating opportunities in specialized, tech-driven fields.

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